European-wide e-Learning Recognition Review Report

SMEs & e-LEARNING (SMEELEARN) PROJECT

ERASMUS+ KA2 [2014-1-UK01-KA202-001610]
http://www.sme-elearning.net

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This research project would not have been possible without the support of many people. The Project Partners wish to express her gratitude to all those individuals and organisations who submitted their questionnaires and who contributed to the Case Studies.

Project Partners

EU15 Ltd (Project Promoter) is a career management and training consultancy with experience throughout the world gained through working in partnership with organisations – from blue-chip companies to Governments to Universities. www.eu15.co.uk

VITECO is an Italian SME located in Sicily. Its staff is formed by professionals with engineering and business administration backgrounds. It's a software and e-learning provider working both with national customers and European partners in EU projects. www.viteco.it

CNA of Pesaro and Urbino is the association of Craft, Small and Medium Enterprises and new professions that provides a lot of facilities and a range of flexible and tailor-made services to be used in its 25 provincial seats or directly in your own company. www.cnapesaro.it

P4ACE is a not-for profit specialist communication research organisation which has emerged from the successful delivery of an EU funded research programme into skills and competencies of communication practitioners inn Europe. www.p4ace.org

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CONTENTS

European-wide e-Learning Recognition Review Report – Summary & Conclusion

The aim of the Review Report is to study the conditions under which SME employees will be more likely to accept and use technology-based learning and make general recommendations as to what strategies SMEs need to adopt to gain the acceptance of their employees.

This European-wide e-Learning Recognition Review Report has been produced in association with all Project Partners who have fully contributed to its production. The first stage of the Report preparation was to prepare a Methodological Plan and then set about Data Gathering in order to inform the production of this Report..

The Methodological Plan set out how the Review was to be undertaken and the methodology for the data gathering which comprised two major elements:

- a European Literature Review, which included a series of Country Reports prepared by Partners and cover the UK, Spain, Italy, Slovakia and Greece (copies of each Country Report can be found at Appendices B to F); and
- A five Country survey was carried out from 1st May 2015 to 30th June 2015 in five European countries: United Kingdom, Spain, Italy, Slovakia and Greece using a mixture of questionnaires, focus groups, face-to-face and telephone interviews – copies of the field study questionnaires can be found at Appendix A.

For the project as a whole over 7,000 translated electronic questionnaires were sent to SMEs belonging to various business sectors randomly selected from national databases which provide contact details and financial information for registered companies.

E-learning is considered as one of the global driving factors for the development of education and economy in many countries. The recent developments of e-learning methodologies characterised by the diffusion of MOOCs, Open Educational Contents, cloud based tools and other elements have improved the effectiveness of the courses and reduced costs. However, there are still a number of issues that restrict the use of e-learning throughout Europe.

Anecdotal evidence suggests that there is a significant correlation between the level of IT infrastructures of a country and the adoption of technology-enabled educational tools such as e-learning by institutions or corporations in this country. Compared to the EU average, in more developed economies (UK) there are higher levels of Internet access whereas in less developed economies lower.

The European and Country literature review and questionnaire/survey highlighted a number of issues:

The following important issues were highlighted after reviewing all responses from the five Countries (although there are differences in the different Countries - the detailed Country by Country responses can be found throughout this Report).

Throughout Europe our survey highlighted that the top three perceived important advantages of e-learning were (i) greater satisfaction in the learning, (ii) job related and (iii) multiple choice - with the least advantageous being "time flexibility" with the top three perceived important disadvantages of e-learning were (i) need for facilities nearby, (ii) course selection difficulty and (iii) need for skills.

As regards e-learning delivery methods around a quarter of respondents wished to undertake courses solely via the Internet, with an around third wanting Internet course assisted by face-to-face support.

The good news from the survey results was that over 65% of respondents felt that the training they received through e-learning would help them perform their job better.

However, SME owner/managers responders had little or no knowledge of the uses of e-learning, so there is work to do to promote the use of e-learning. The overwhelming method preferred by responders was through sharing best practice. This is borne out by the responders to our "Training Provider" questionnaire where only 21% were SME customers.

The e-learning market in **Greece** is rather underdeveloped. The deep economic crisis and the current situation in Greece could partly justify this fact. Despite this however, a set of actions need also to be undertaken. This set of actions should correspond to increased sophistication and adopt an inter-governance perspective, in order to build and effectively implement highly demanding education and training policy reforms, and to deliver both on a short-term and a long-term basis. Such an approach will allow these reforms to bring results, as it regards the learning outputs, in the next three-year period, with measurable up-skilling of human resources, through focused and advanced actions. An example of actions in line with this proposal includes the development of various models for the design of web-based electronic train systems (ETS) for Greek SMEs.

Slovak SMEs recognize that in order to increase their competitiveness and achieve more growth the education is an indispensable precondition. They are also fully aware that in terms of time efficiency, cost savings and overall flexibility, e-learning is the ideal choice compared to full-time form of education. However, when comparing the three main types of education (traditional – presence based, combined, e-learning), combined form continues to gain the best score among employees. In addition to frequently stated fear of losing personal contact between trainers and participants of the course, the lack of motivation or lack of information on the use of the system are other perceived disadvantages of e-learning.

This awareness is emerging also in **Italy**, although there is still a long way to go before a systemic implementation of the use of e-learning is reached. For instance e-learning is used mainly in large enterprises. In SMEs, at the moment, the implementation of e-learning systems is very slow and doesn't meet the expectations and/or needs of the users. The e-learning sector in Italy has a great growth potential but the current situation cannot be compared to other countries (USA, Northern Europe, Asia etc.). This is due to several factors among which there is definitely the lack of powerful infrastructures.

The slow diffusion of the broadband has a negative impact on e-learning implementation. For instance in **Italy** 22.000.000 of people don't have access to 20Mbps band. In 2014 64% of the Italian families have an internet access but there are still 21.9 million people that don't use internet. Among these people, elderly, children (1-6 years), Southern Italy and the islands. In these conditions, it is not surprising that the e-learning market in Italy is not comparable to the one of the developed countries and the teaching programmes are limited and technologically outdated.

Although e-learning has seen a huge increase in recent years, **Spain** remains below in terms of adoption of e-learning as an effective educational option, compared to the EU or the United States. Several studies found that there is no direct relationship between Internet penetration in the country and the demand for online training. In 2013 the penetration of e-learning accounted for 18% in Spain, above Portugal, Austria and Sweden, but clearly below other EU Member States.

The need to economise and to encourage growth in the **UK** suggests that e-learning can provide a 21st century alternative to traditional training packages. The "digital divide" may be interpreted in terms of generational use and although one should not generalise, it is apparent that younger employees of large organisations are more likely to consider e-learning as the preferred means of accessing training and information. Social media, including *Facebook*, *Twitter* and *LinkedIn* are often viewed as the preferred means of communication and SMEs, sole traders and larger organisations are becoming adept at sharing, trading and training via these technological hubs. Within these areas, e-learning and SMEs continue to develop a working relationship although there seems to be a gap between what is predicted, proposed and aimed for and what is happening in practice.

For SMEs generally the most frequent services required are e-learning training courses with tutorials and evaluation services. As the investment required in order to develop personalized platforms and courses is too high for many SMEs (taking into account that any European SMEs have less than 10 employees), the most common solution adopted is the purchase of e-learning courses. The content is standardised and the employees are treated individually, like the other participants on the course.

One of the most widespread problems in relation to distance education is the difficulty of tutoring courses. To do this, some centers are incorporating in their virtual campuses, intelligent tracking systems. These systems simulate real tutors and monitor the students throughout the virtual space in order to give each user the information required according to their knowledge and learning skills.

Although the use of the Internet by individuals throughout the EU has risen from 51% in 2007 to 75% in 2014 those individuals accessing the Internet for on-line training has only risen from 3% in 2007 to 6% in 2014.

Therefore there is a clear need to increase the quality of the e-learning offer.

The fragmentation of the initiatives, the waste of public resources and the lack of a common evaluation system are the main critical factors. There is no communication between e-learning providers and the best practices are not so visible and shared.

E-learning systems in Europe need to have a coherent strategy that foresees the definition of some parameters to plan e-learning courses, common evaluation guidelines and repositories to share good practices and common standards to manage the processes.

> ***" … e-learning has the potential to increase retention of information by up to 60%; nearly 25% of employees leave jobs because there is not enough room for training or development, whilst companies who offer e-learning are able to generate 26% more revenue per employee..." (e-Learning Industry, 2014)***

The publication of the "Best Practice Guide to e-learning for SMEs", in January 2016, will address, as far as practicable, many of the specific issues raised in this Report to increase the use of e-learning, and its value to SME development and growth, and inform e-learning course developers of the concerns raised by SME employees and employers.

This European-wide e-Learning Recognition Review Report has been published on the Project website http://www.sme-elearning.net) and is freely available to download to interested individuals and organizations.

SMEELEARN Project Summary

In order to place this Recognition Review Report in the context of the whole SMEELEARN Project the following section gives a summary of all the elements of the SMEELERARN Project and the importance of this Review Report to the outcomes of the whole Project.

This SMEELEARN Project, which has been funded by the European Union through the ERASMUS+ KA2 Programme, has as its aim to test and transfer e-learning practices that are common in the formal education sector to SMEs in order to address the vocational skills needed to develop and sustain SME growth in Europe. This will involve working closely with SMEs employees and managers and VET providers. Research has shown that SMEs have limited resources for offering training and what they really require is "informal" training for specific problems they encounter, at a time to suit them. Bespoke training is not usually on offer from traditional training institutions. Therefore e-learning offers a great opportunity. However, there is reluctance on the part of SMEs, and their employees, to engage in this form of learning, despite the many advantages.

The objective of this Project is to ensure, by way of the creation of an "SME e-Learning Portal", that SMEs are aware of the e-learning opportunities available to them, and, more importantly, how these can be used to best advantage to ensure acceptance by the Managers and workforce. Throughout Europe SMEs are increasingly important to the economic well-being of the EU. It is estimated that they account for 99% of all business with 42% of all turnover.

Meeting the training needs of SME employees is a challenge that requires review; their very survival may depend on an appropriately trained workforce. Established to provide real solutions to the challenge of embedding e-learning in the training practices of SMEs, the SMEELEARN consortium seeks to promote the development of strong economies through the identification and use of innovative training systems.

The Project outcomes will include establishing a "SME e-Learning Recognition Review Group" to conduct research leading to the production of a "Best Practice Guide to e-learning for SMEs throughout Europe."

This will include: a study of the conditions under which SME employees will be more likely to accept and use technology-based learning; recommendations as to what strategies SMEs need to adopt to gain the acceptance of their employees and the development of a "best practice approach" for SMEs when considering including e-learning as part of their training portfolio.

This project will:

- *develop and promote a "SME e-Learning Portal" to ensure that innovative training practices are shared and made accessible to European SMEs,*

- *create associative opportunities to embed an e-learning culture within participating organisations,*
- *engage the target group in the processes of e-learning by ensuring that training materials are accessible and fit for purpose, and*
- *provide a web based Portal that will feature, promote and emphasise the importance of e-learning and blended learning as innovative, accessible and economically viable alternatives to traditional and often costly training practices.*

The impact of the Project will be the direct promotion of e-learning as a viable training strategy, through the dissemination of the report and its findings, the transfer and embedding of innovative training practices in SMEs contributing to the sustainability and growth of SMEs within the EU.

1. Introduction

SMEs engage easier in short-term training, tailored to their own needs and short-term goals, rather than in long-term training. The increasing use of e-learning in education has allowed SMEs to organize their learning and in their own time and space at low cost. Informed by "The Small Business Act (SBA) for Europe" (2008) and "Thinking Big for Small Businesses" (EU2011) this project reflects the need for building and maintaining a fit for purpose approach to SMEs and e-learning.

Reflecting the need to deliver the key objectives of the "Europe 2020 strategy" - smart, sustainable and inclusive growth - the Project seeks to promote the transfer of innovative training practices from formal educational institutions to SMEs. In the UK, 93% of firms are classified as SMEs (Learning Skills 2011) but 88.8% of UK SMEs have less than 10 employees with sole proprietors accounting for 23.3% of total enterprises. (UK Office for National Statistics 2011). Sector specific digital learning centres provide online and blended learning opportunities but rely on self-identification of need. Identifying needs and searching for courses may detract from business priorities.

By creating a "SME e-Learning Portal" SMEs would have a source of information to access. The Greek National LLL Plan (Strategic objective 4) promotes the reinforcement of innovation and creativity and entrepreneurial spirit at all levels of education and training. Among the Member States, Spain has the highest unemployment rate of 28% (July 2012) and youth unemployment 54.2%. Considering these facts, and as a response to these fragilities, the political priority for Spain has changed and now is focused on finding solutions that can ensure the employability of citizens, including SMEs. The role of SMEs play an important place being part of the Ministry of Science and Innovation research policy that the Spanish government created in order to deal with present realities. The interest of the state in this area can been seen, analysing The National SME RTD Programmes and Initiatives (Spain) that try to respond to relevant needs through innovation and research.

As regards Spain it is imperative that alternative methods of learning, such e-learning, should go together with the creation of more small and medium-led businesses generating new sources of welfare and jobs. This project seeks to reflect national concerns underlining the importance of integrating new forms of learning with the traditional methodologies.

By successfully transferring innovative practices previously developed within formal educative organisations including universities, colleges of further and higher education, this project will aim to:

- address the imbalance experienced by lack of access to, or knowledge of, the availability of e-learning initiatives,
- change individual and organisational perceptions of training needing to be only provided through traditional workroom/classroom based pedagogies,
- introduce innovative pedagogical materials to a previously hard to reach target group, initiating a heightened awareness of the importance of illustrating how e-learning can address difficulties associated with ensuring that employees receive fit for purpose training, and
- recognise the role of accessibility to e-learning by emphasizing the many ways in which e-learning can be accessed using the latest technologies including smart televisions, smartphones, iPad and Android apps.

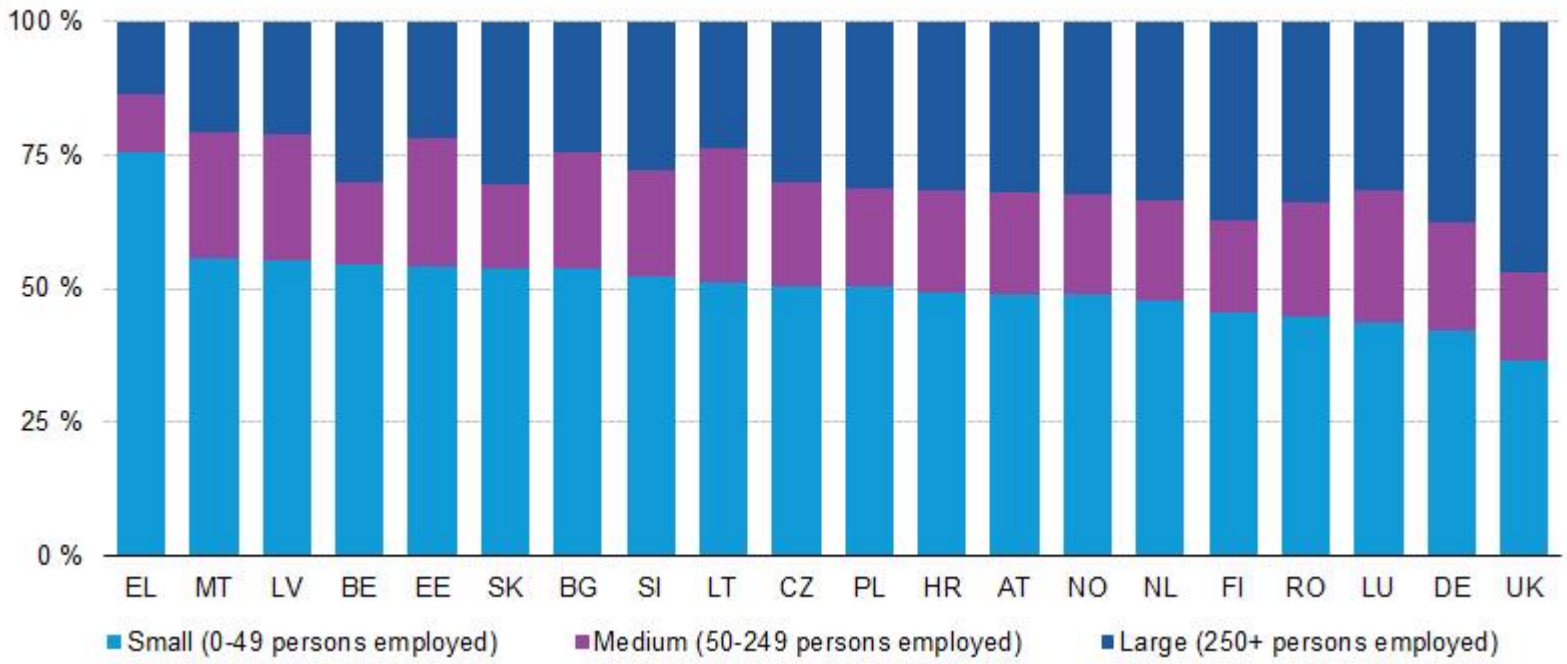
The result of the SMEELEARN Project is to research and publish a "Best Practice Guide for SMEs & e-Learning Developers" to accompany a new "SME e-Learning Portal" so that SMEs are aware of the e-learning opportunities available to them, and, more importantly, how these can be used to best advantage to ensure acceptance by the Managers and workforce. Seeking to address issues associated with access to information related to e-learning and to provide a means of sharing best practice.

2. European Literature Review

Small and medium sized companies (SMEs) are important for the economic world, contribute to output and to the creation of employment but are under high economic pressure (European Commission, 2013). This economic pressure and other ones require continuous improving of company efficiency, of staff knowledge, of training and learning to survive or stay competitive.

The distribution of total employment across small, medium-sized and large enterprises is shown in figure 1 below. Small enterprises typically account for between 40 % and 60 % of total employment. The two exceptions are Greece at the high end and the United Kingdom at the low end. When looking at figure 1 we see that small enterprises in Greece account for 75 % of total employment, whereas in the United Kingdom small enterprises account for only 37 % of total employment.

Figure 1: Distribution of total employment across small, medium and large organisations in Europe (Eurostat 2015)



Source: Eurostat 2015

Evidence from the field of labour economics suggests a positive relationship between training and firm productivity (Blundell et al., 1999; Konrad and Mangel, 2000).

This, however, has tended to focus on large firms, which are understood to provide more training per employee than small firms. A number of reasons are offered to explain why small firms may be less disposed to training than large firms. These reasons include the perceptions

that training is costly (Hankinson, 1994), and that benefits are not considered to be performance enhancing (Fernald et al., 1999).

At the European level, significant attention has been directed towards the role of vocational education and training (VET), which consists in learning programmes aiming to equip people with skills and competences to be used in the labour market.

The importance of VET activities for individuals, firms and society as a whole, is nowadays widely recognized and perceived as a key element for lifelong learning (European Commission, 2007).

By solely focusing on firms, it is possible to narrow down the scope of analysis to continuing vocational training (CVT), which ranges from short vocational training courses to accelerated and lifelong training courses. CVT usually includes either internal courses designed and managed by the enterprise itself, or external courses designed and managed by a network of enterprises or social partners, at local or regional level. Firms are increasingly investing in continuing vocational training, which is conceived as an engine for innovation and a means for increasing labour force productivity. In such a respect, a central role is played by the ability of individuals and firms to use information and communication technologies (ICT). The tight connection between education and training and information technology has opened the door to the birth and development of e-learning.

E-learning enables businesses to remove distances (by distributing training to multiple locations easily and conveniently), to lower expenses, to facilitate training access of a large number of workers, to simplify complex processes and to make the organization more flexible.

Results of projects and researches (Cedefop, 2005; Attwell, 2003) show that SMEs are restricted in the efficient use of different forms of learning and technology for learning and in adequate management learning approaches. Furthermore, Hamburg *et al.* (2005) detect some critical situations met by SMEs when implementing e-learning activities: first, the fear that learning activities not directly involving teachers may be less effective than traditional forms of education; second, the costs stemming from the startup and maintenance of e-learning systems; finally, the lack of firm vocation and suitability to use e-learning techniques. A study carried out by Chang (2003) shows that workers in large organizations mostly prefer electronically-aided learning, while workers of SMEs exhibit a preference for traditional vocational training or face-to-face learning.

It is also known that the most liked learning in SMEs is informal one and the predominant training method is workplace training for daily tasks as it is viewed as “low cost” (Admiraal and Lockhorst, 2009). The integration with formal strategic training is often not planned. Also the blending of face to face training with self-paced e-learning is not efficiently used (O'Brien and Hamburg, 2014).

Due to limited financial resources managers often reduce learning activities and also the introduction of new technologies in their companies. According to other studies e-learning is not in high demand with SMEs although it is a suitable medium to quickly update the typical training requirements of SMEs (Beer *et al.*, 2008; Hamburg and O'Brien, 2013).

An empirical research carried out by Leuven *et al.* (2002) underlines that firms may be willing to invest the socially optimum amount of resources in general and specific training only if workers are sufficiently motivated by reciprocity. A reciprocal worker, indeed, will have 15% higher rates of return to investment in education and training than workers with a low sensitivity to reciprocity (Leuven *et al.*, 2002).

Research by Bryan (2006) and Spicer and Sadler-Smith (2006) show a – weak and sometimes inconsistent – causal relationship between training or organizational learning and performance in SMEs.

An evaluation study on online learning at the workplace (Oberski et al., 2000) shows that some workers indicated that they were unfamiliar with the Internet technology, the connections were unstable and slow, they had unsuitable software and hardware to download files, and there was limited technical support.

This conclusion on the limited technology infrastructure is confirmed by the results of other evaluations of e-learning in SMEs (Fulantelli and Allegra, 2003; Hay, 2003). Recently, reports on positive use of e-learning in SMEs can be found. For example, Slotte and Herbert (2008) found positive effects of a simulation-based training of sales personnel of a Finnish bookstore chain on customer service skills.

3. Field Study

A group of researchers from all partners set up three different questionnaires, which are presented in Appendix A. The topics that were covered and the content of the items are based on studies on e-learning in small firms and learning at the workplace.

This survey was carried out from 1st May 2015 to 30th June 2015 in five European countries: United Kingdom, Spain, Italy, Slovakia and Greece. The survey was drawn up in the form of three online questionnaires:

- employers of SMEs,
- employees in SMEs and
- managers of vocational education providers to be questioned.

For each one of these three target groups a different questionnaire was prepared.

For the project as a whole over 7,000 translated electronic questionnaires were sent to SMEs belonging to various business sectors randomly selected from national databases which provide contact details and financial information for registered companies. Unfortunately the realized response rates were low in all countries ranging from 1% to less than 5%.

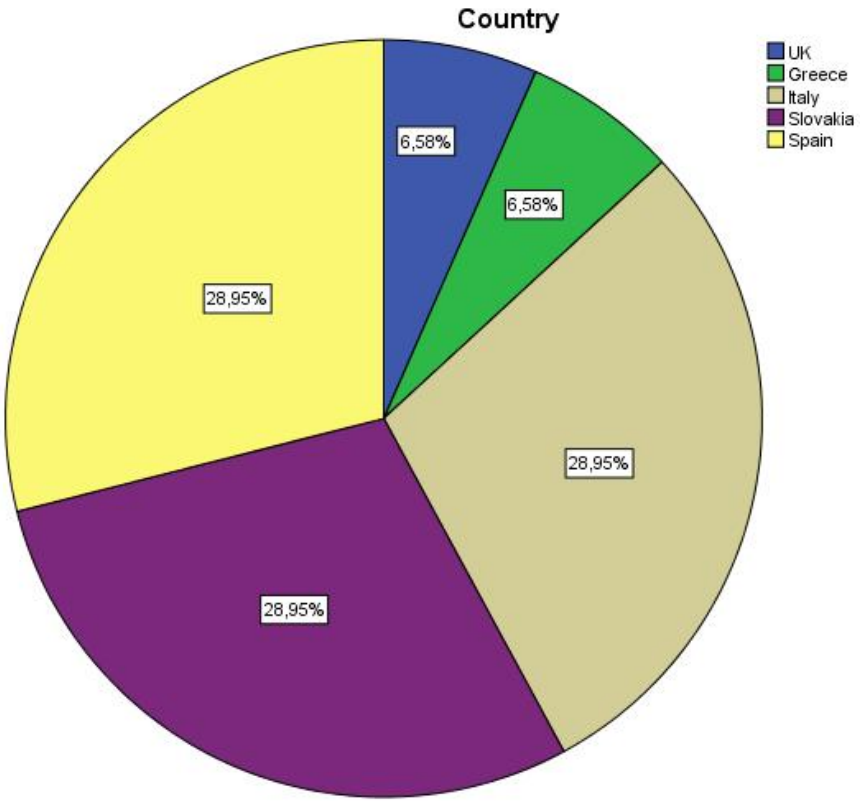
However, even with these low response rates a sufficient number of completed questionnaires was finally received for statistical analysis purposes. Except from some introductory categorical items on number of employees, work locations economic sector etc., all items were scored on a Likert type scale in order to be quantifiable and properly analyzed.

At the same period of time partners from each country sent another questionnaire targeted to education providers of their country. In that case the realized response rates were higher reaching on average the percentage of 10%.

The structure of the sample allowed the data to be analysed by country, size of company or business sector.

In the following pages we depict the comparative results of all responses starting from the employees, then from the employers and finally from the educational providers representatives.

EMPLOYEE QUESTIONNAIRE – DESCRIPTIVE STATISTICS

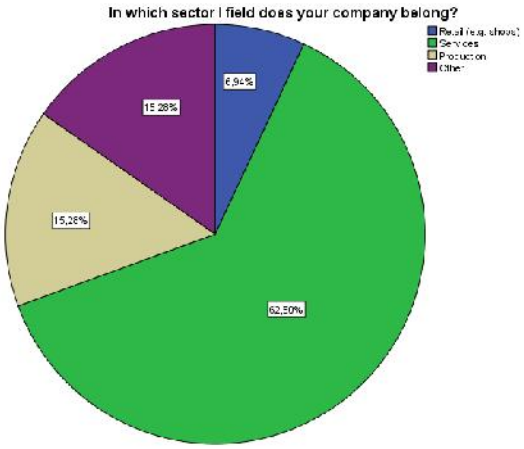


Country

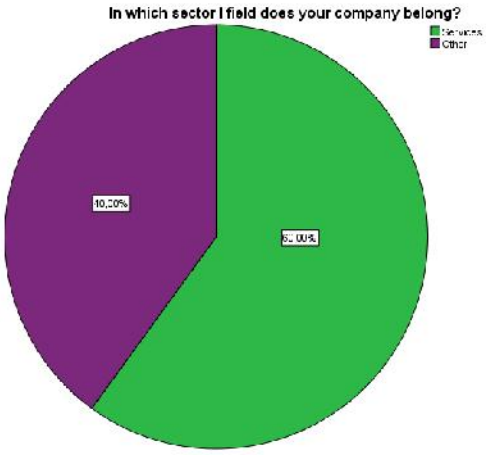
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UK	5	6,6	6,6	6,6
	Greece	5	6,6	6,6	13,2
	Italy	22	28,9	28,9	42,1
	Slovakia	22	28,9	28,9	71,1
	Spain	22	28,9	28,9	100,0
	Total	76	100,0	100,0	

Q.2 In which sector / field does your company belong?

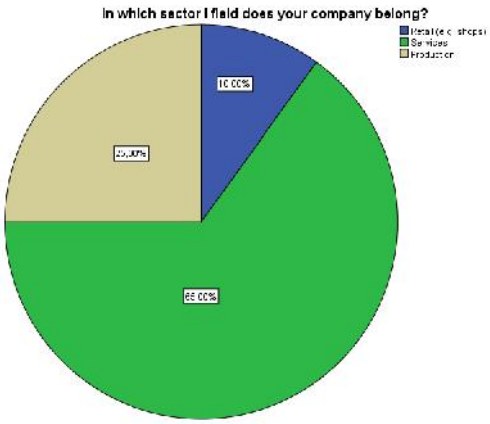
ALL COUNTRIES



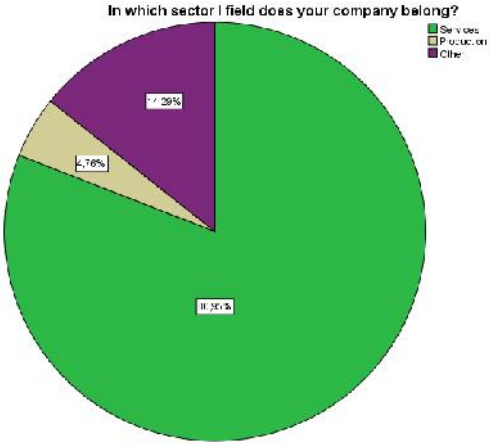
UK



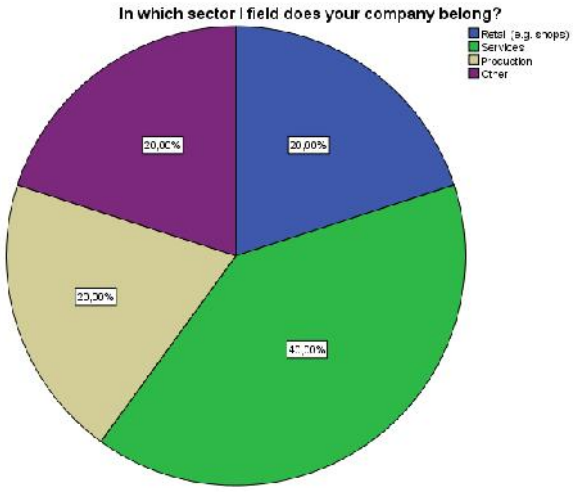
ITALY



SPAIN



GREECE



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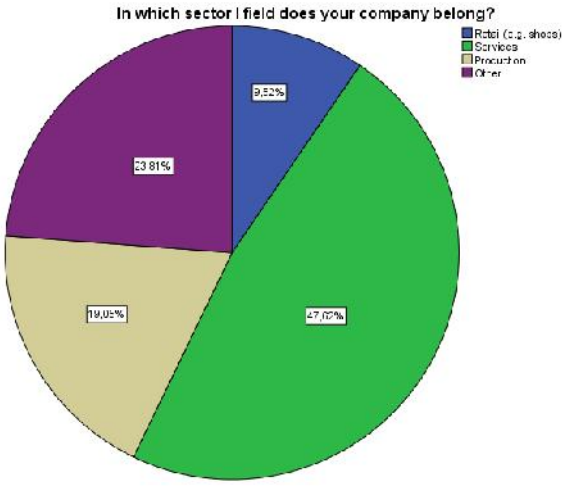
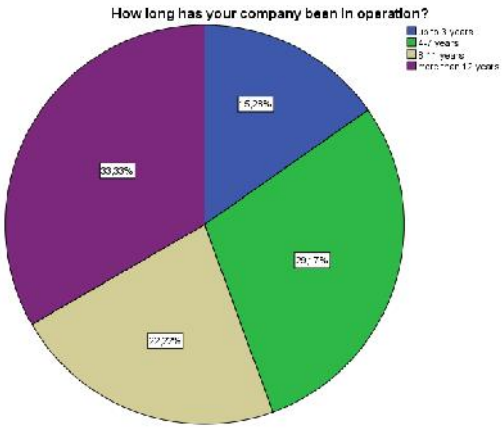


Q.3 How long has your company been in operation?

ALL COUNTRIES



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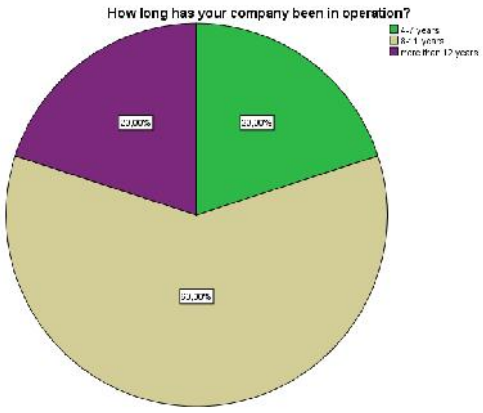

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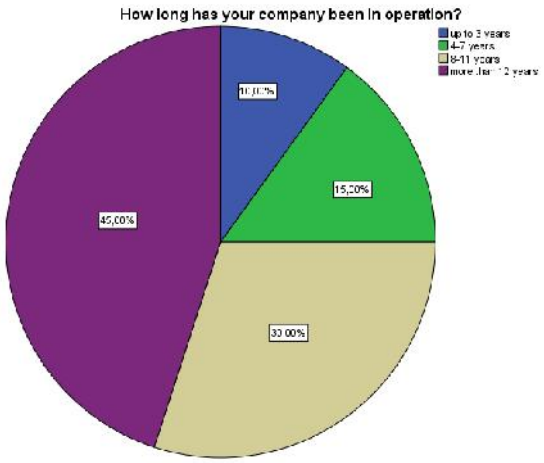

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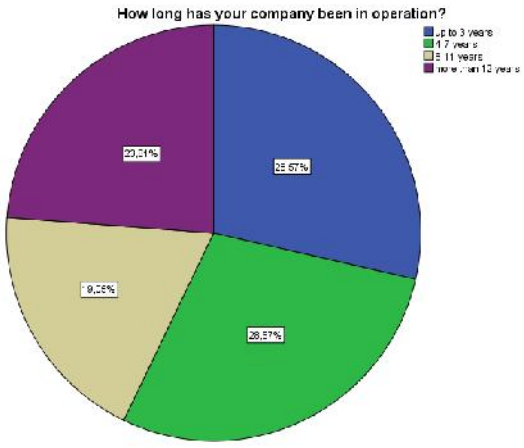
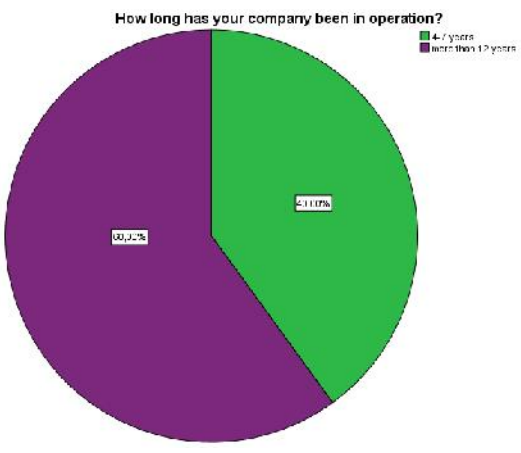
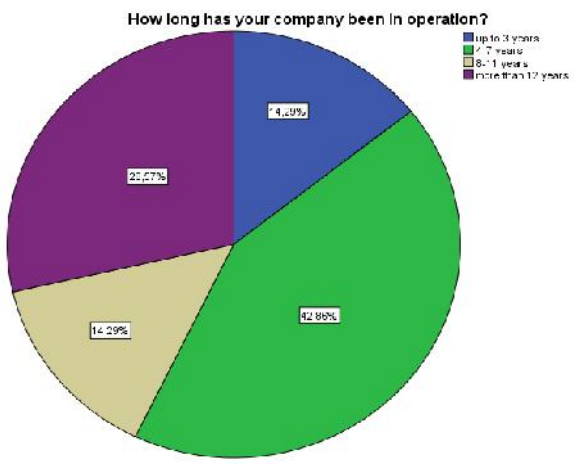


GREECE

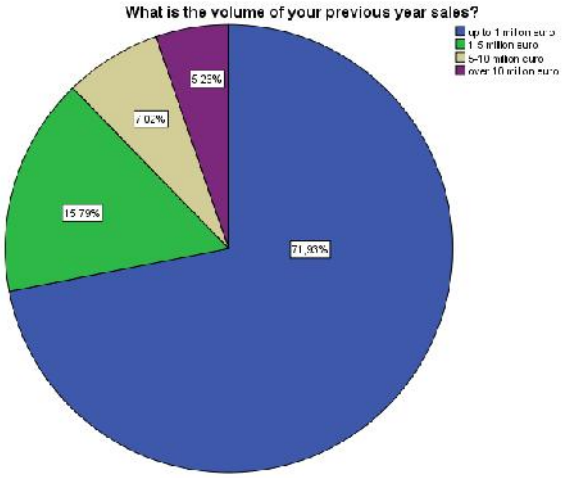


SLOVAKIA

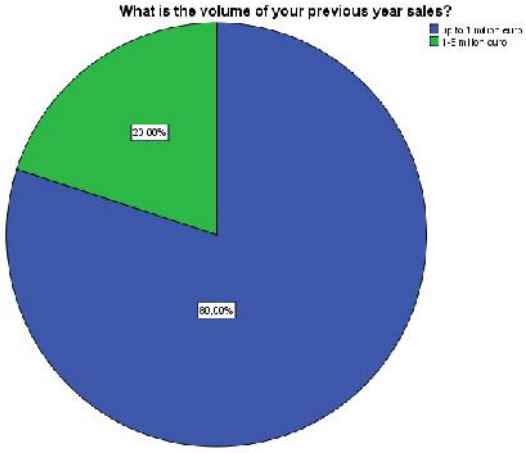


Q.4 What is the volume of your previous year sales?

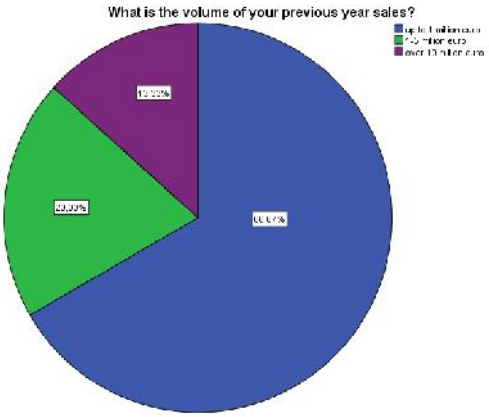
ALL COUNTRIES



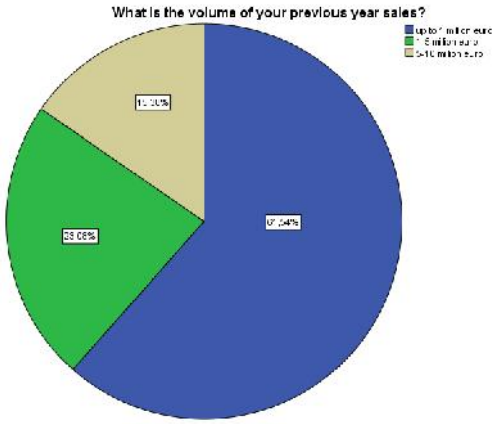
UK



ITALY



SPAIN



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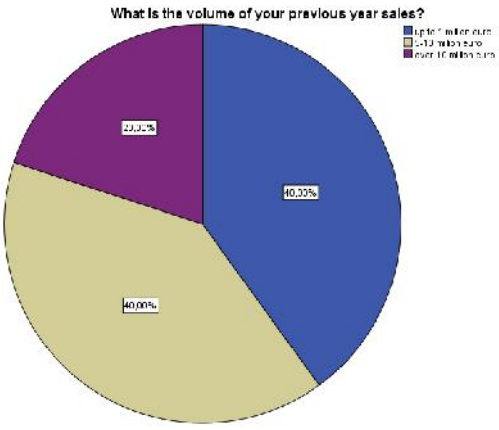

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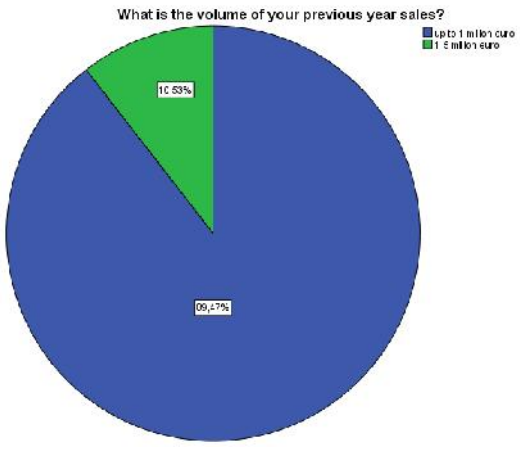
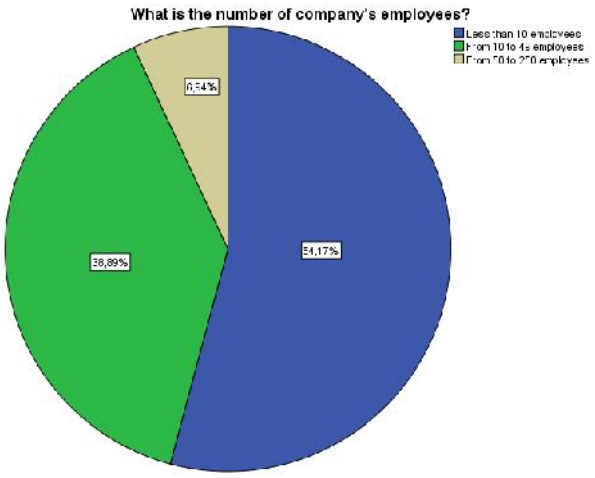


Q.5 What is the number of company's employees?

ALL COUNTRIES



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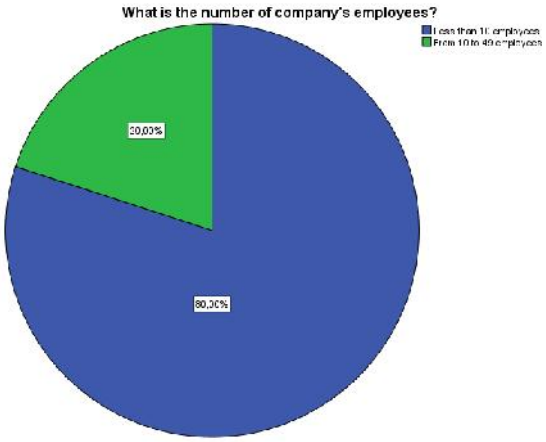

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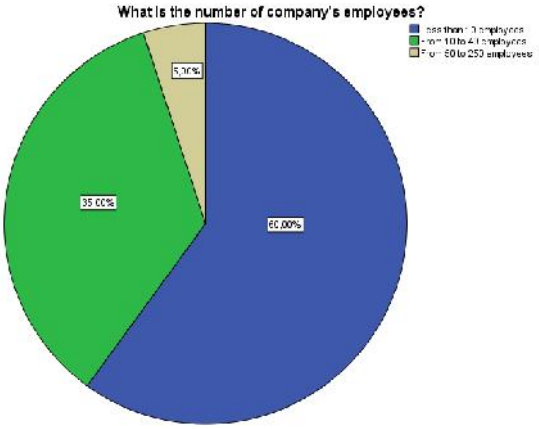

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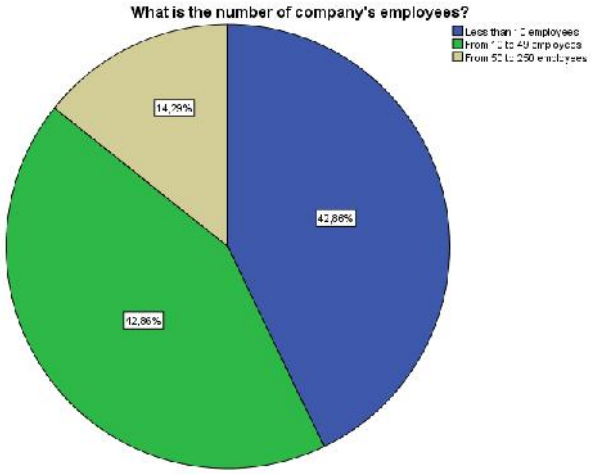

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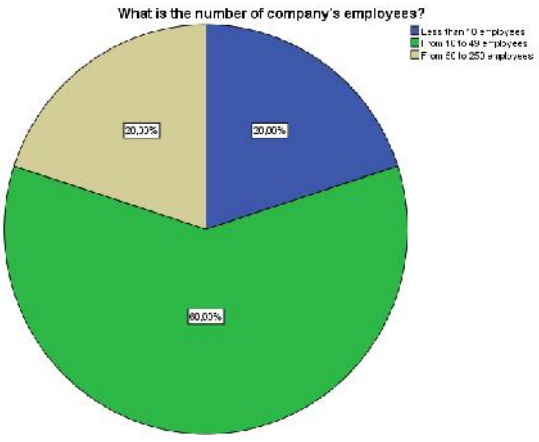

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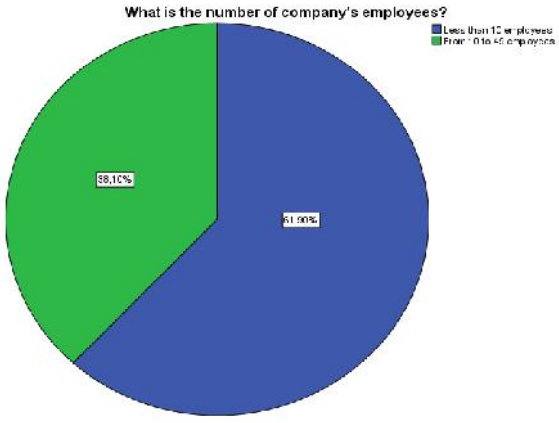
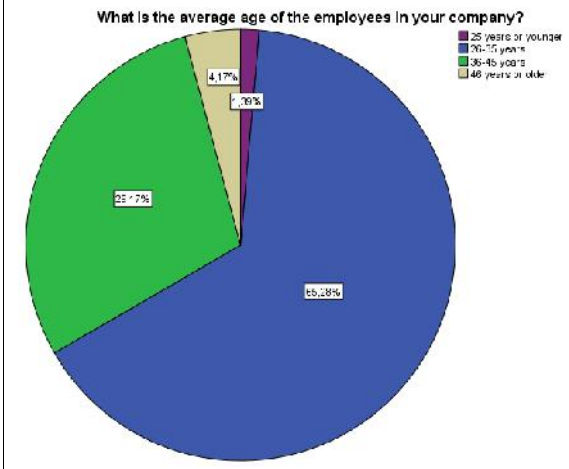


Q.6 What is the average age of the employees in your company?

ALL COUNTRIES



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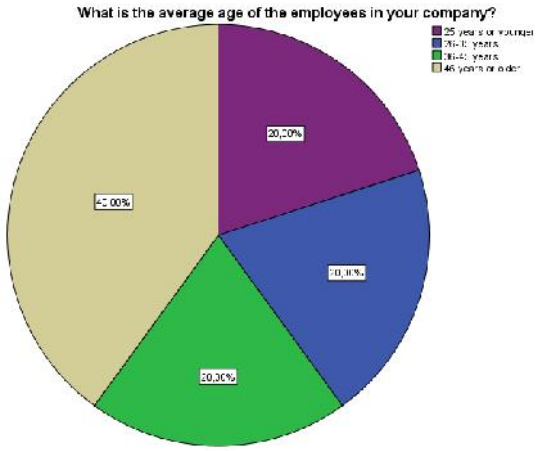

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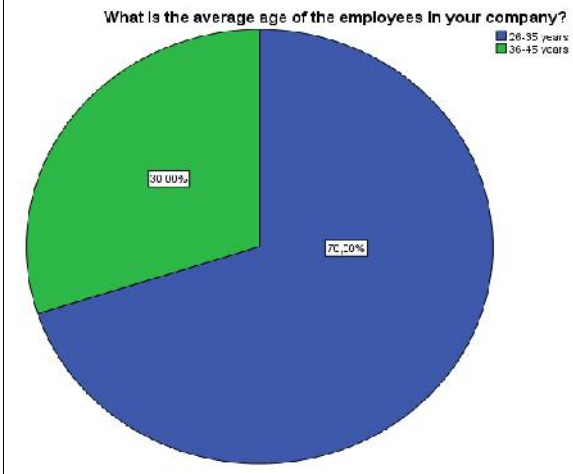

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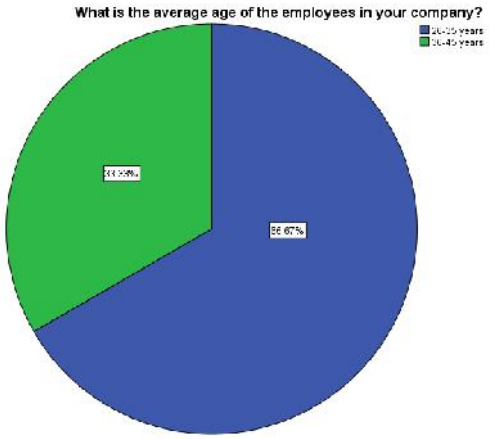

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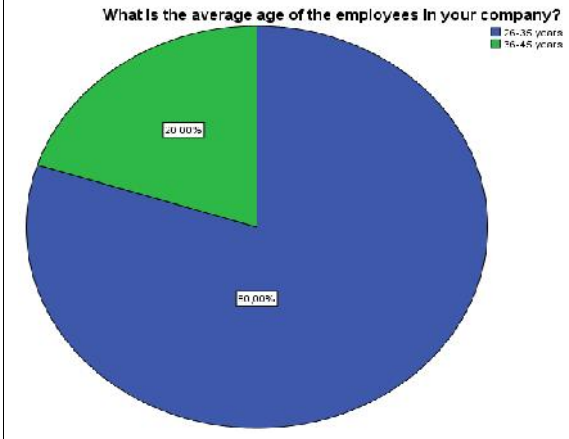

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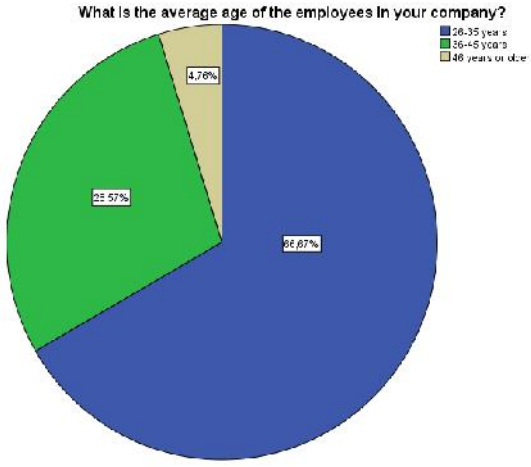
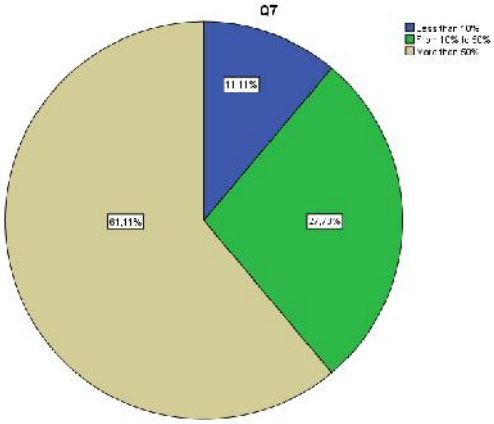


Q.7 What percentage of employees has a College, University degree or any vocational qualifications?

ALL COUNTRIES



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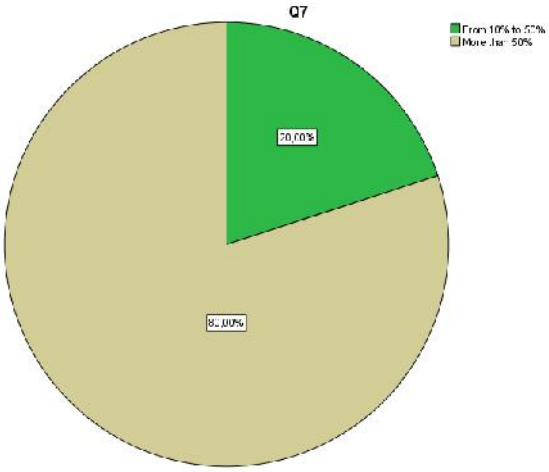

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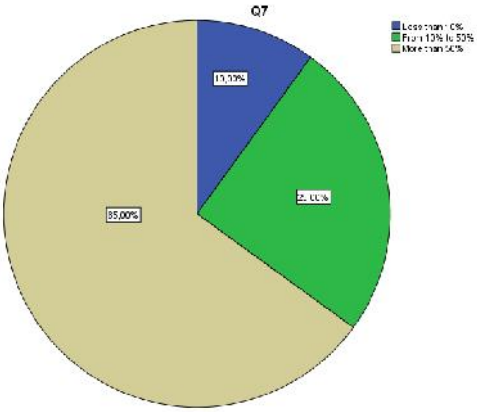

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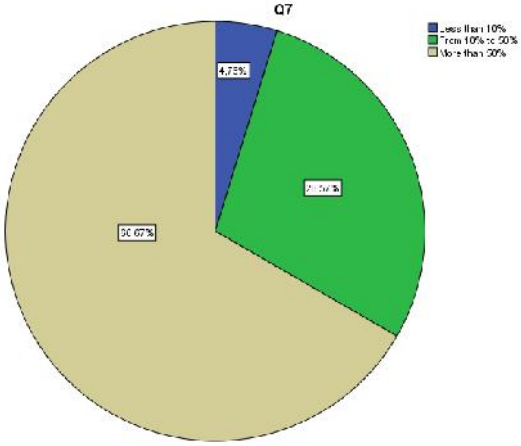

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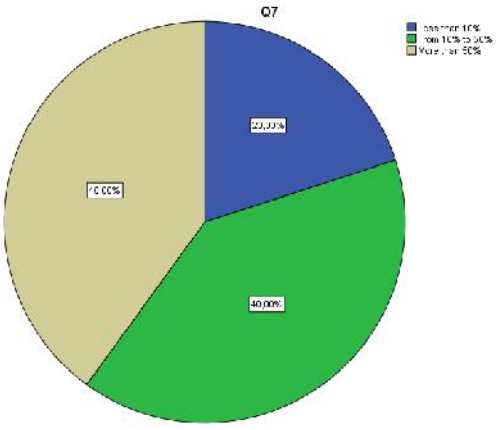
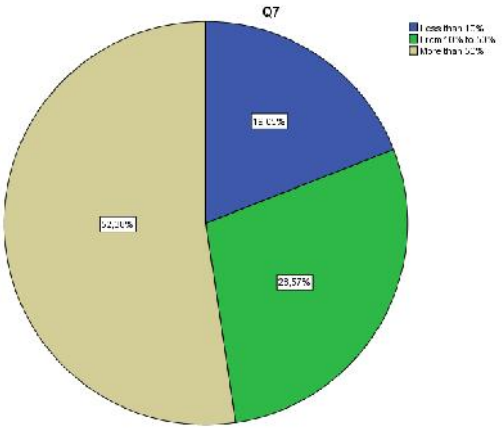
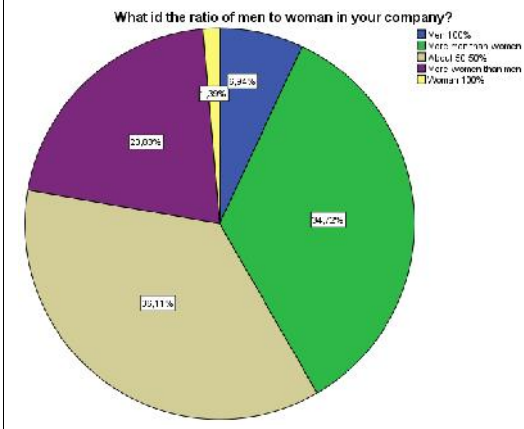


SLOVAKIA



Q.8 What is the ratio of men to woman in your company?

ALL COUNTRIES



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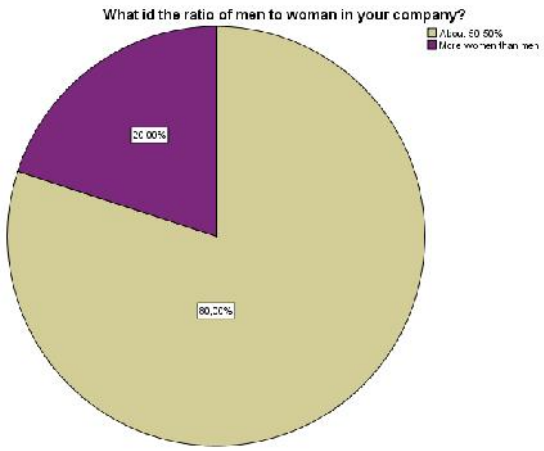

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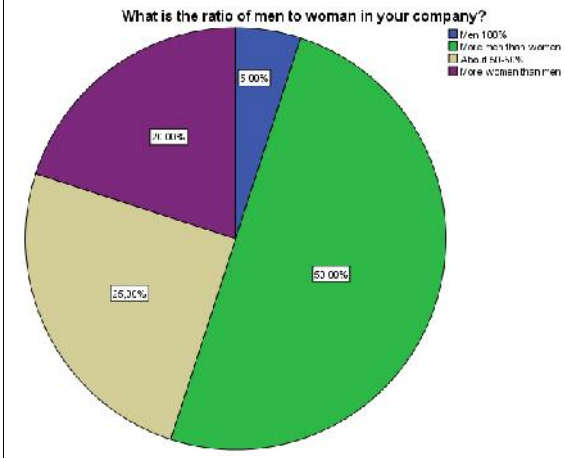

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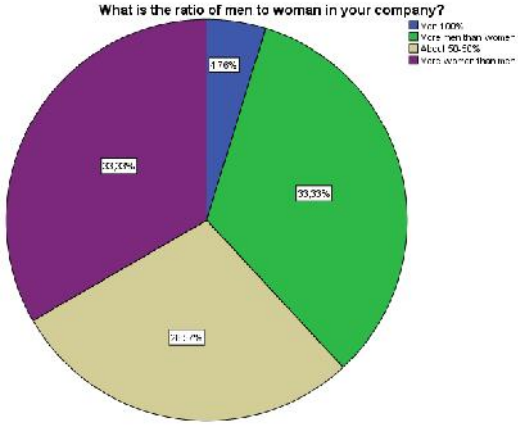

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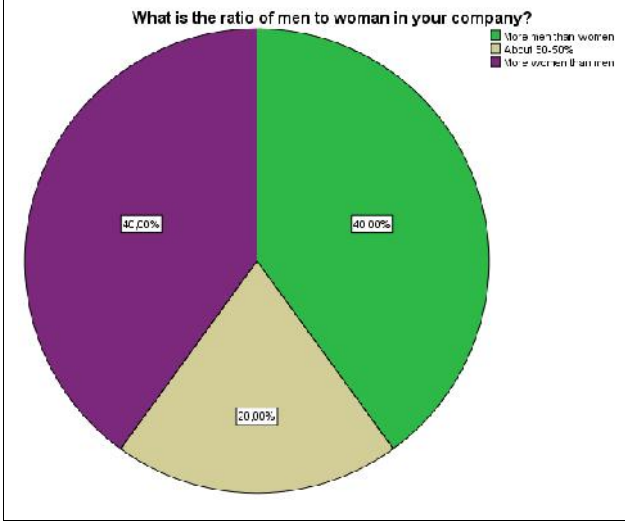

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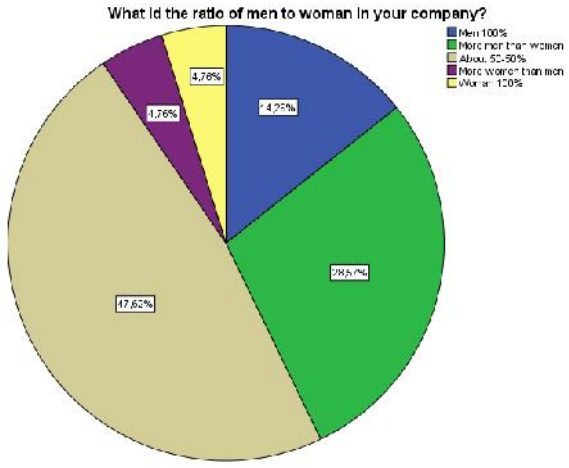
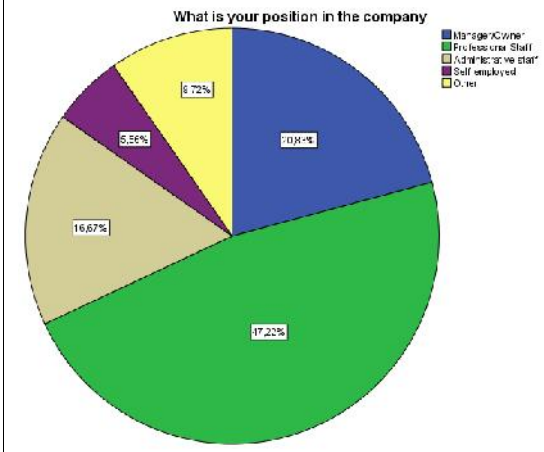


Q.9 What is your position in the company

ALL COUNTRIES



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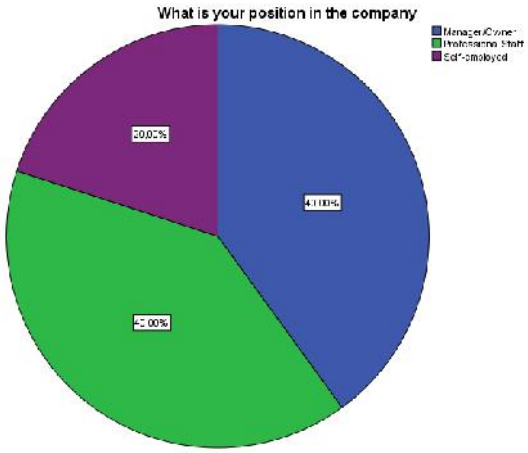

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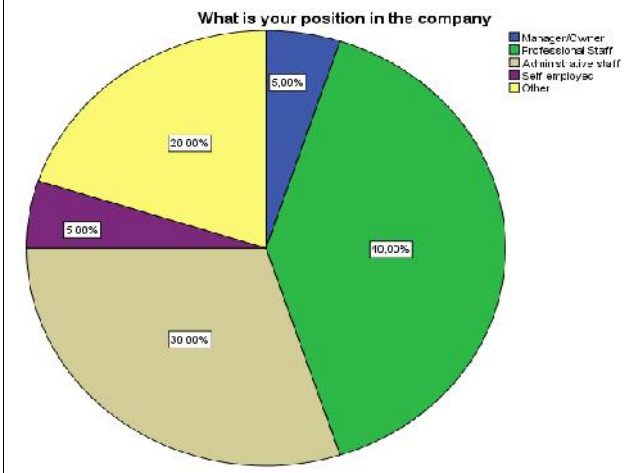

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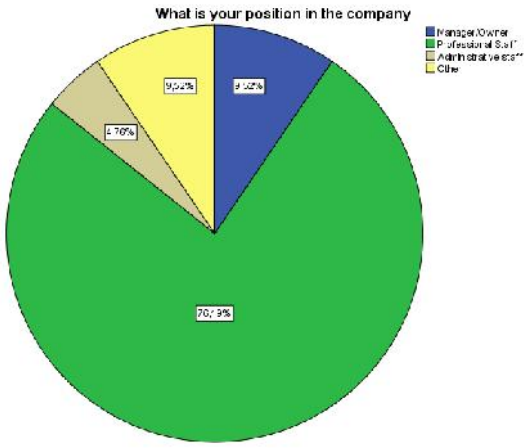

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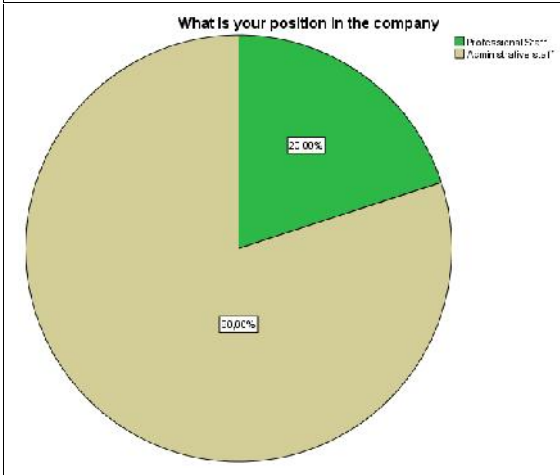

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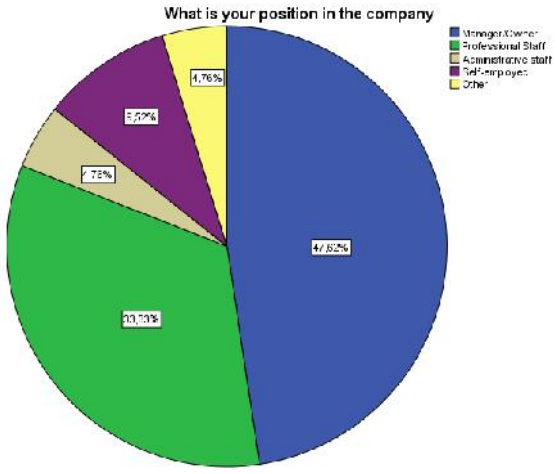
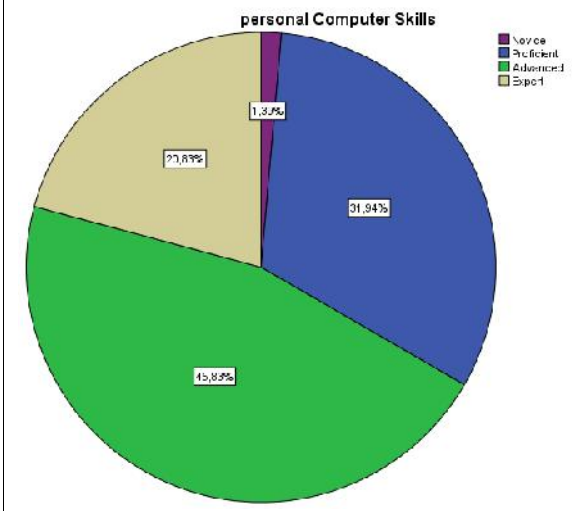


Q.10 Please rate your personal Computer Skills

ALL COUNTRIES



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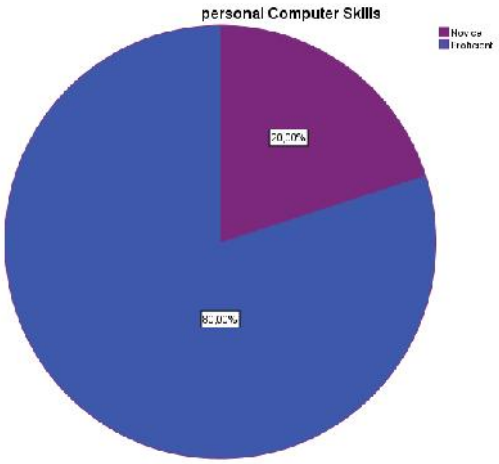

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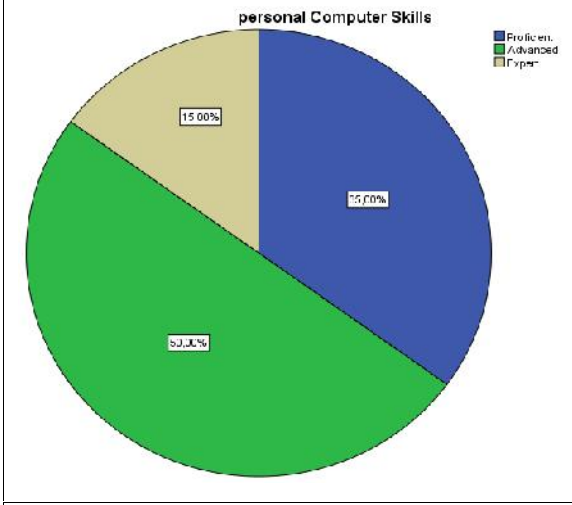

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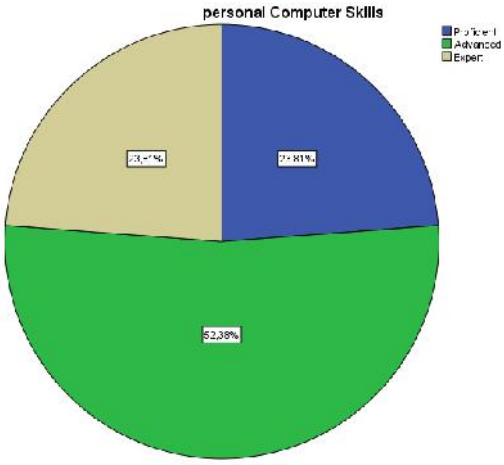

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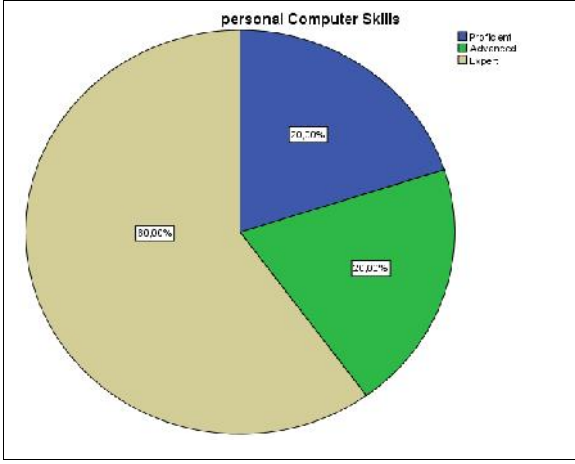

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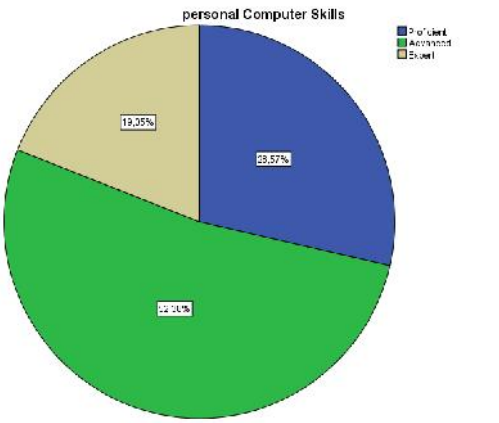
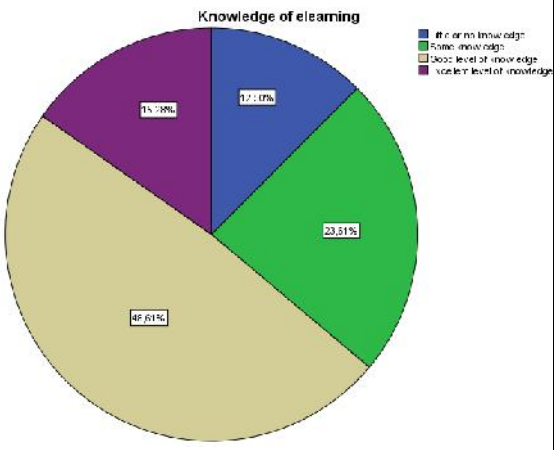


Q.11i Prior Knowledge of e-learning

ALL COUNTRIES



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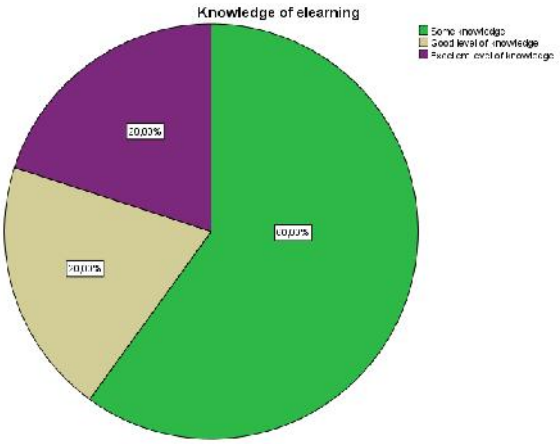

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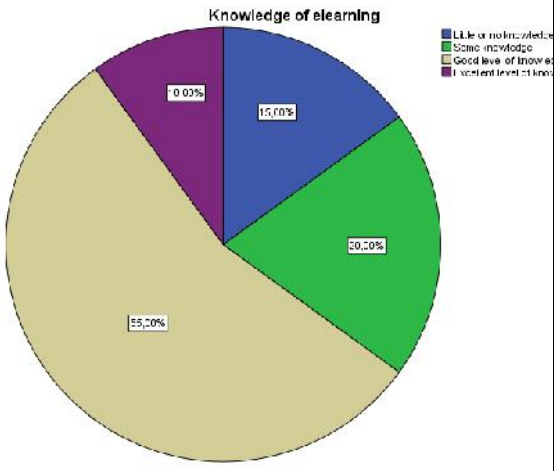

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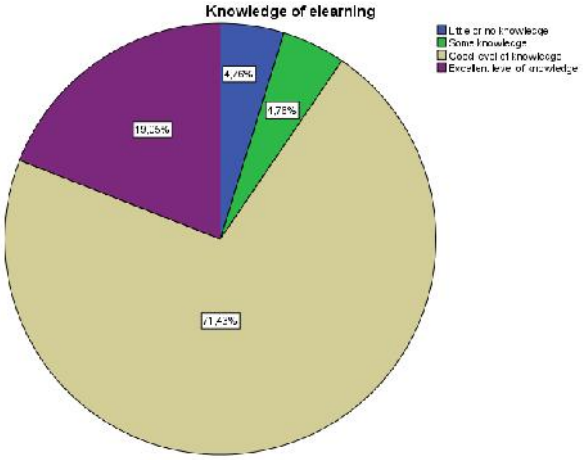

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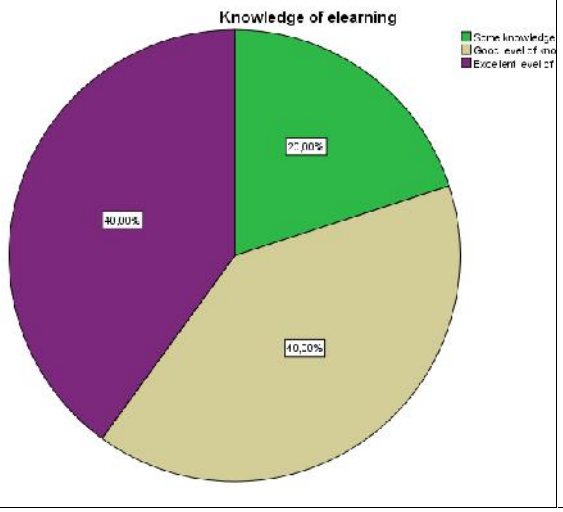

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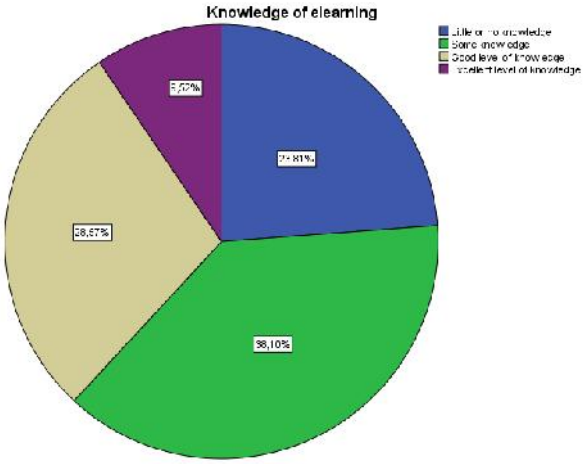
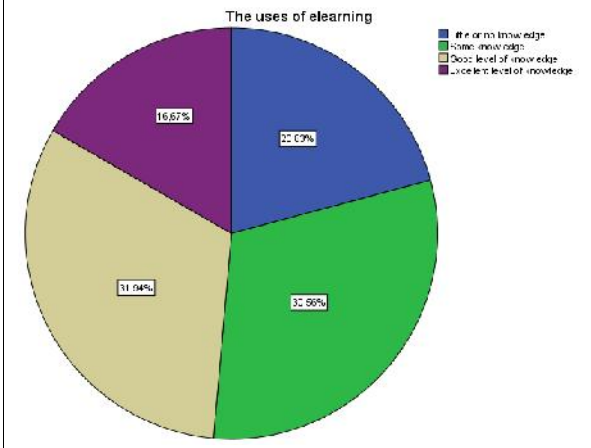


Q.11ii Prior Knowledge of e-learning (The uses of e-learning)

ALL COUNTRIES



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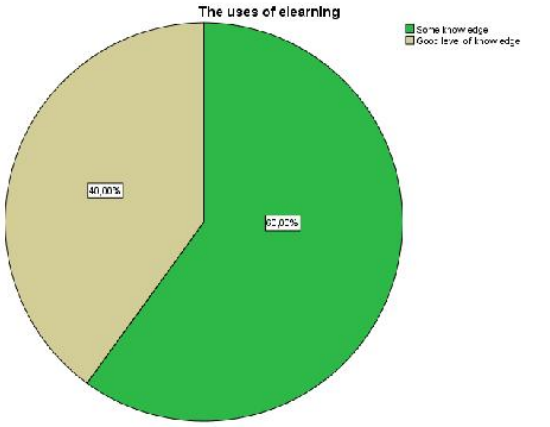
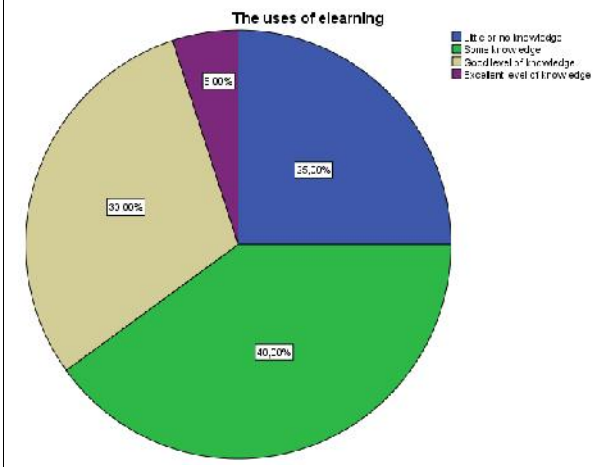


ITALY



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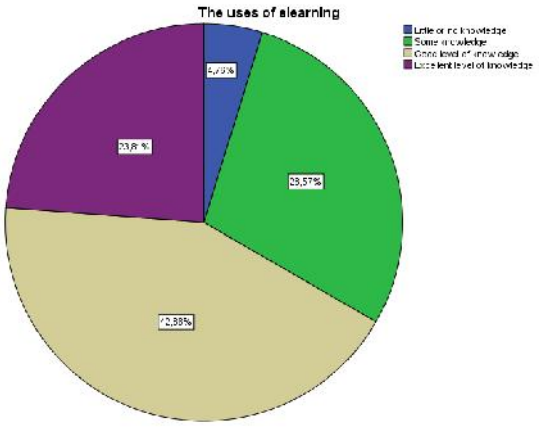

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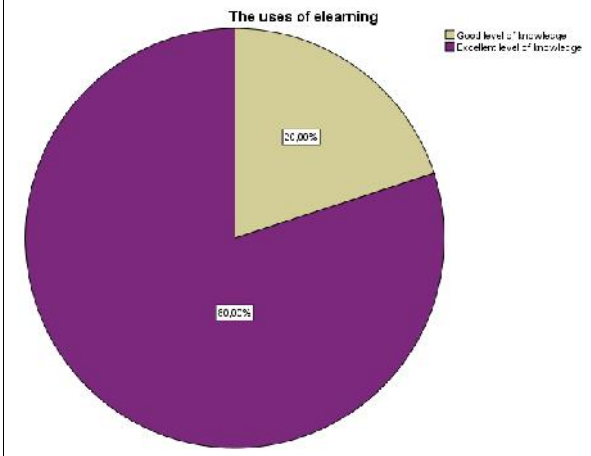

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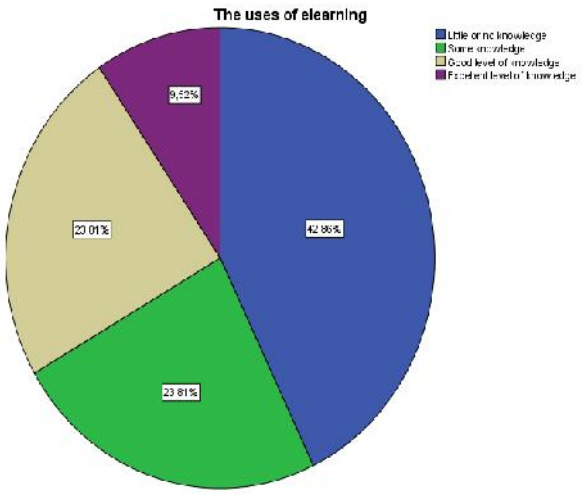
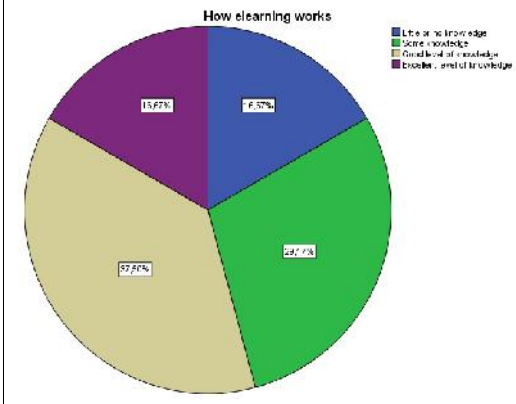
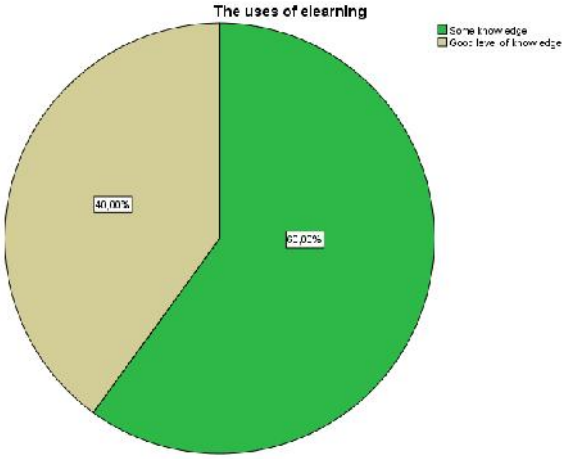


Q.11iii Prior Knowledge of e-learning (How e-learning works)

ALL COUNTRIES



UK



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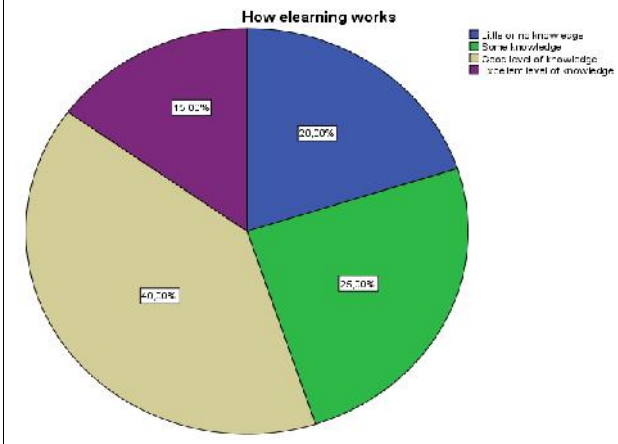

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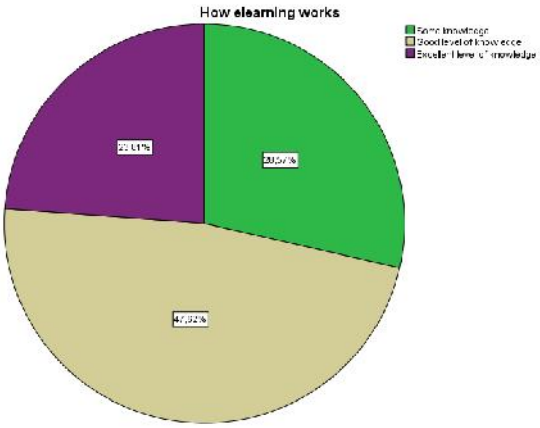

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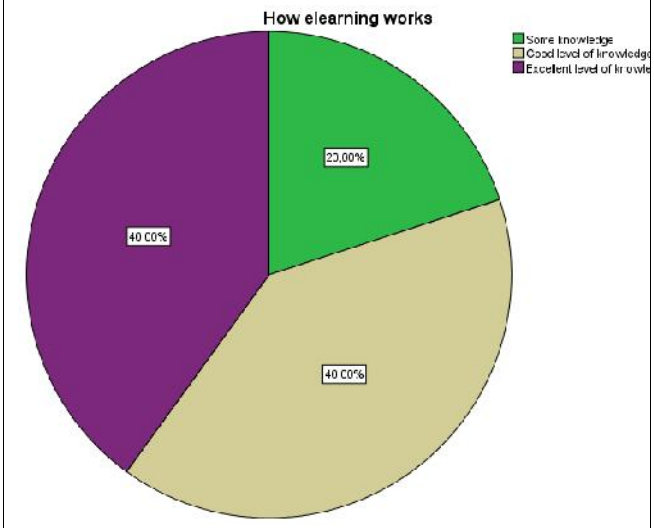

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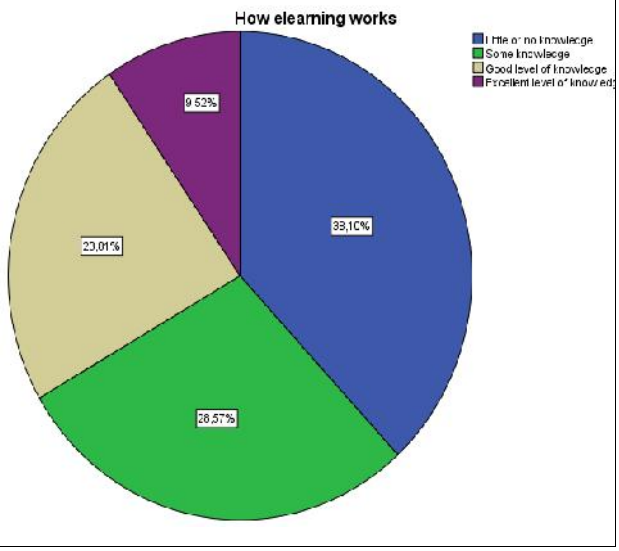
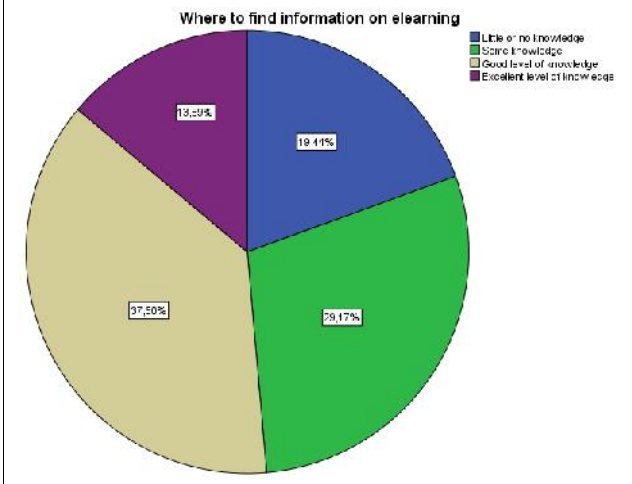
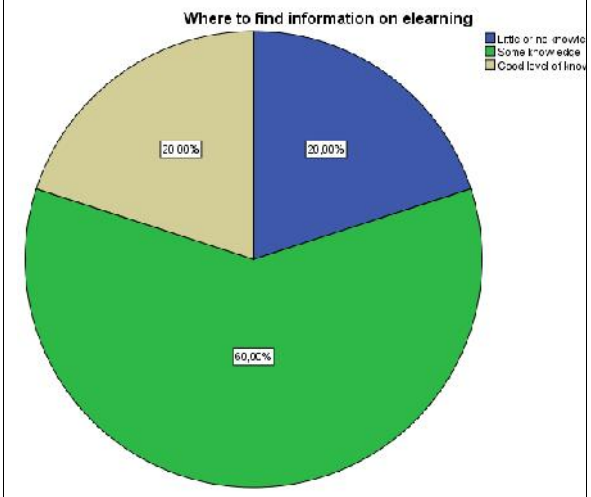
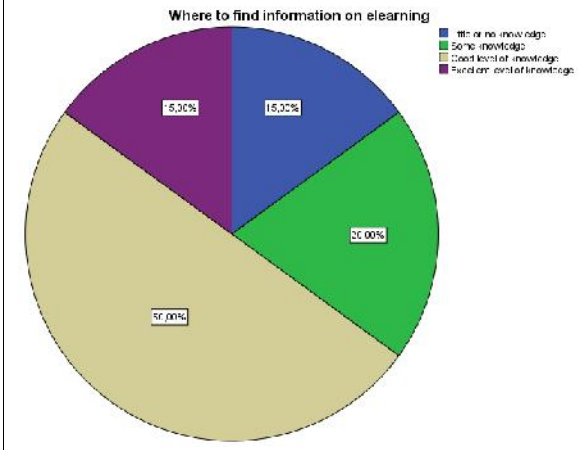
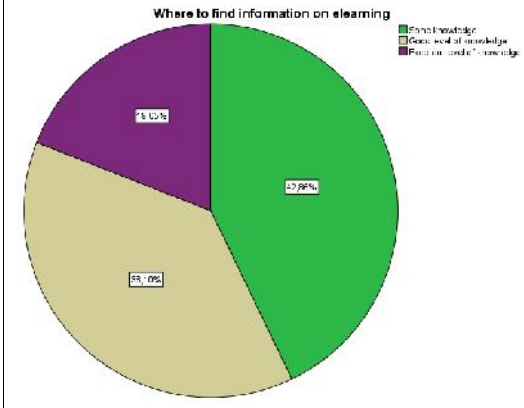
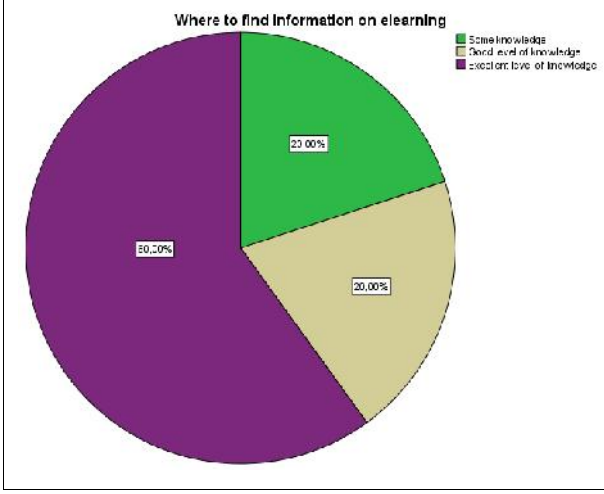
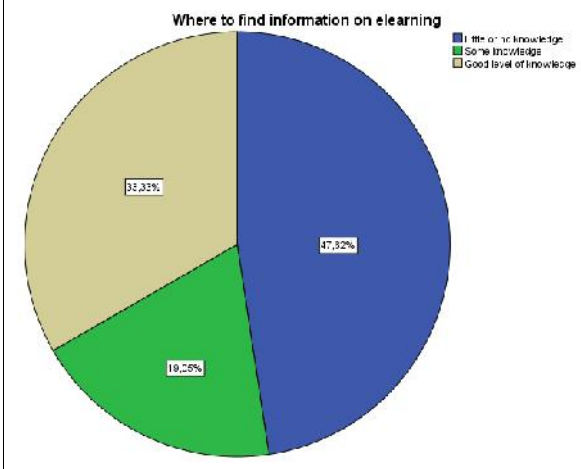
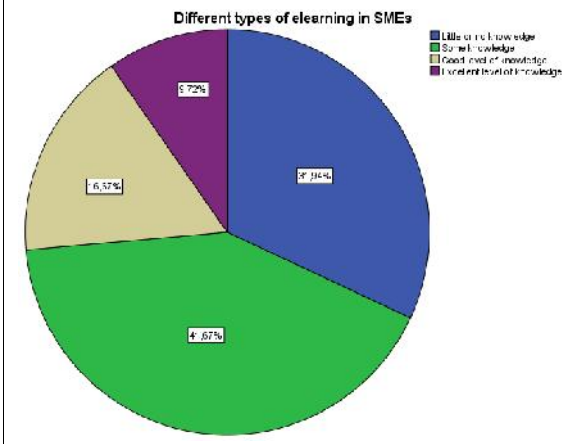


Q.11iv Prior Knowledge of e-learning (Where to find information on e-learning)	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.11v Prior Knowledge of e-learning (Different types of e-learning in SMEs)

ALL COUNTRIES



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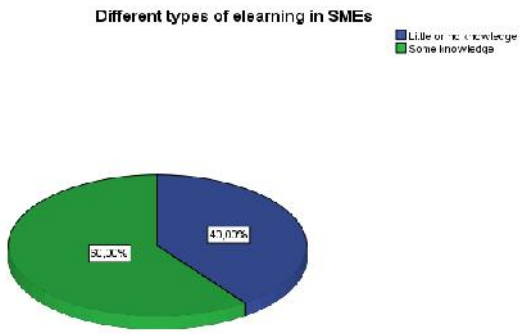

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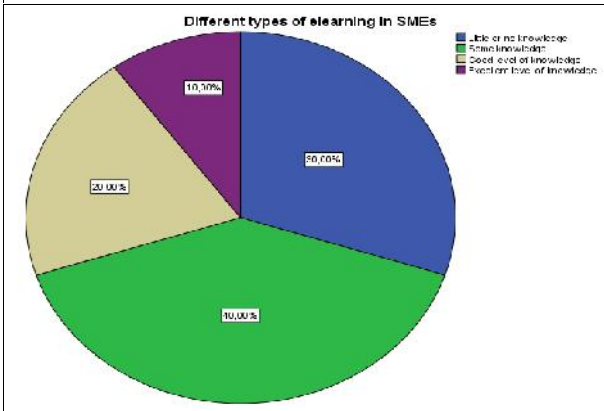
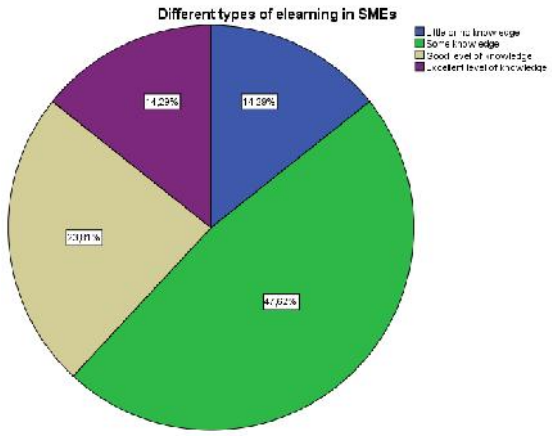


SPAIN



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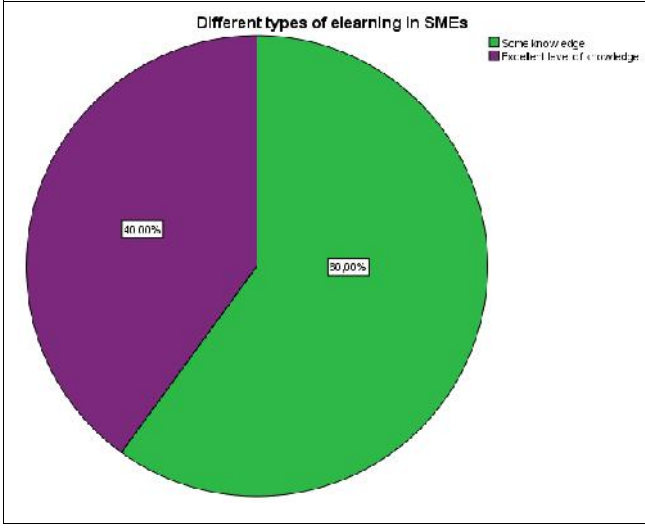
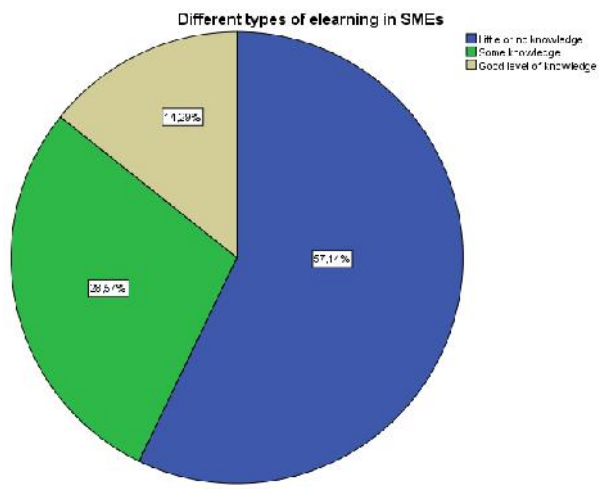
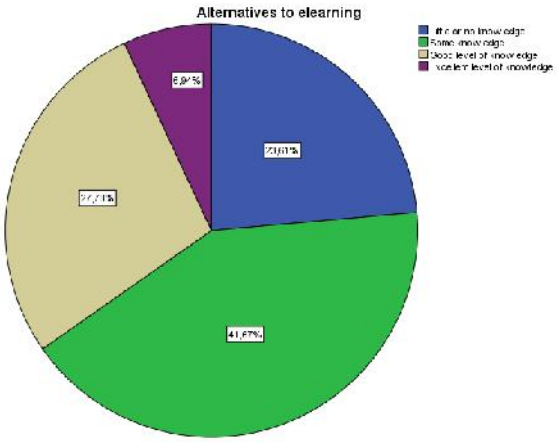


SLOVAKIA



Q.11vi Prior Knowledge of e-learning (Alternatives to e-learning)

ALL COUNTRIES



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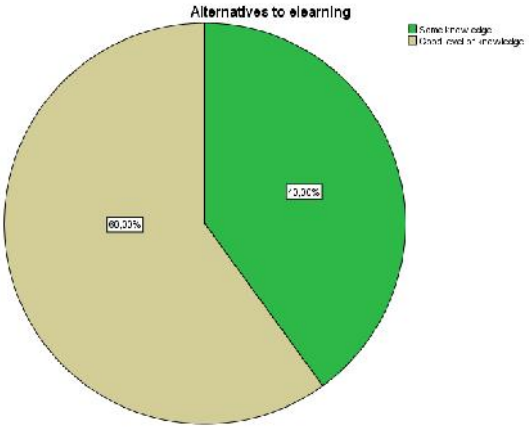

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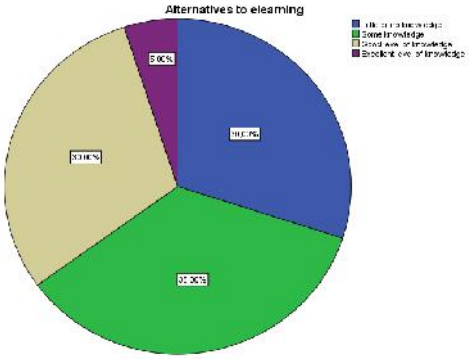

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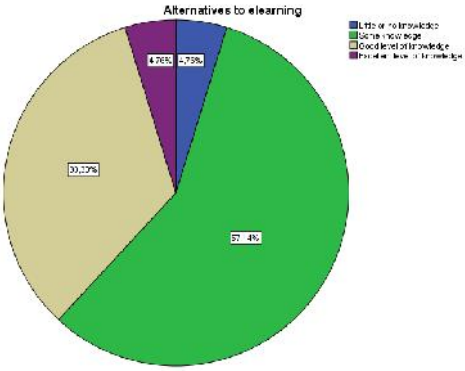

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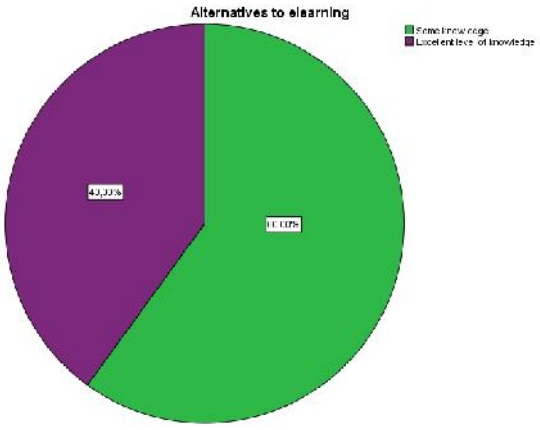
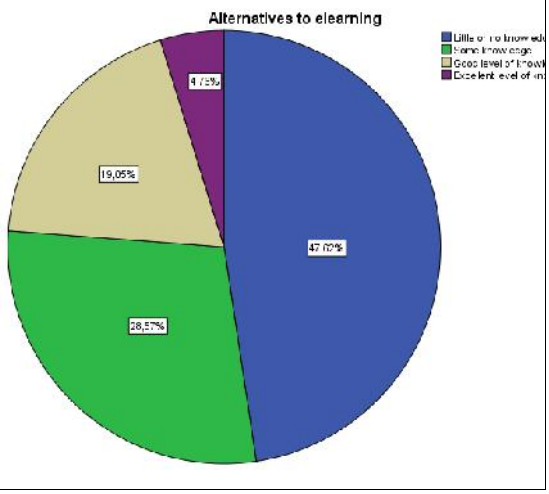
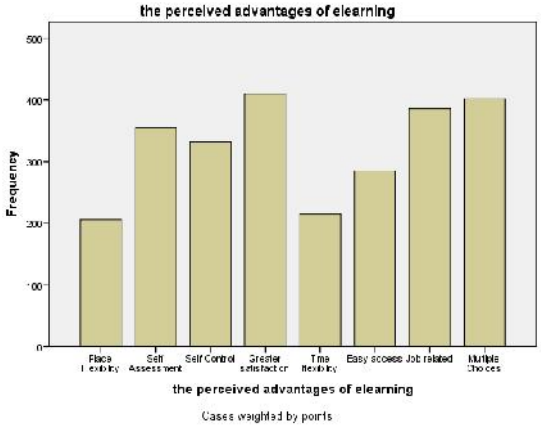


SLOVAKIA



Q.12 Please rate from 1 to 8 the perceived advantages of e-learning (1 the strongest 8 the weakest)

ALL COUNTRIES



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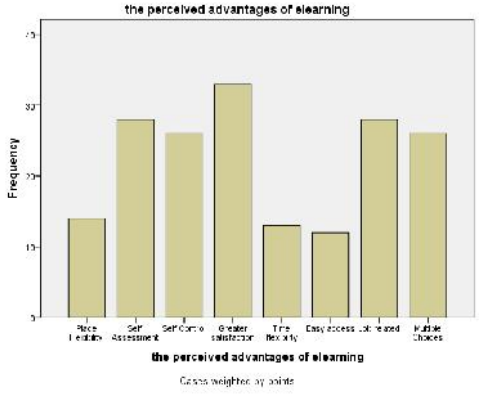

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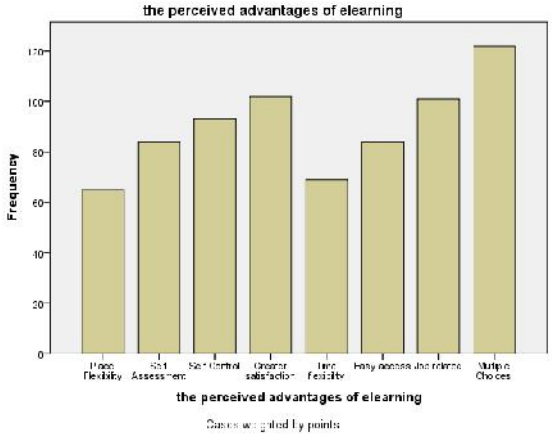

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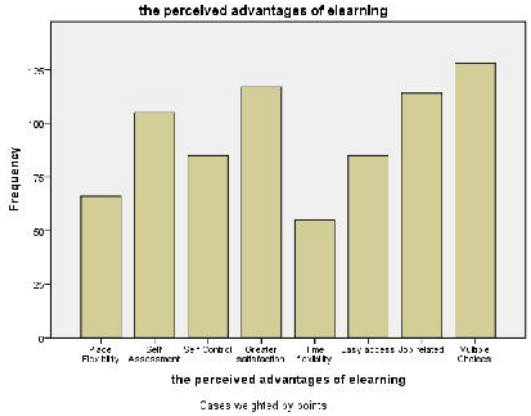

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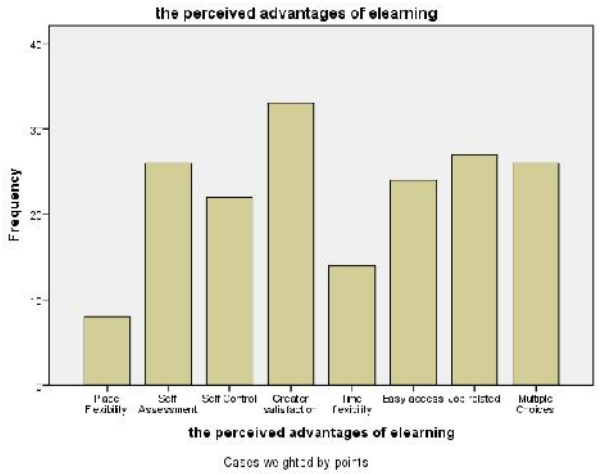

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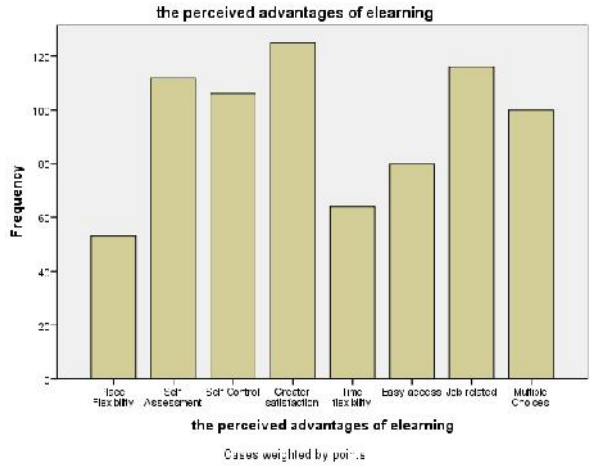
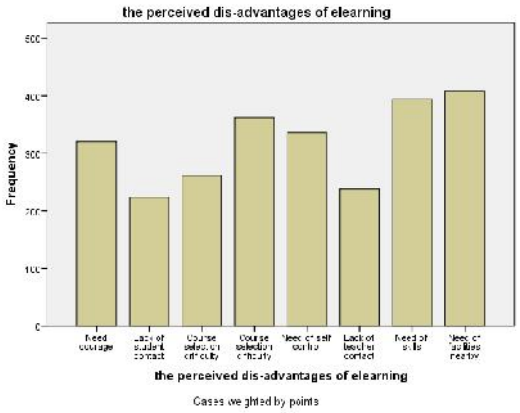


Q.13 Please rate from 1 to 8 the perceived dis-advantages of e-learning (1 the strongest 8 the weakest)

ALL COUNTRIES



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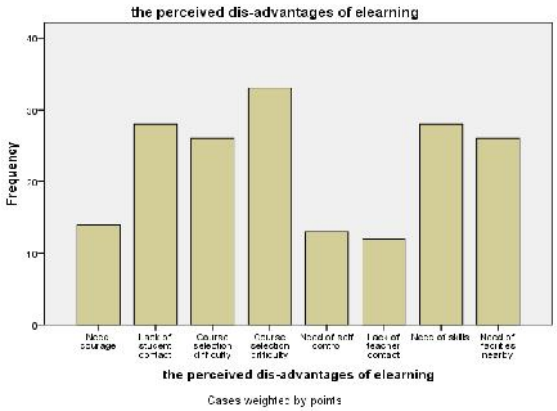
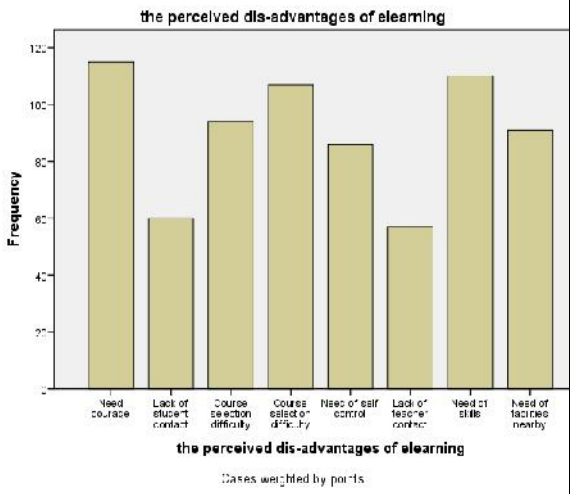


ITALY



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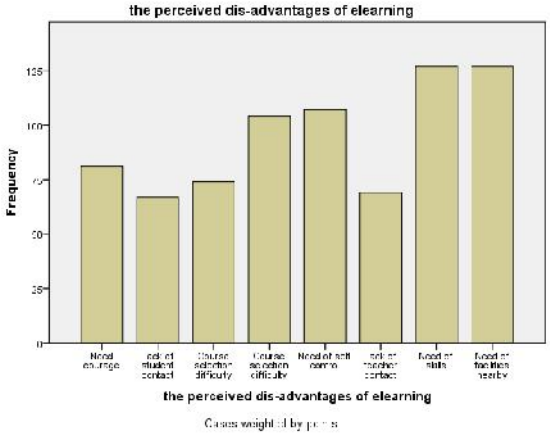

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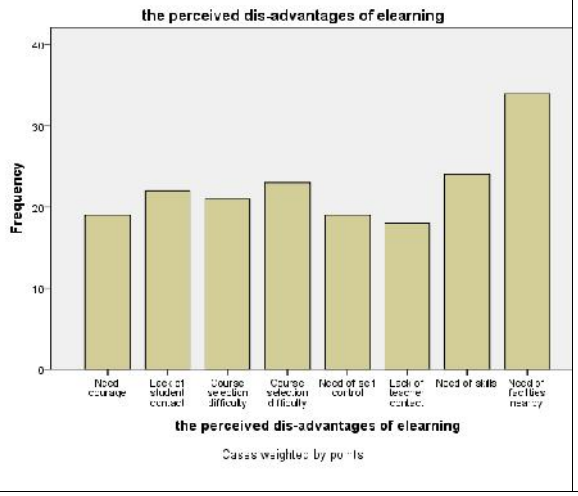
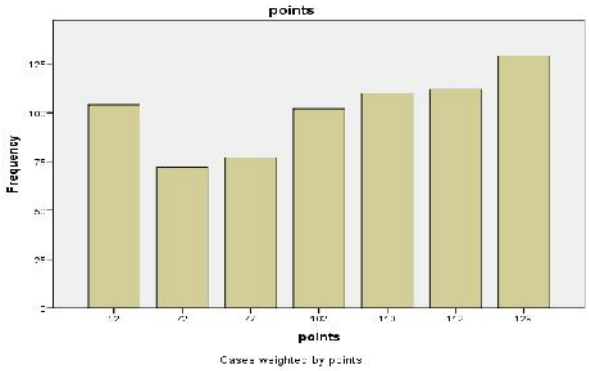
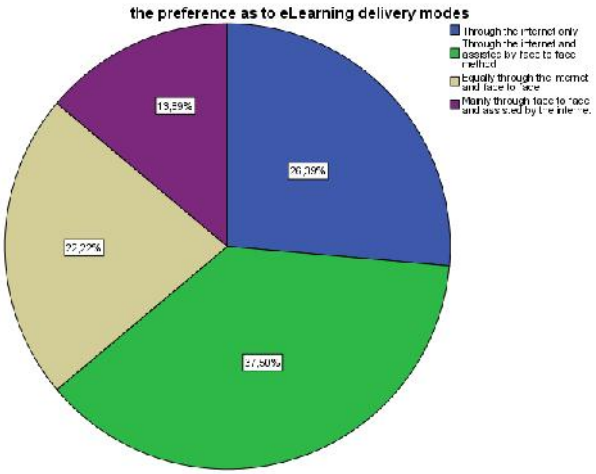


SLOVAKIA

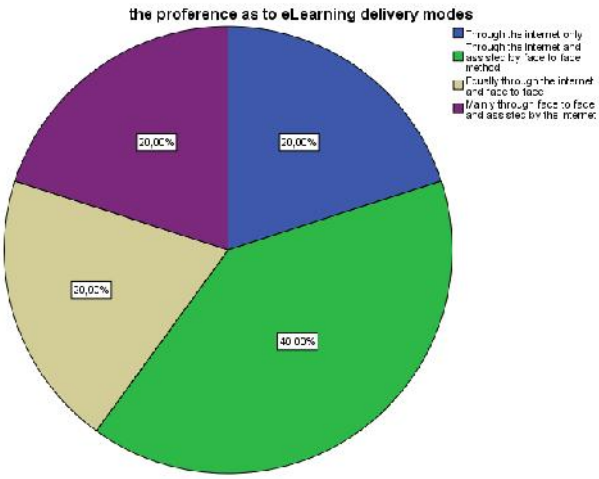


Q.14 Please state your preference as to e-learning delivery modes

ALL COUNTRIES



UK



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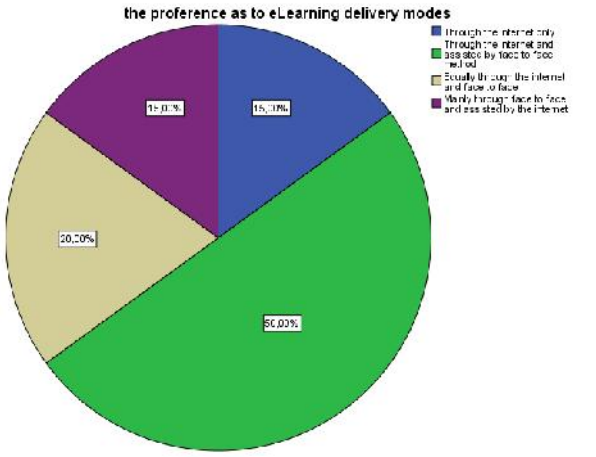

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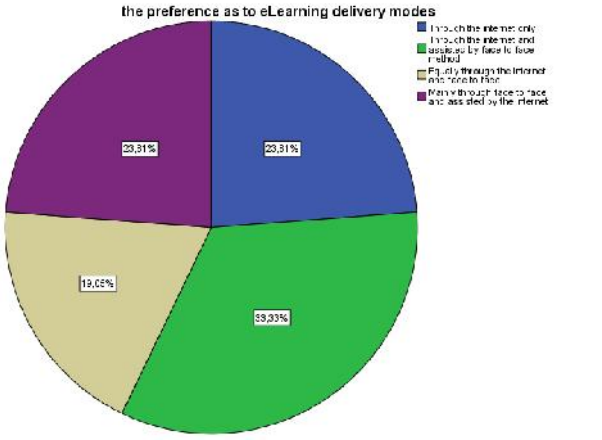

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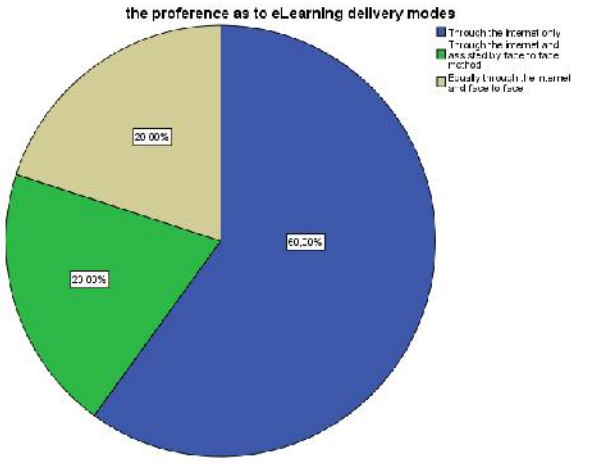
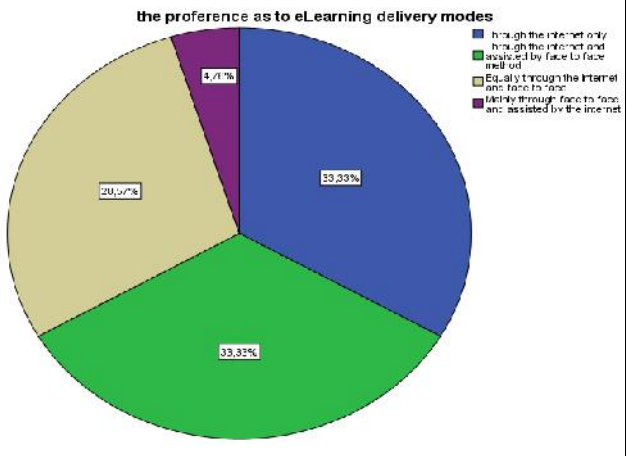
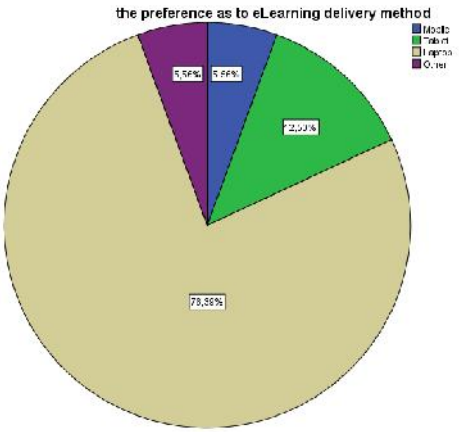


SLOVAKIA

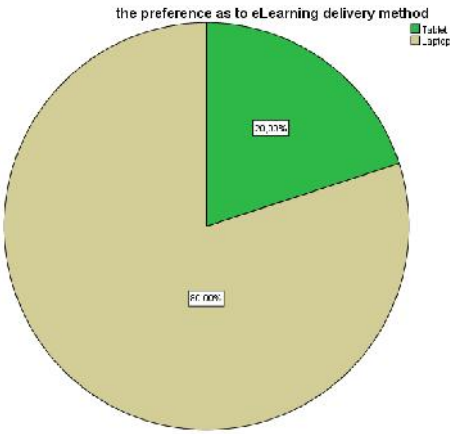


Q.15 Please state your preference as to e-learning delivery method

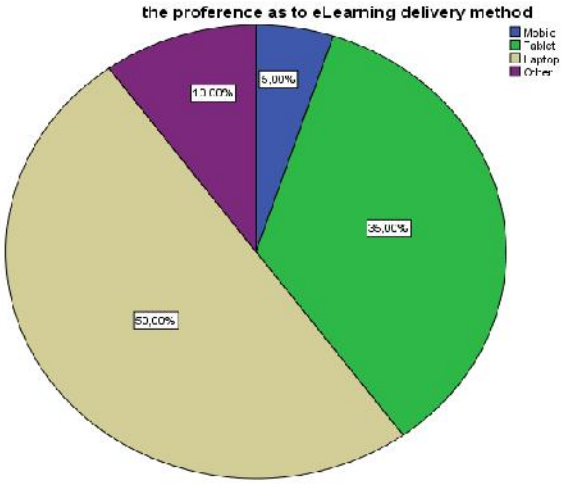
ALL COUNTRIES



UK

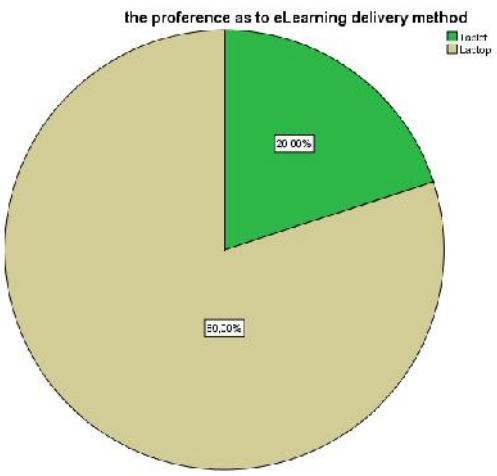


ITALY

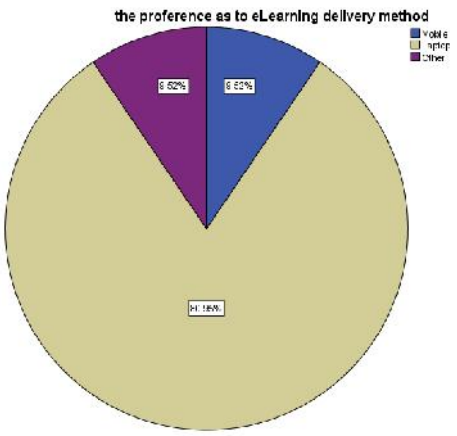


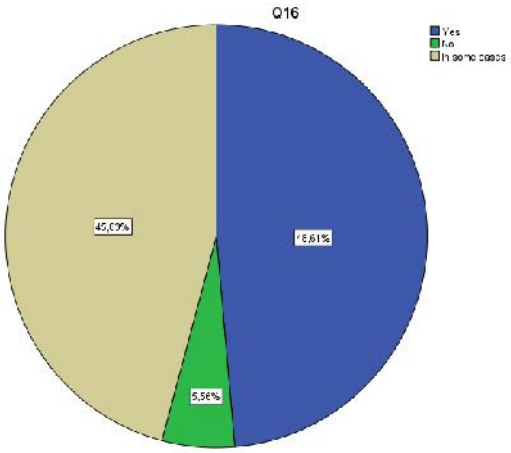
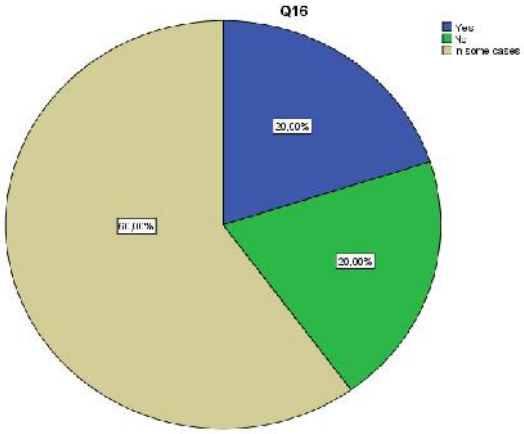
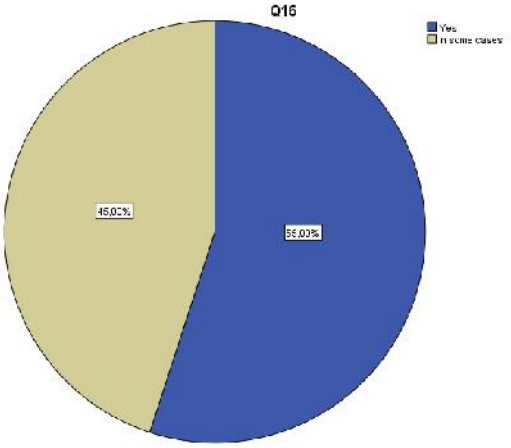
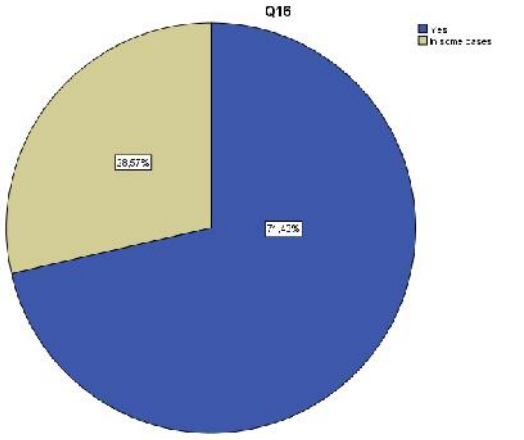
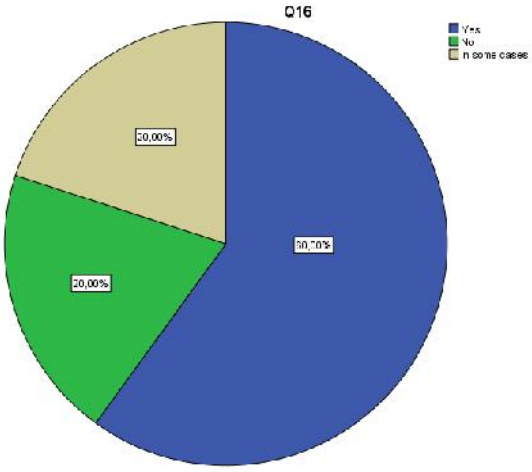
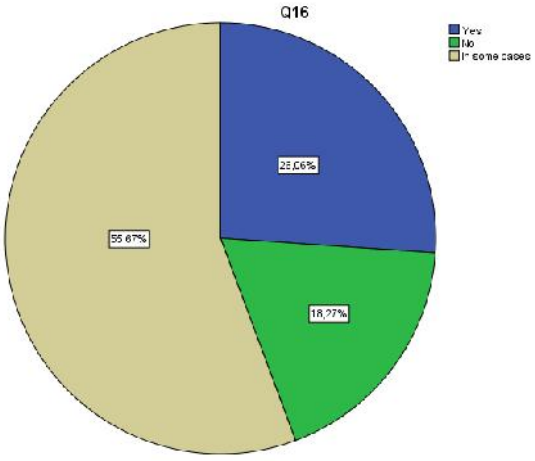
SPAIN

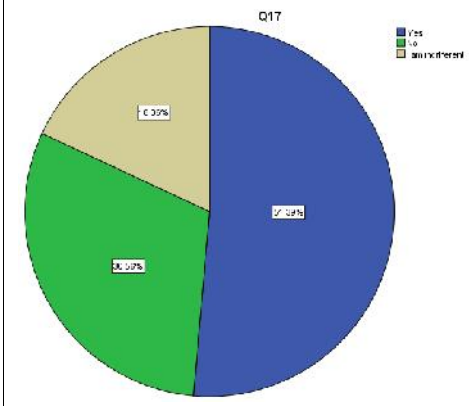
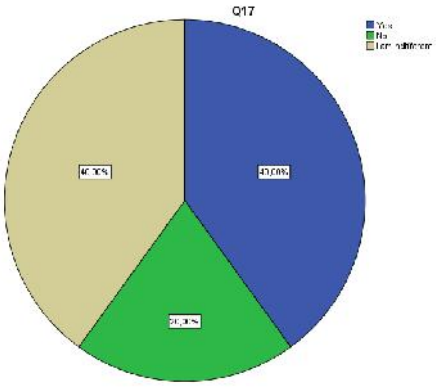
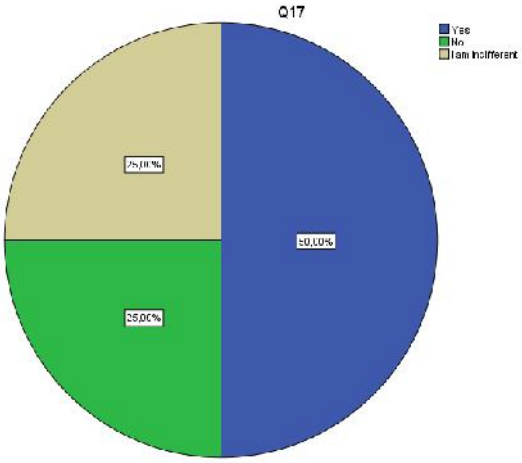
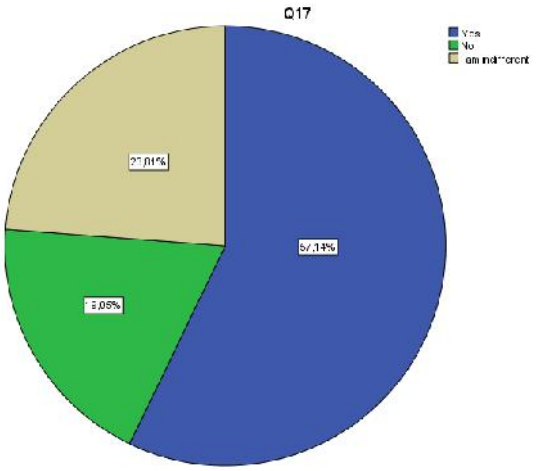
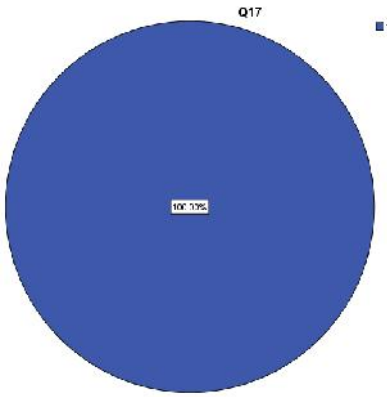
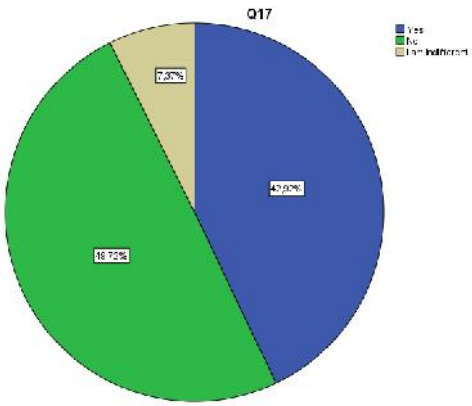
GREECE



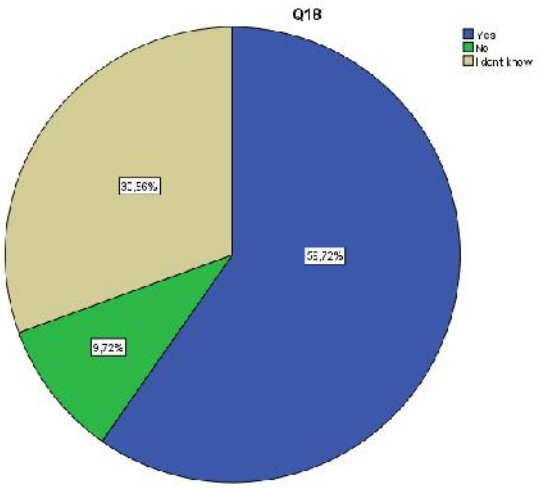
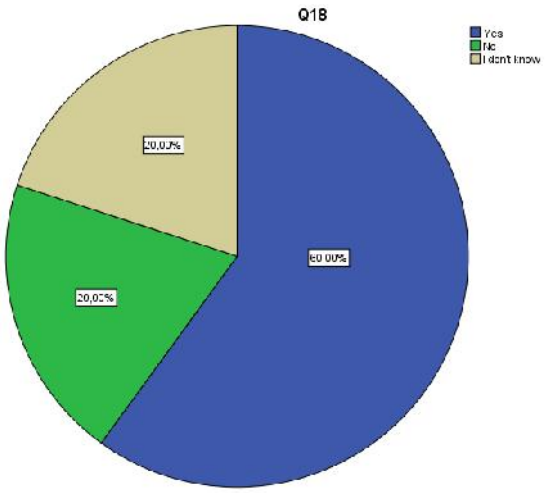
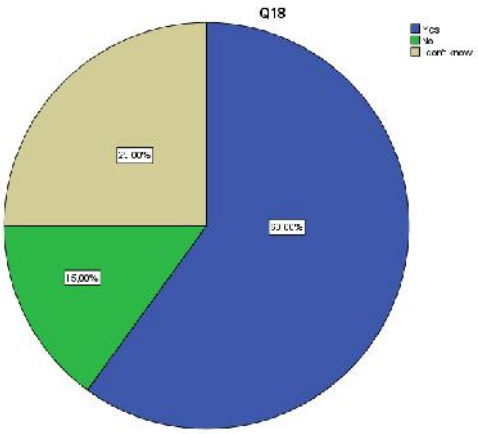
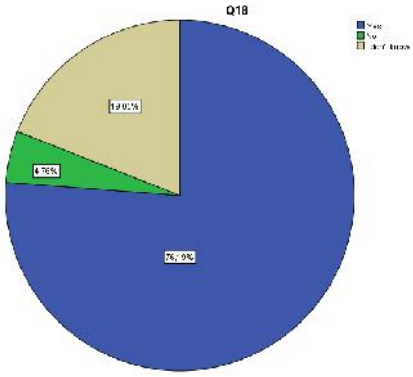
SLOVAKIA



Q.16 As an e-learner, do you understand and apply what you have learned?	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.17 Is e-learning more convenient for you versus attending a physical class?	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.18 Do you feel that the training you receive through e-learning help you perform your job better?

ALL COUNTRIES	UK
	
ITALY	**SPAIN**
	
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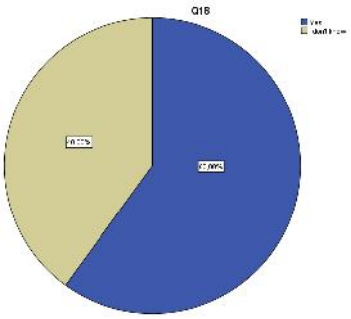
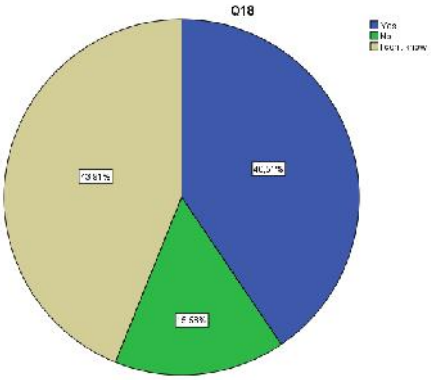
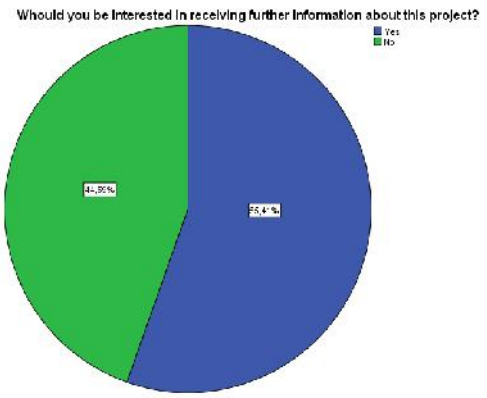
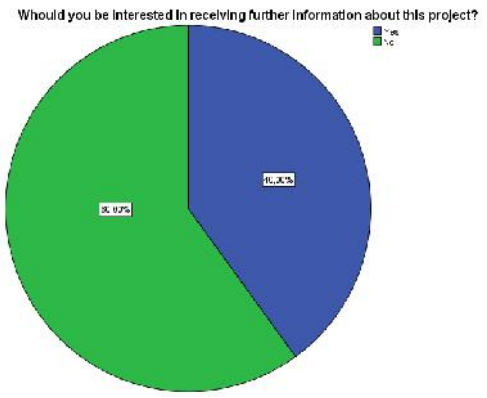
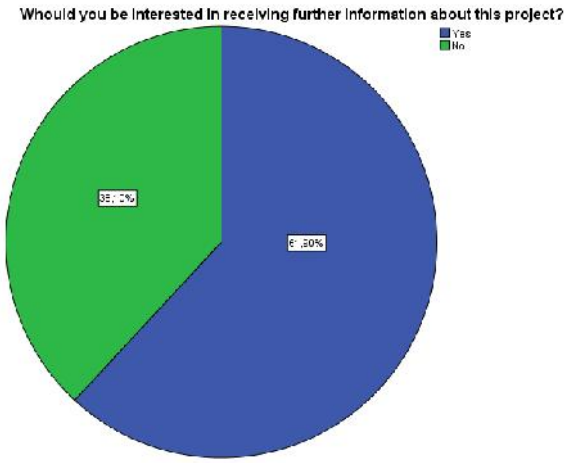
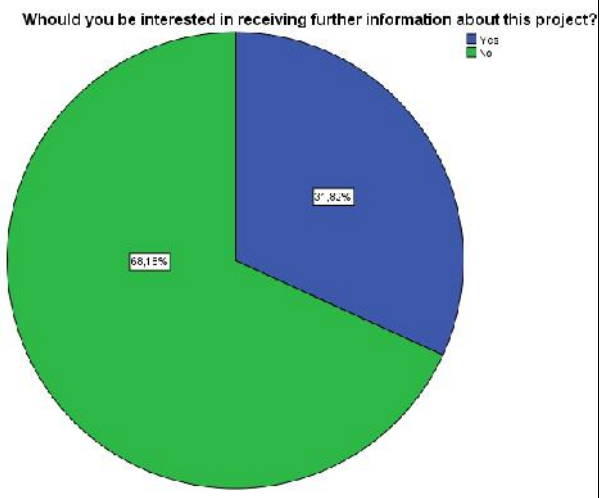
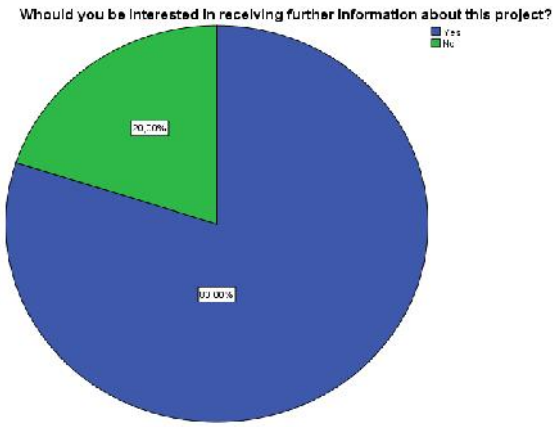
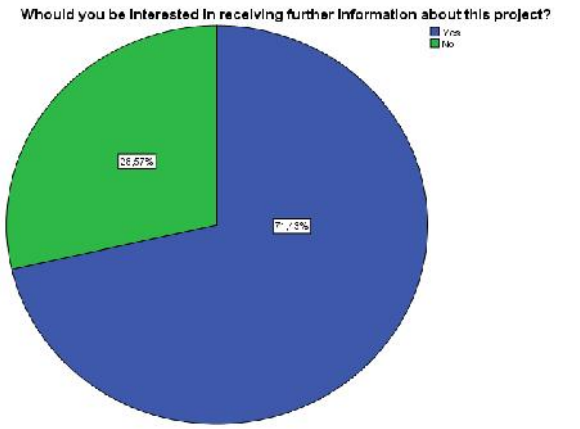
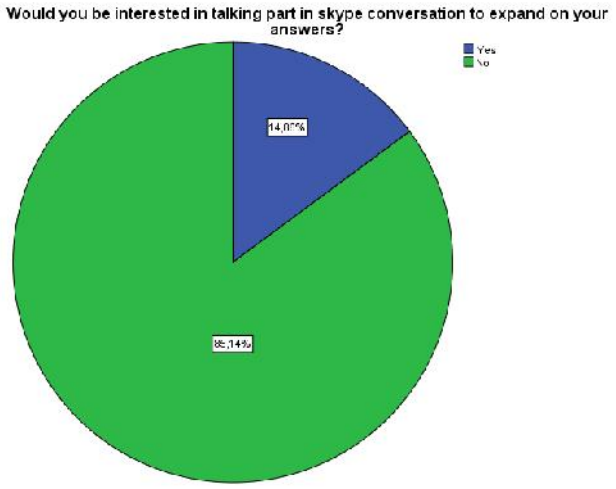
	

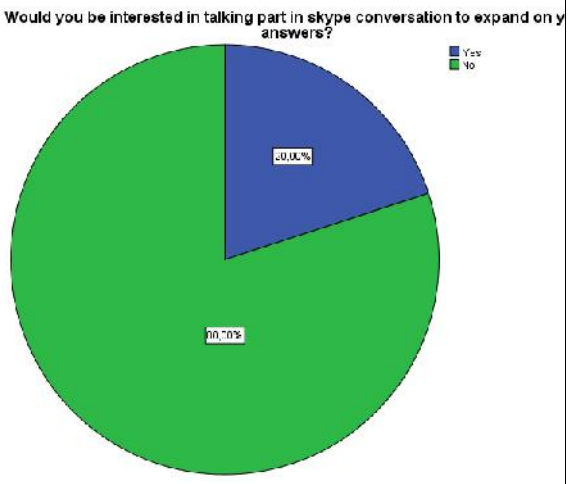
Q.20 Would you be interested in receiving further information about this project?	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.21 Would you be interested in talking part in skype conversation to expand on your answers?

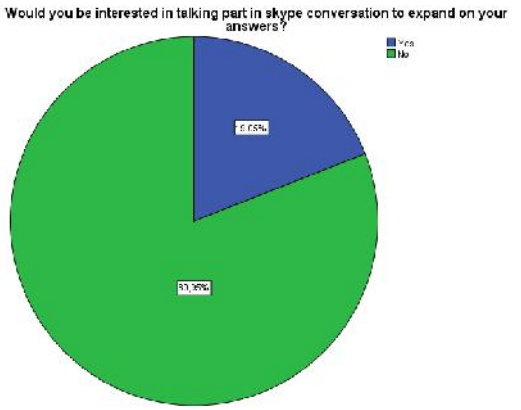
ALL COUNTRIES



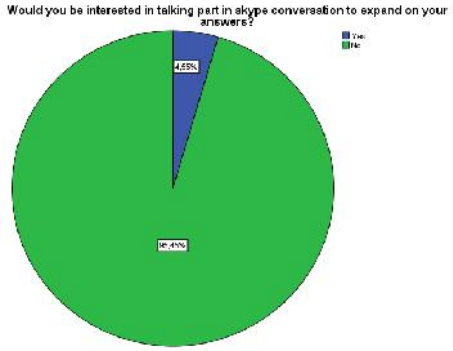
UK



ITALY



SPAIN



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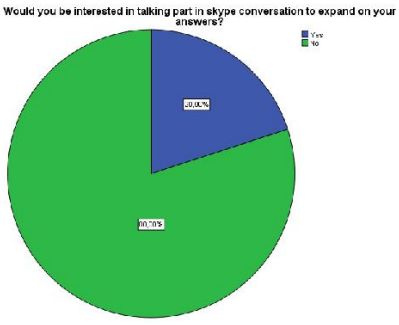
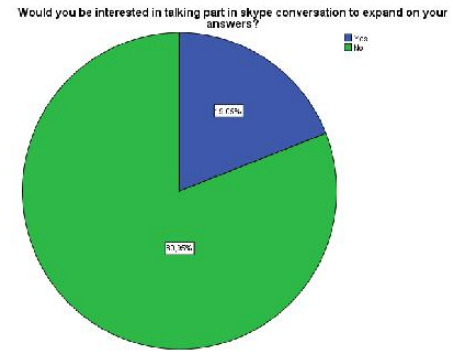
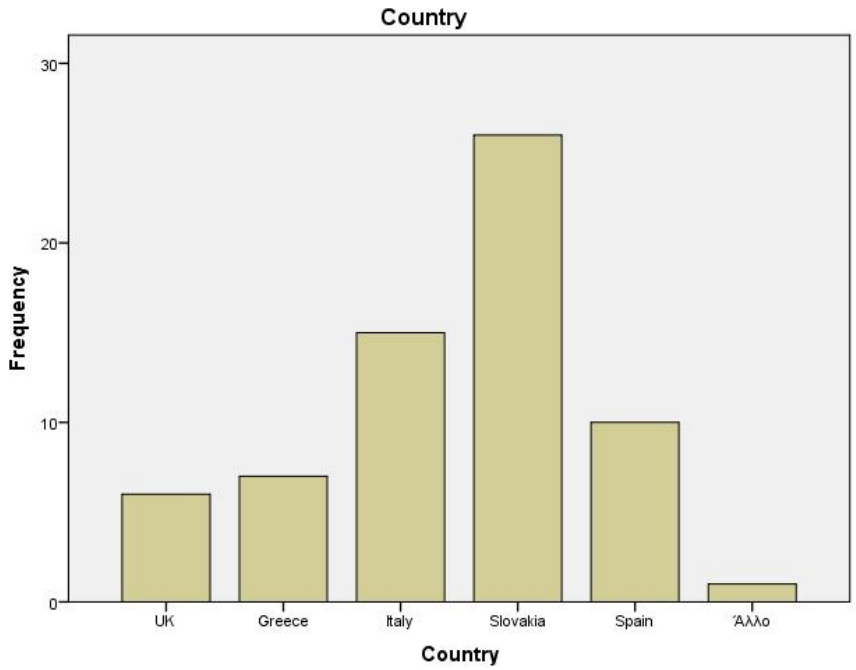


SLOVAKIA



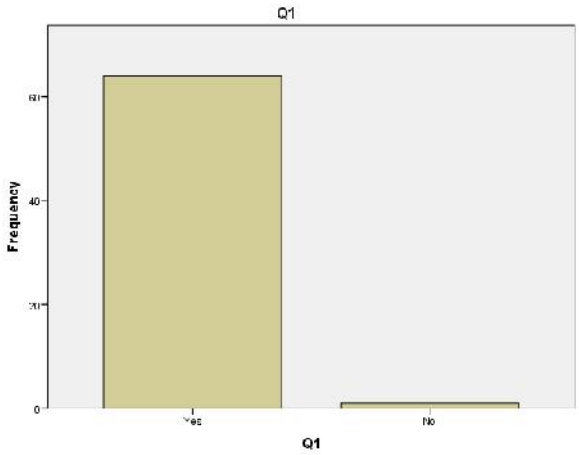
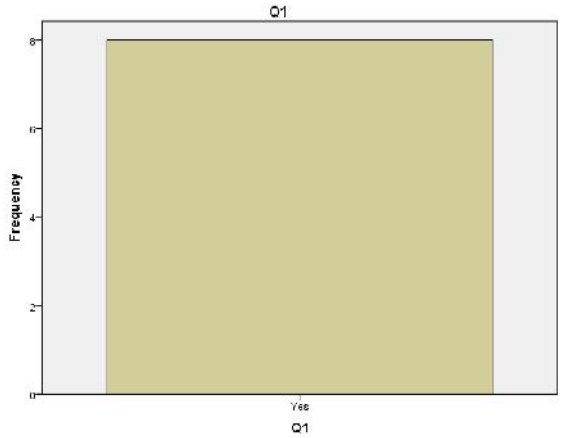
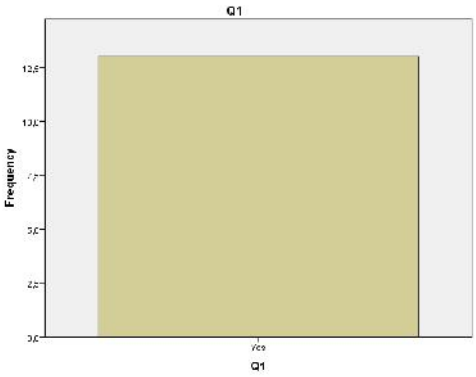
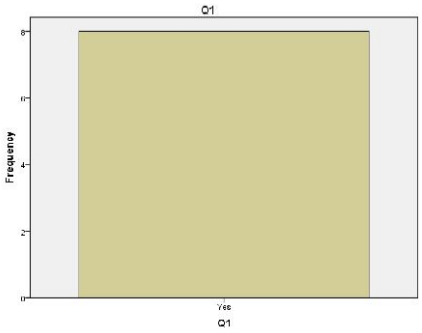
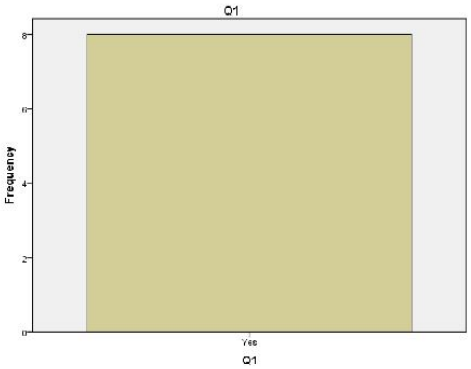
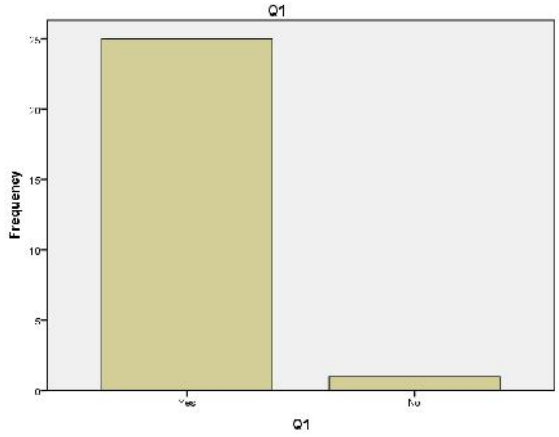
EMPLOYER QUESTIONNAIRE – DESCRIPTIVE STATISTICS

NUMBER OF RESPONSES PER COUNTRY



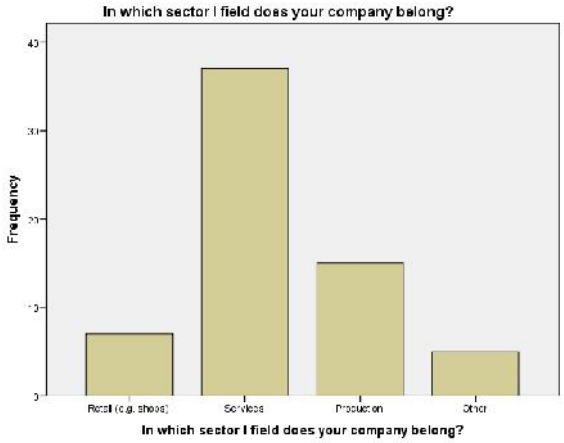
Country

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UK	6	9,2	9,2	9,2
	Greece	7	10,8	10,8	20,0
	Italy	15	23,1	23,1	43,1
	Slovakia	26	40,0	40,0	83,1
	Spain	10	15,4	15,4	98,5
	Άλλο	1	1,5	1,5	100,0
	Total	65	100,0	100,0	

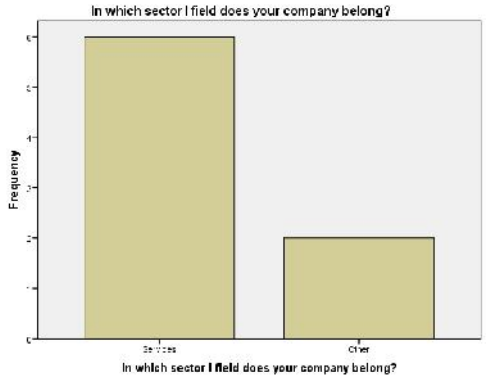
Q.1 Is your company classified as an SME?	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.2 In which sector / field does your company belong?

ALL COUNTRIES



UK



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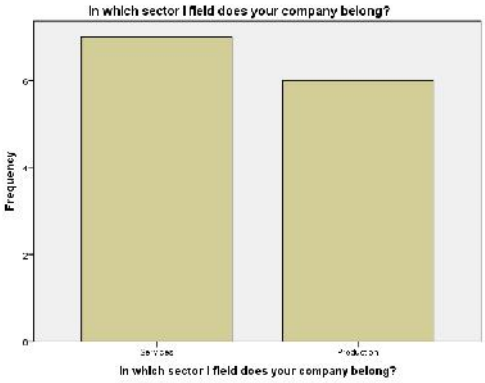

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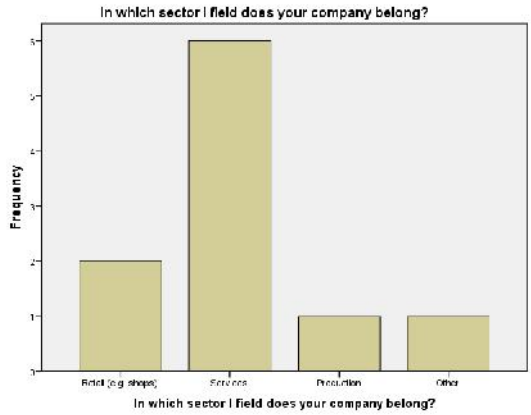

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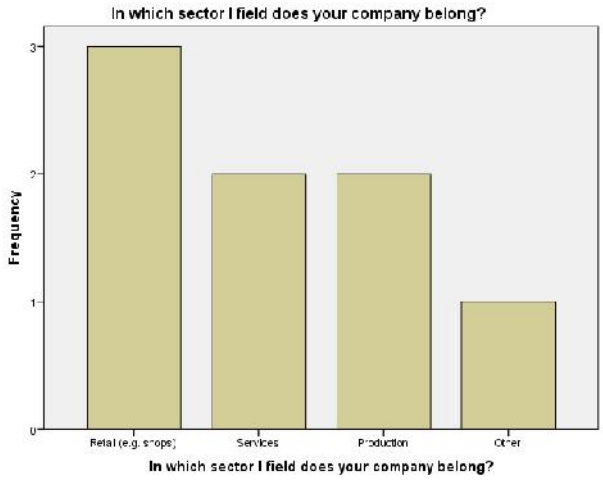
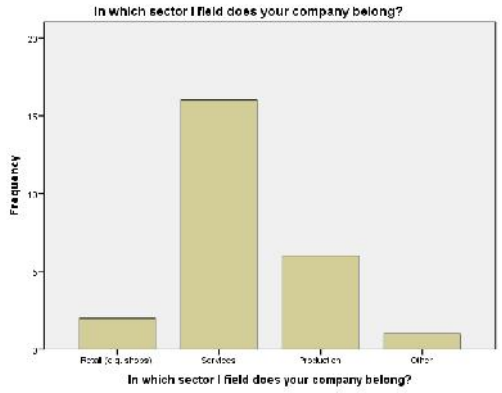
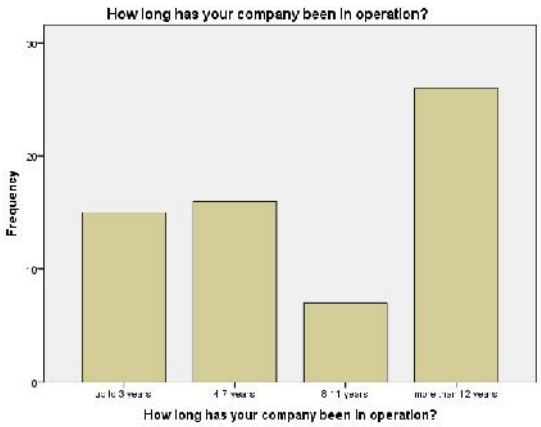


SLOVAKIA

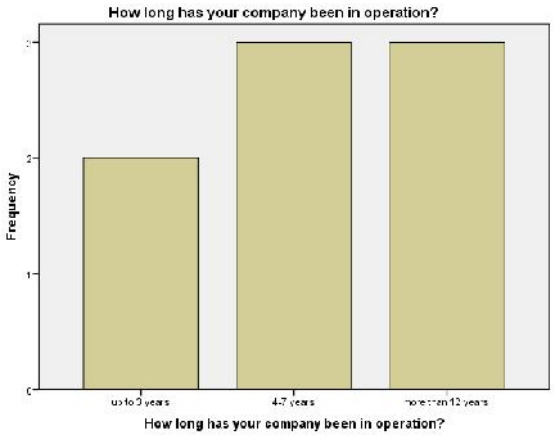


Q.3 How long has your company been in operation?

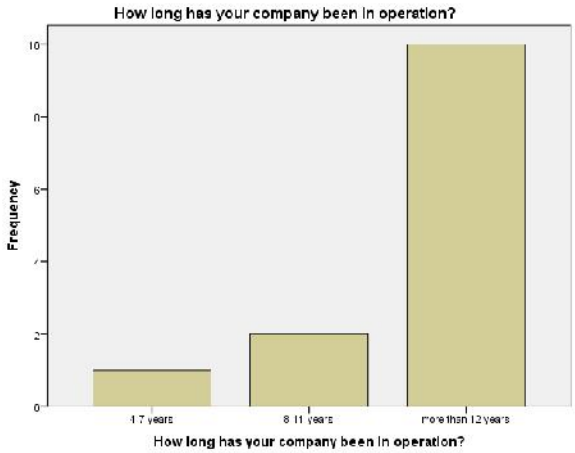
ALL COUNTRIES



UK



ITALY



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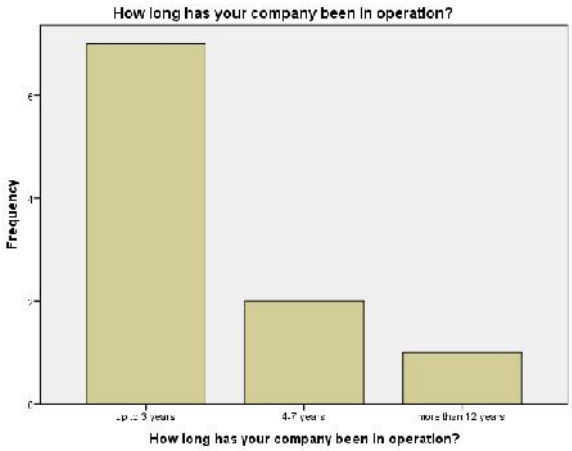

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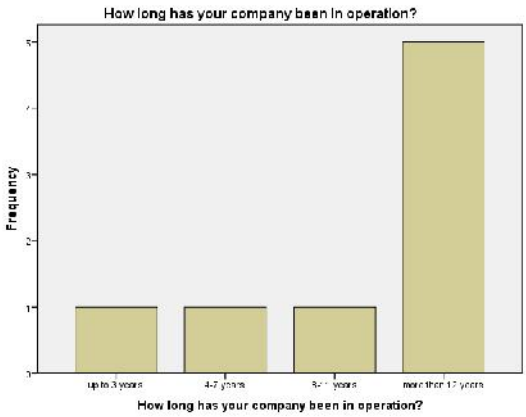
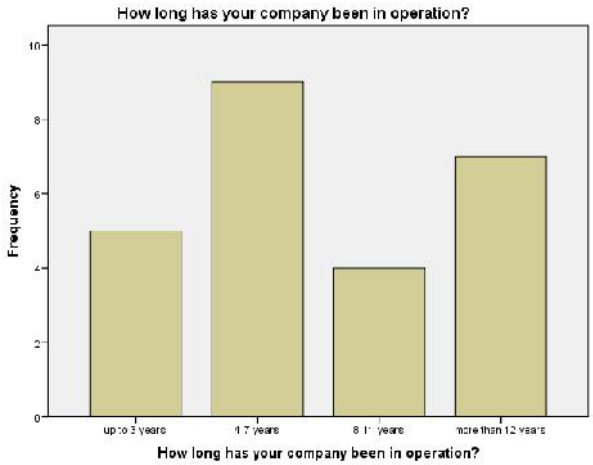
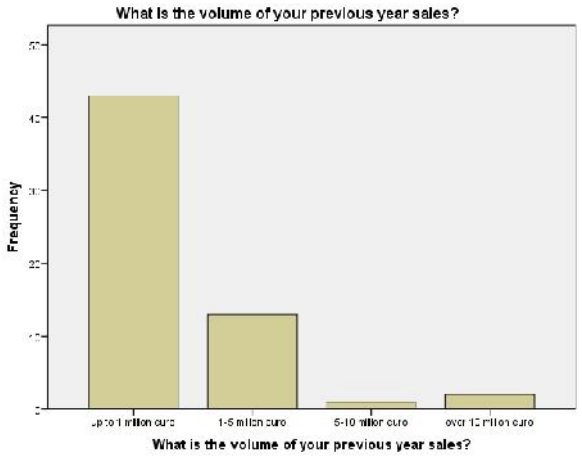


SLOVAKIA

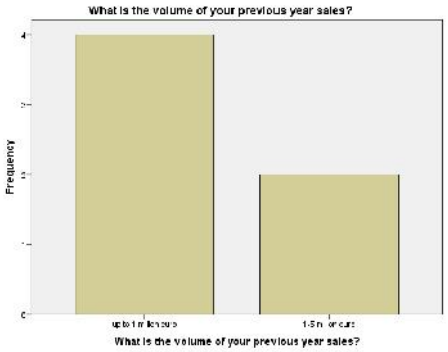


Q.4 What is the volume of your previous year sales?

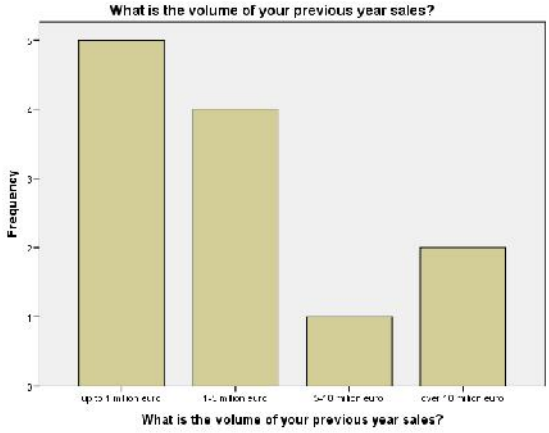
ALL COUNTRIES



UK



ITALY



SPAIN

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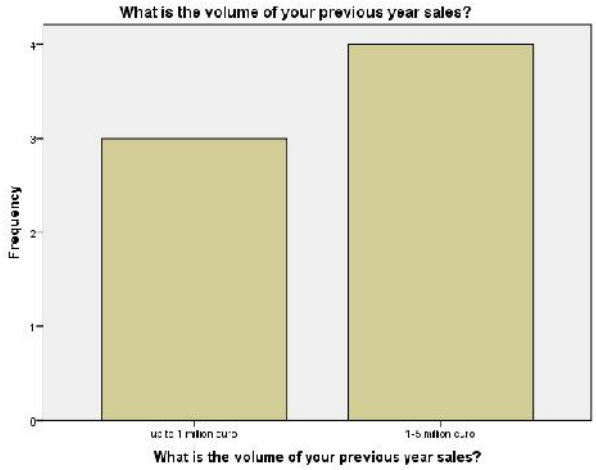
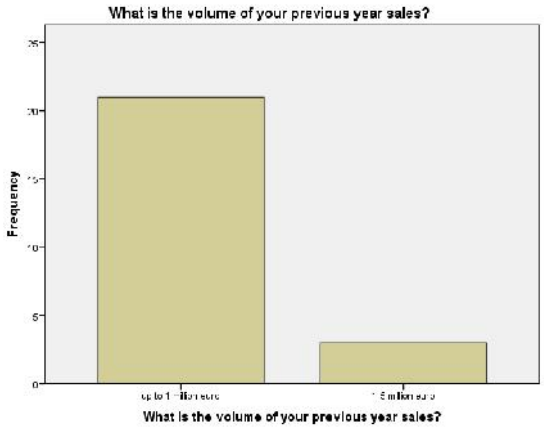
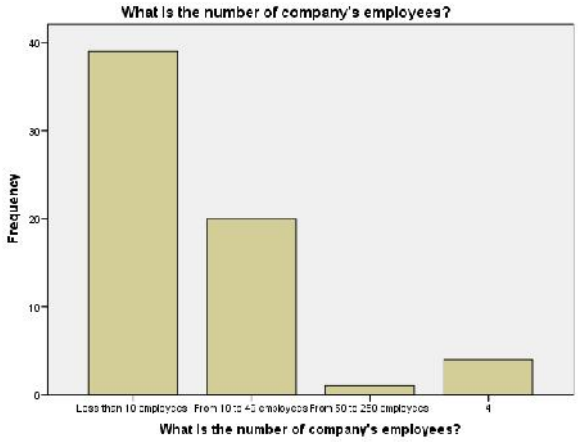


SLOVAKIA

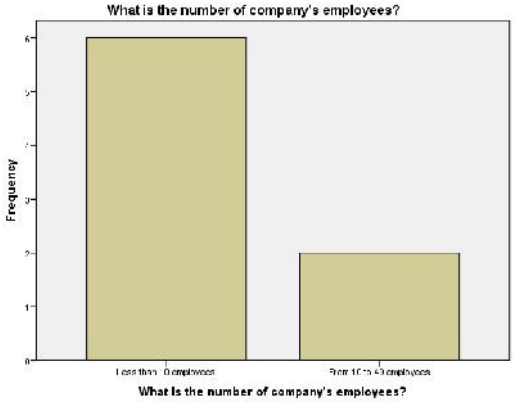


Q.5 What is the number of company's employees?

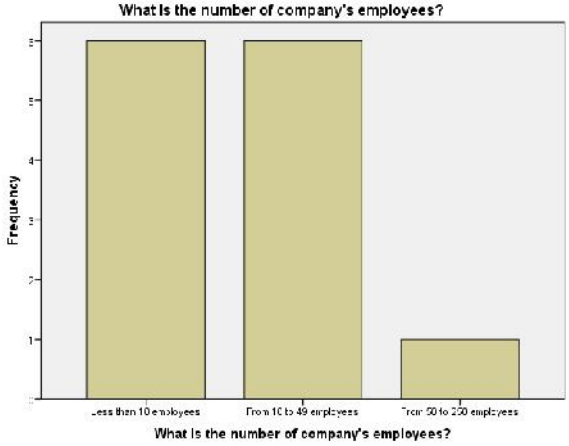
ALL COUNTRIES



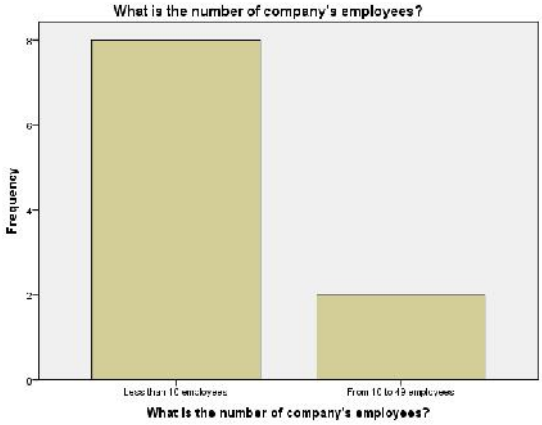
UK



ITALY



SPAIN



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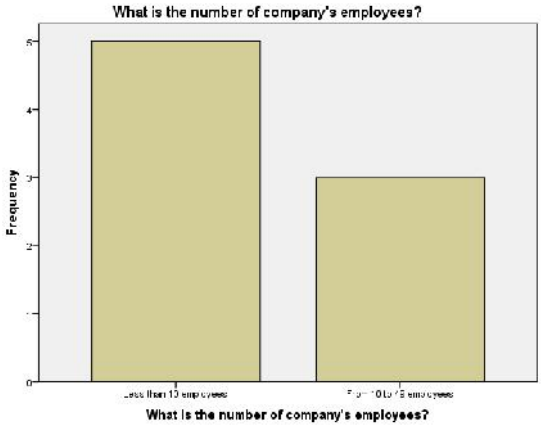
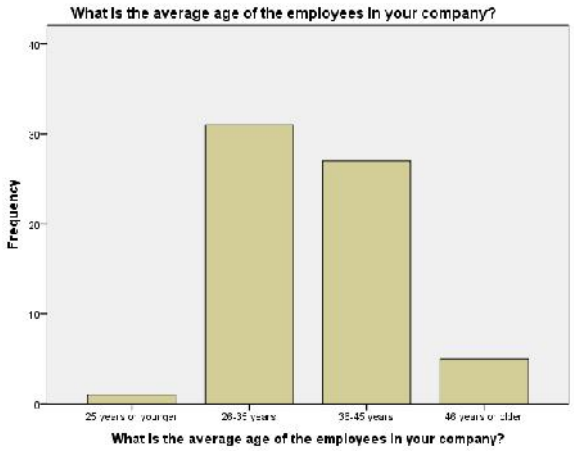


SLOVAKIA

Q.6 What is the average age of the employees in your company?

ALL COUNTRIES



UK

ITALY

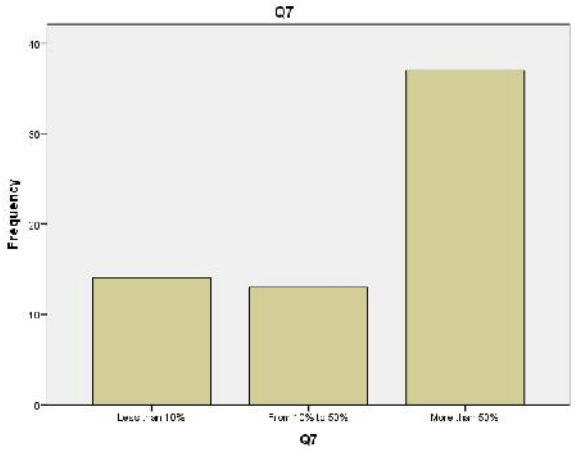
SPAIN

GREECE

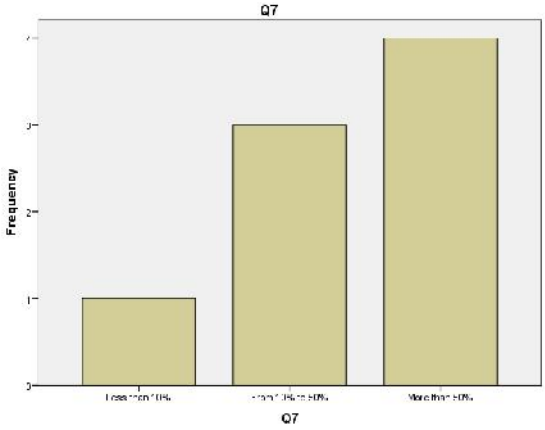
SLOVAKIA

Q.7 What percentage of employees has a College, University degree or any vocational qualifications?

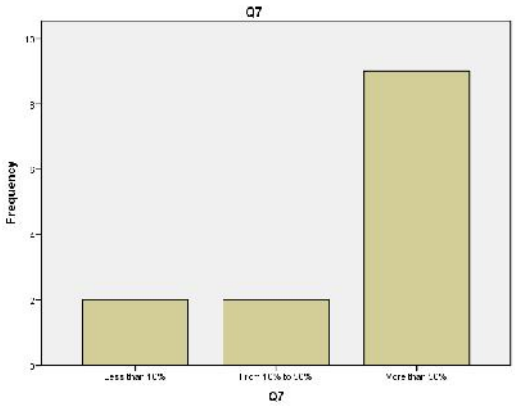
ALL COUNTRIES



UK



ITALY



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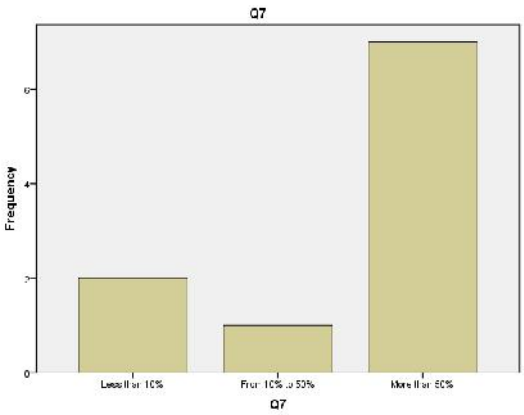

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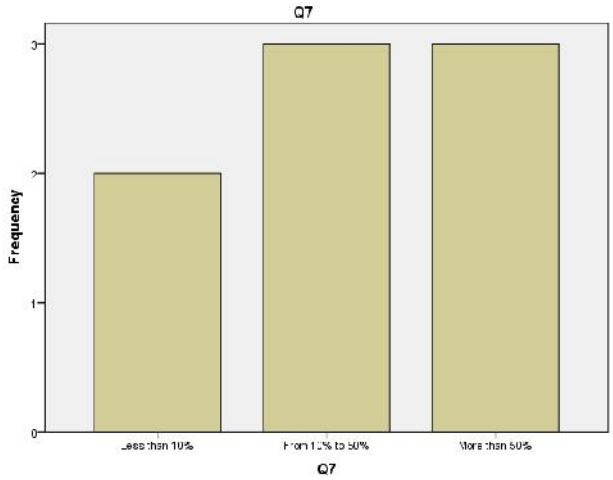
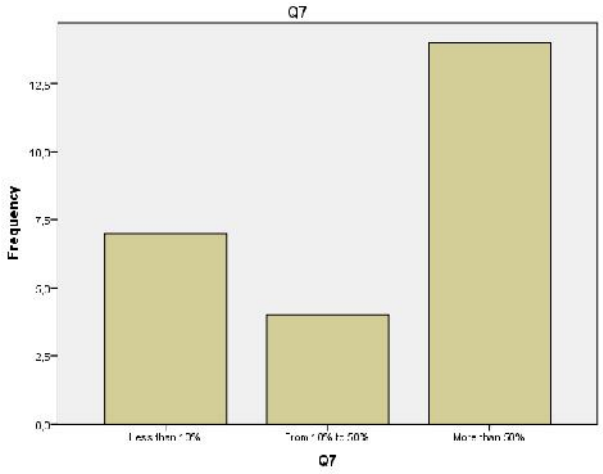
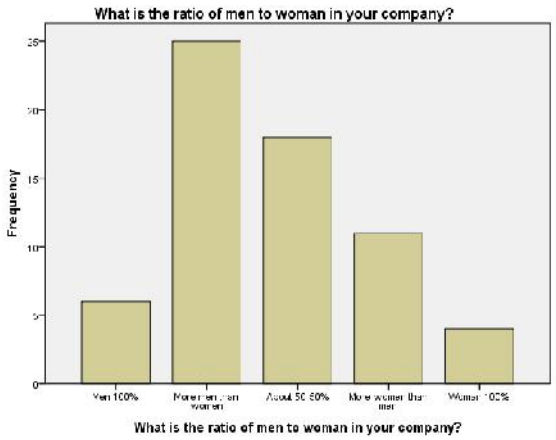


SLOVAKIA

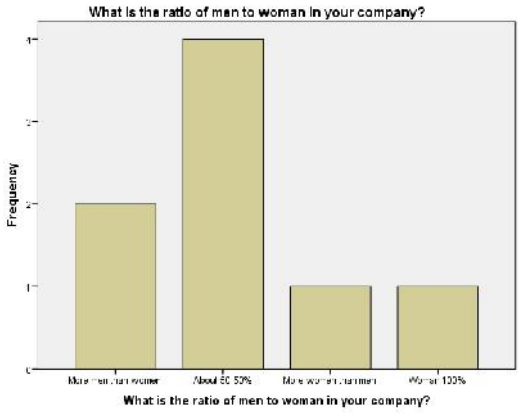


Q.8 What is the ratio of men to woman in your company?

ALL COUNTRIES



UK



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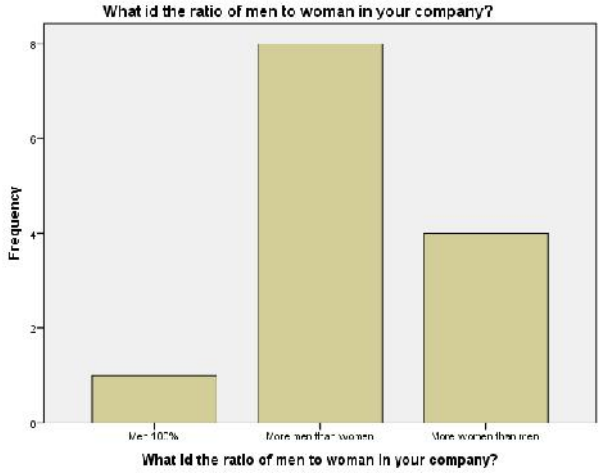

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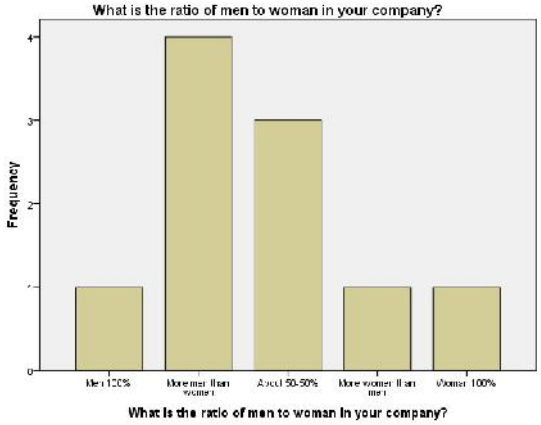

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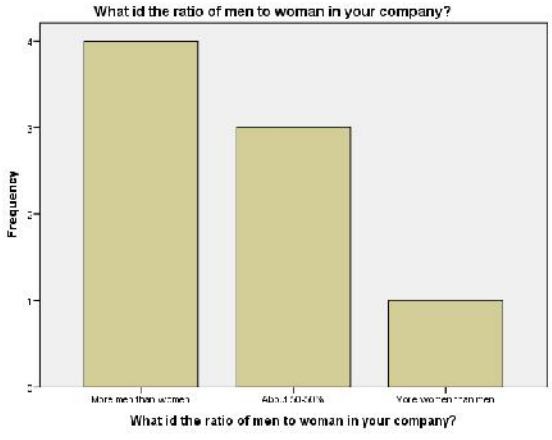
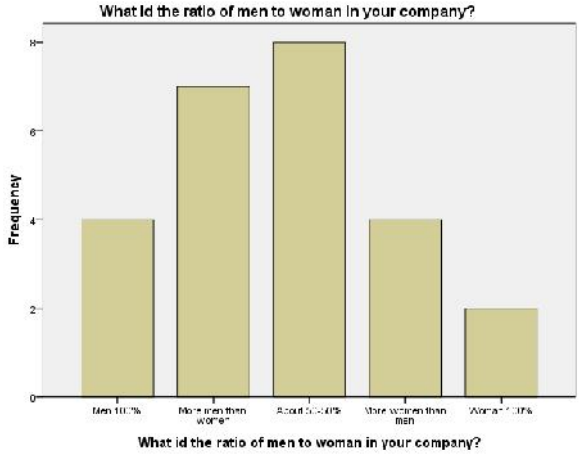


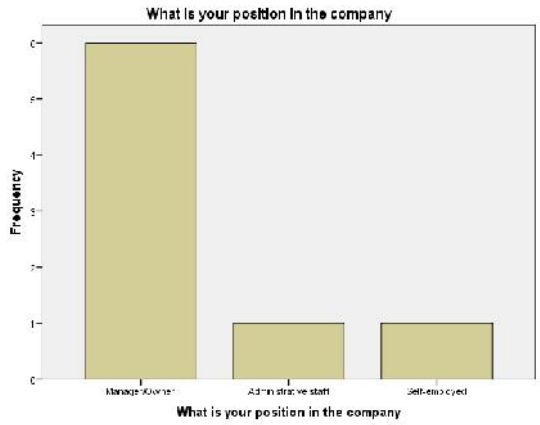
SLOVAKIA



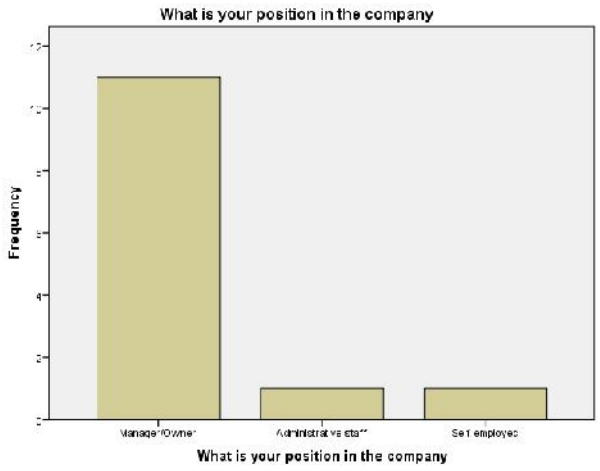
Q.9 What is your position in the company

ALL COUNTRIES

UK



ITALY



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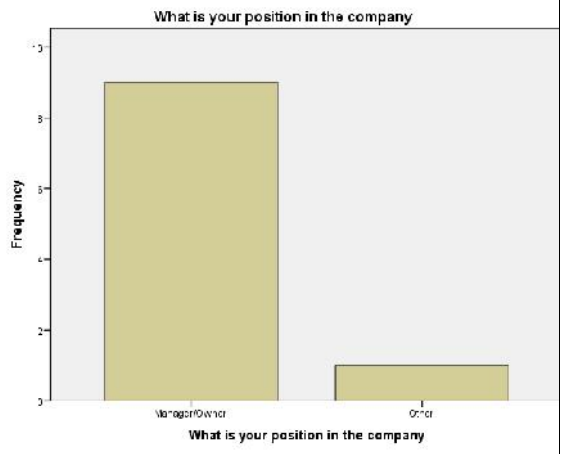

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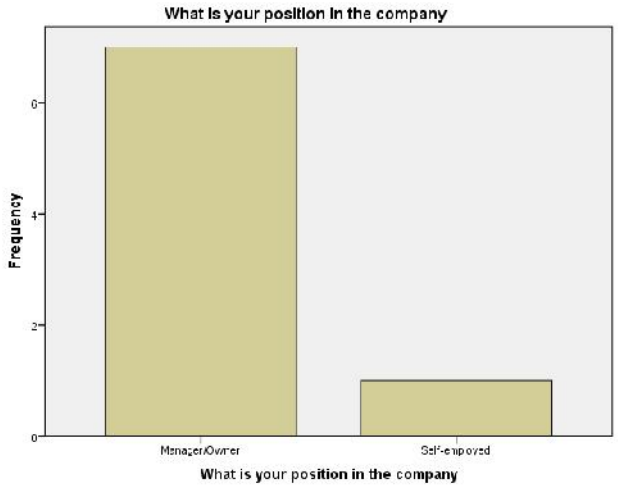
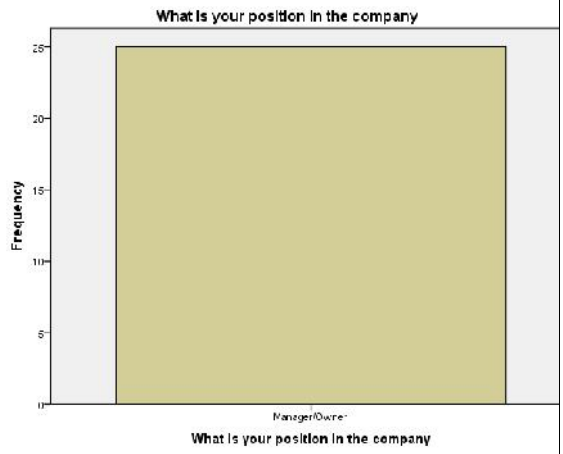
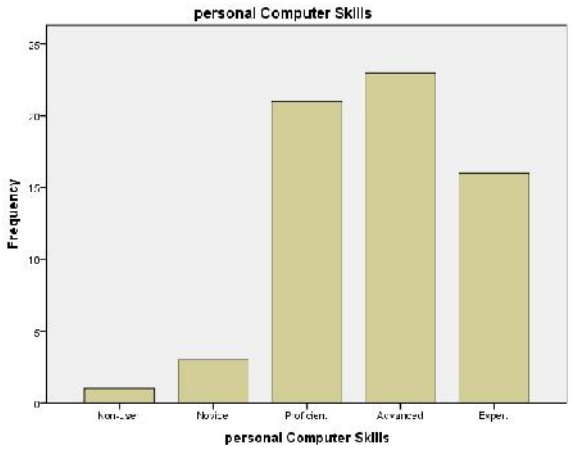


SLOVAKIA

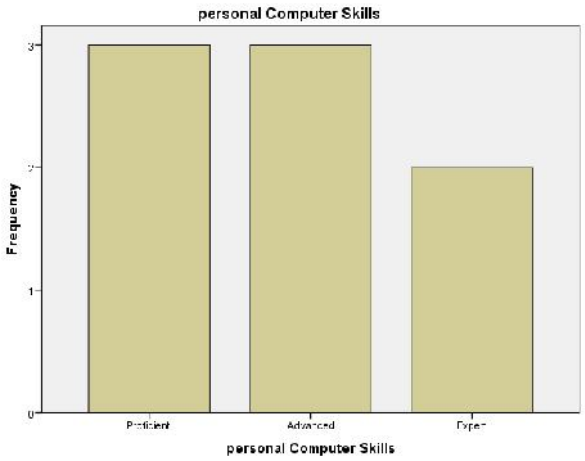


Q.10 Please rate your personal Computer Skills

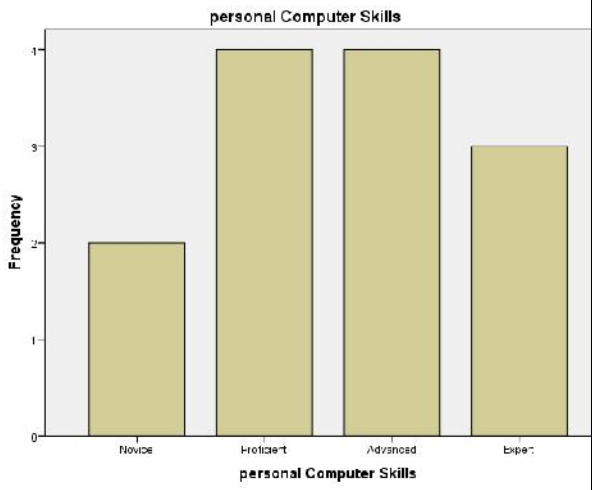
ALL COUNTRIES



UK



ITALY



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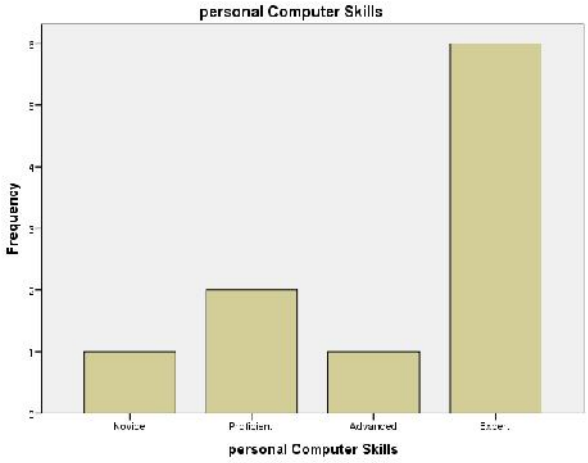
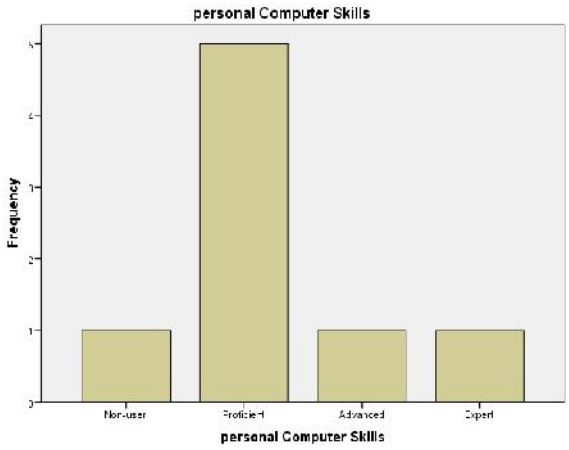
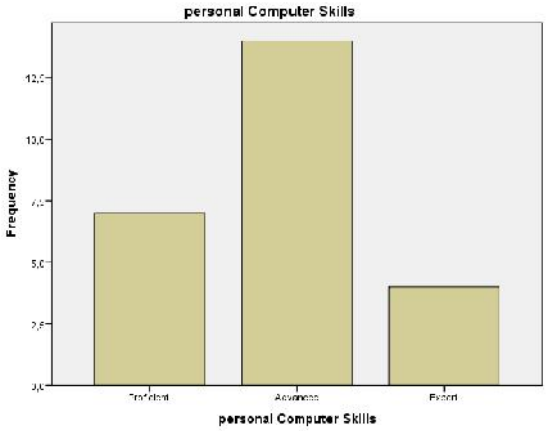


GREECE

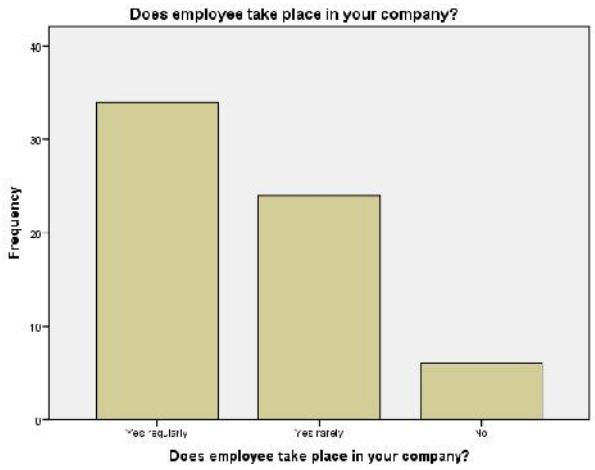


SLOVAKIA



Q.11 Does employee education take place in your company?

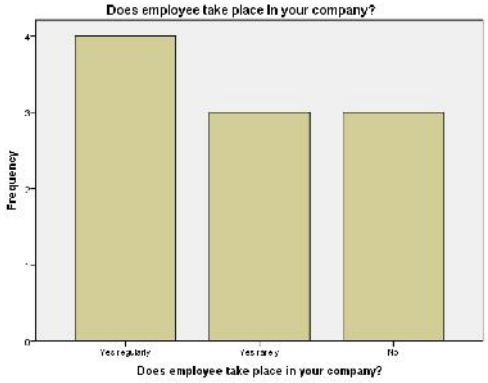
ALL COUNTRIES



UK

ITALY

SPAIN



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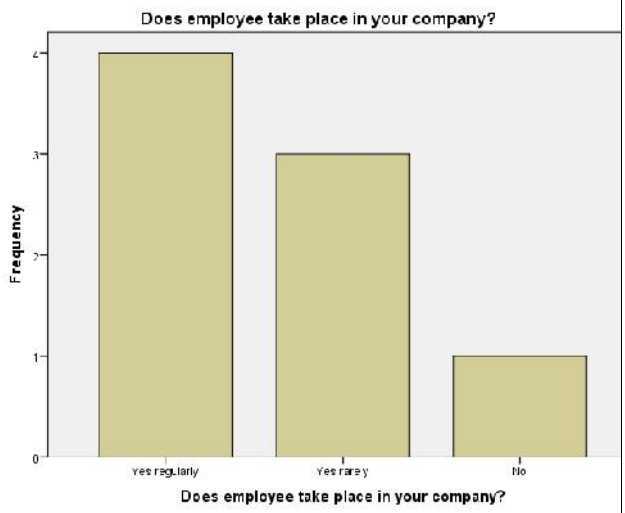
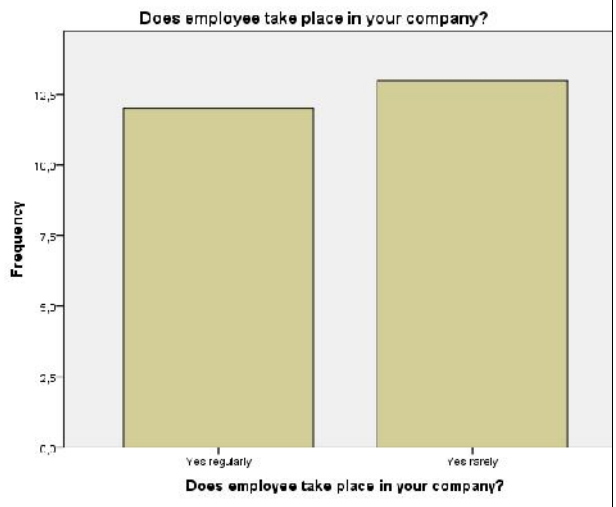
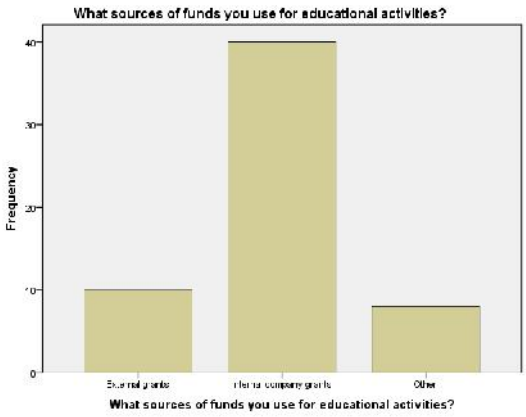


SLOVAKIA



Q.12 What sources of funds you use for educational activities?

ALL COUNTRIES



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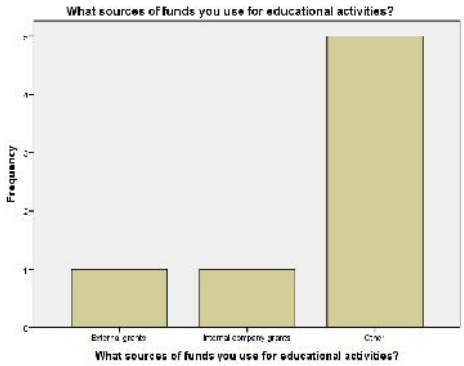
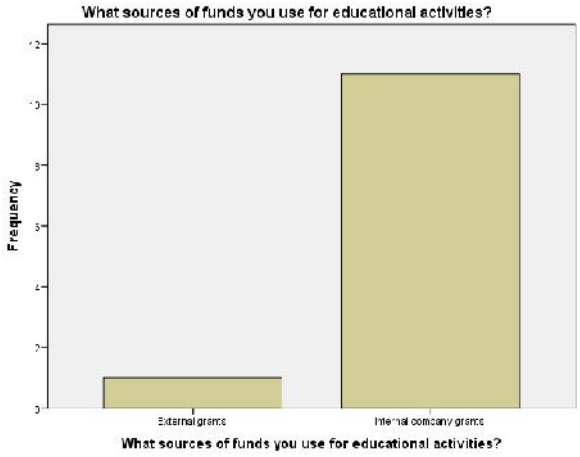


ITALY



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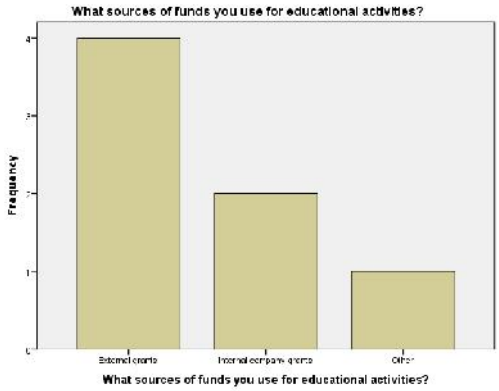

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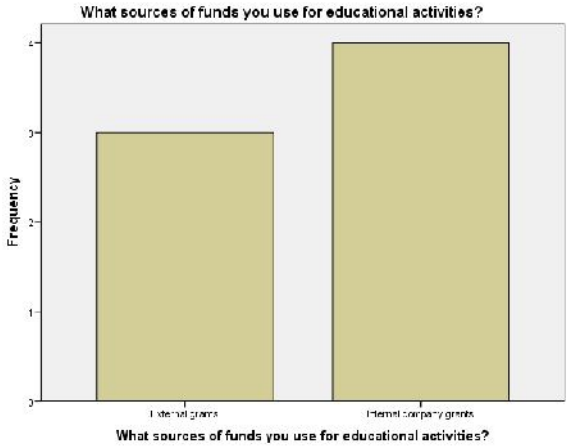
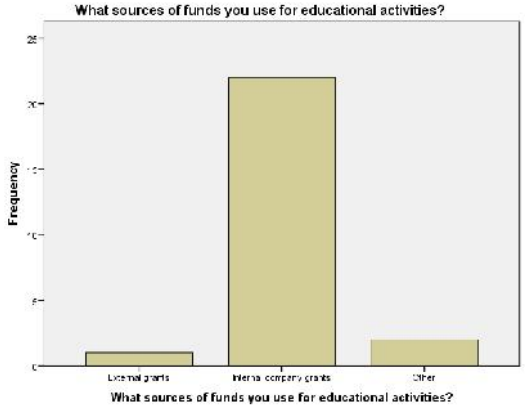
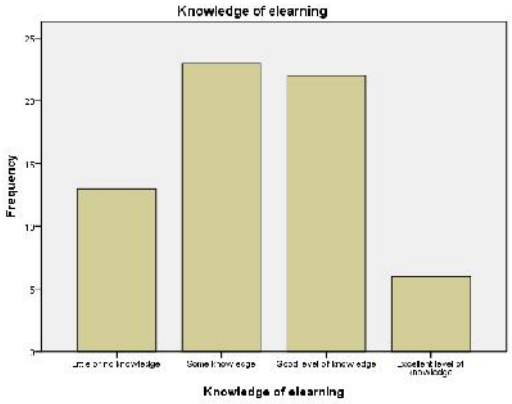


SLOVAKIA



Q.13i Prior Knowledge of e-learning

ALL COUNTRIES



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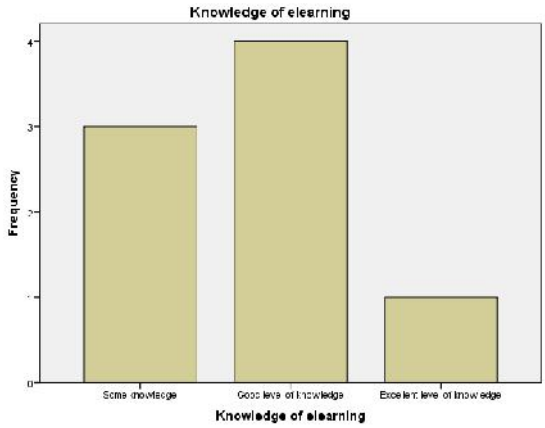

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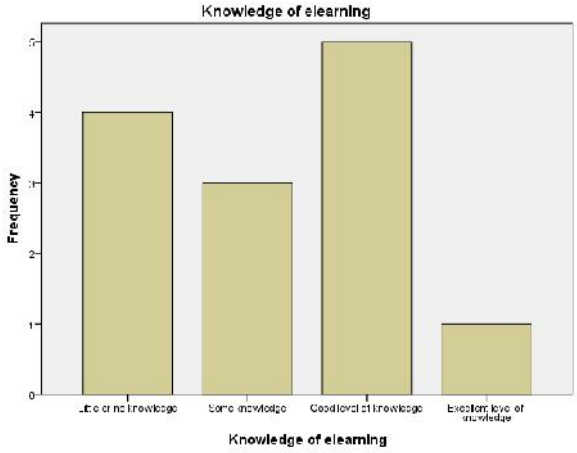

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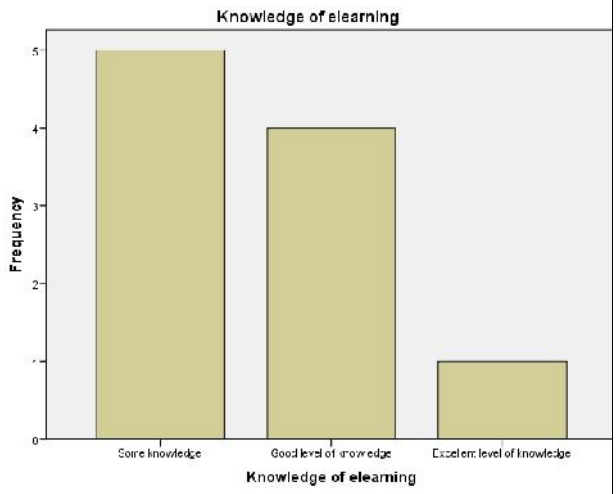

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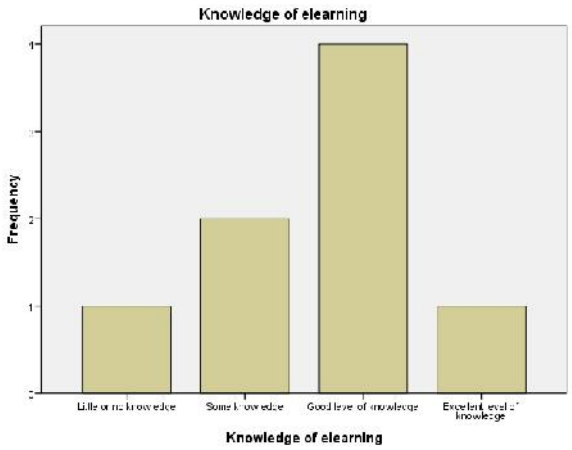

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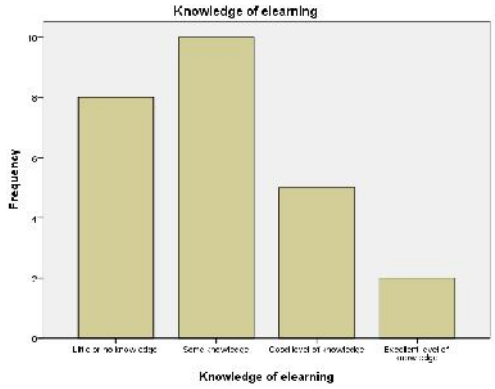
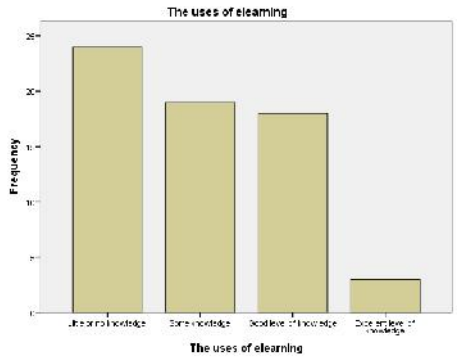


Q.13ii Prior Knowledge of e-learning (The uses of e-learning)

ALL COUNTRIES



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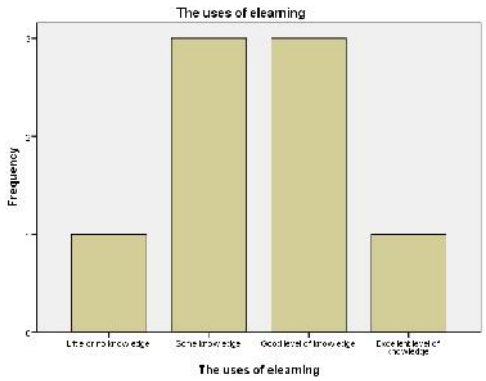

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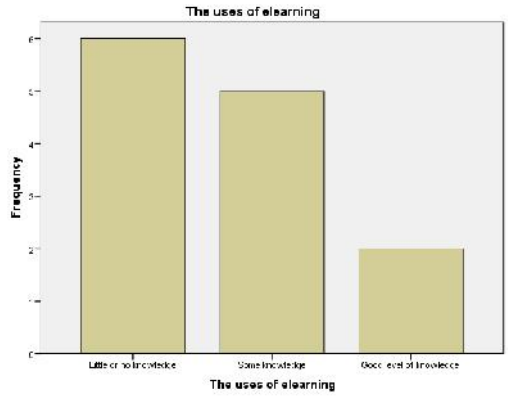

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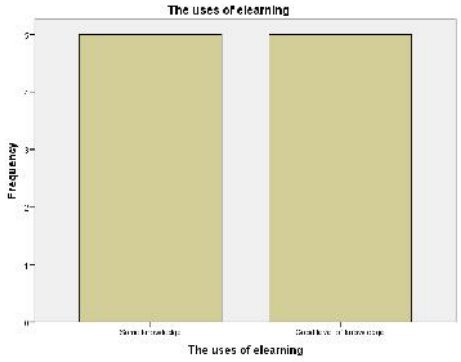

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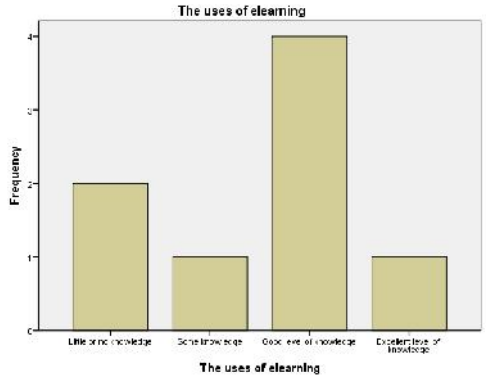

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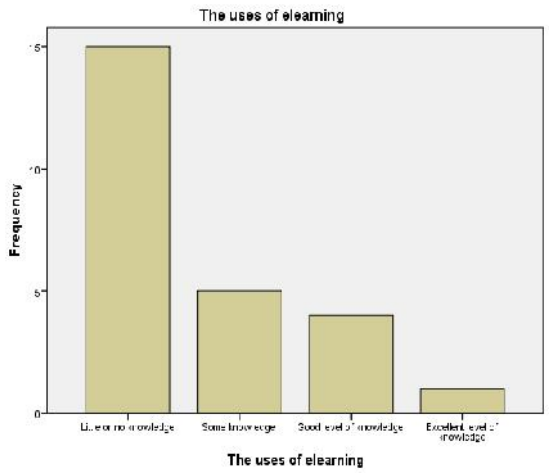
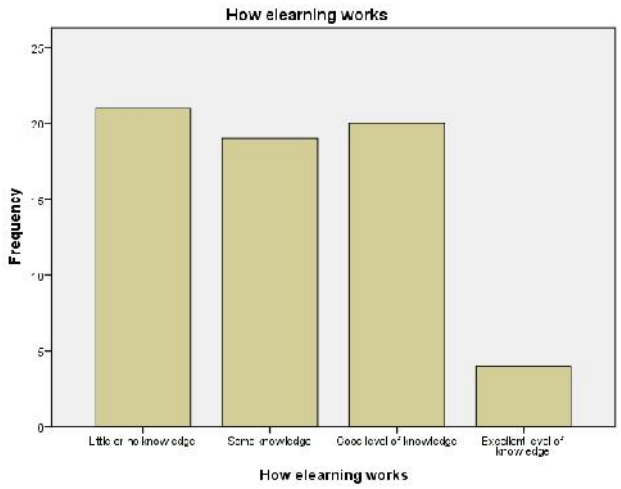


Q.13iii Prior Knowledge of e-learning (How e-learning works)

ALL COUNTRIES



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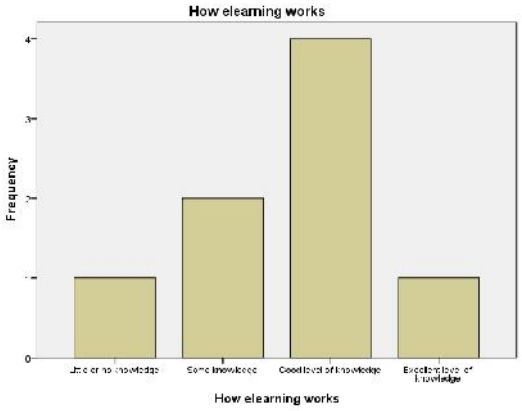

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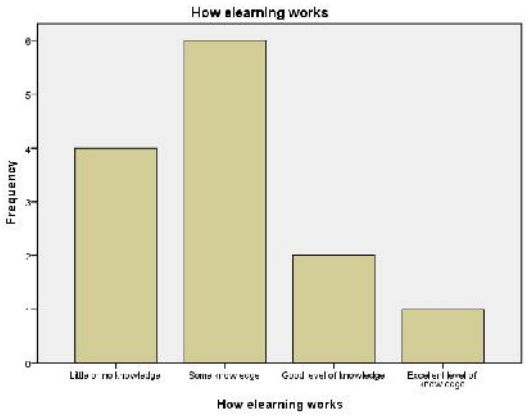

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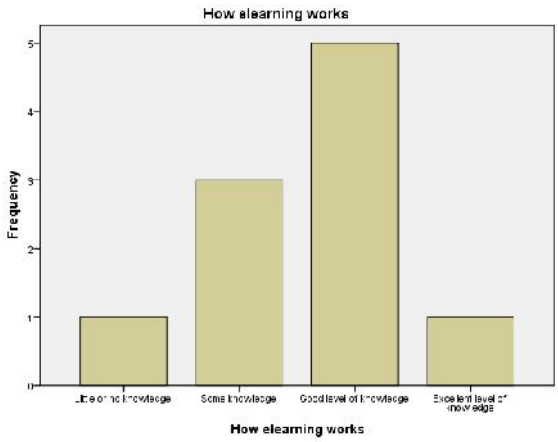

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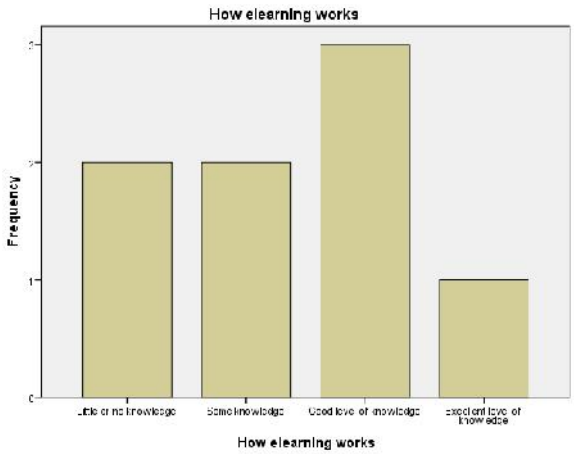

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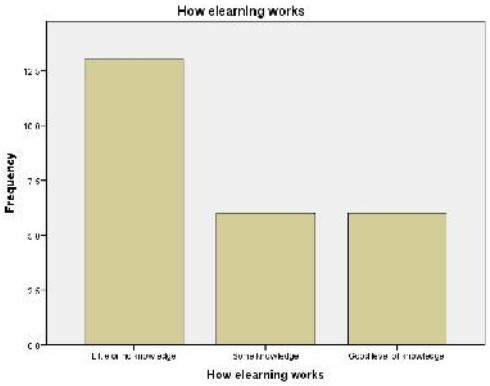
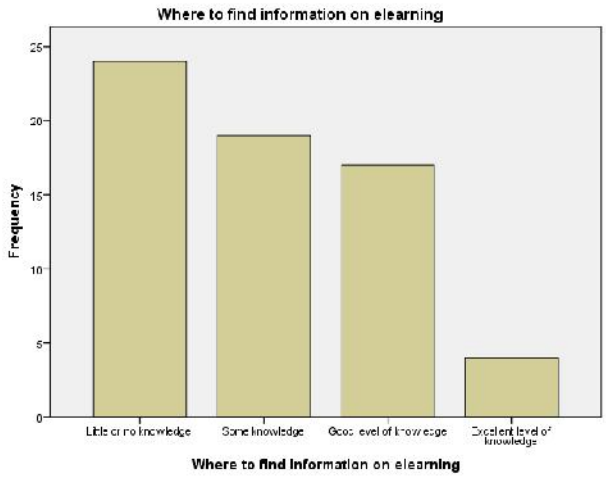


Q.13iv Prior Knowledge of e-learning (Where to find information on e-learning)

ALL COUNTRIES



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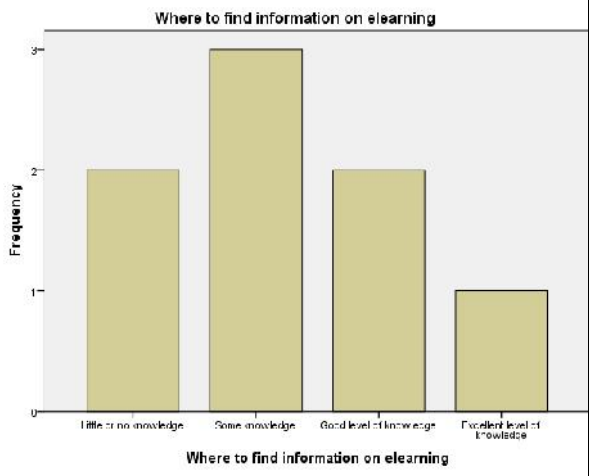

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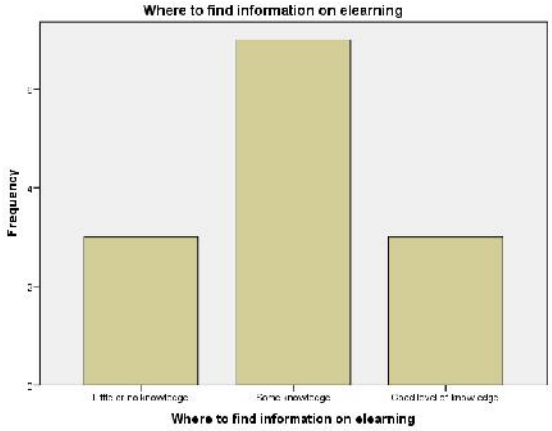

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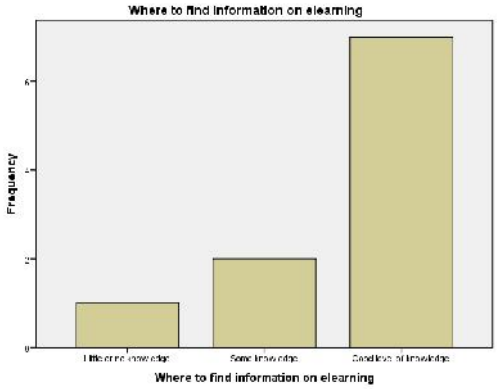

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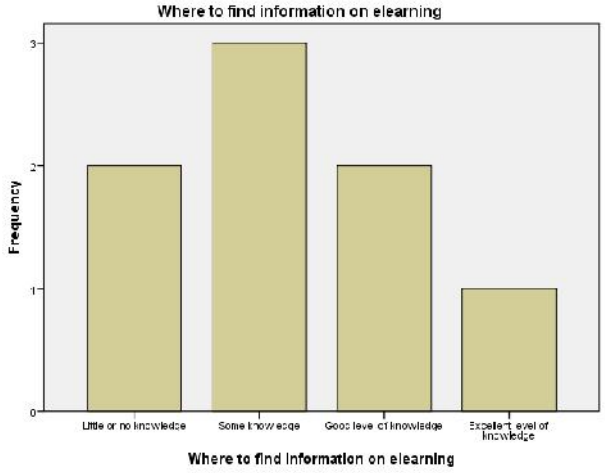

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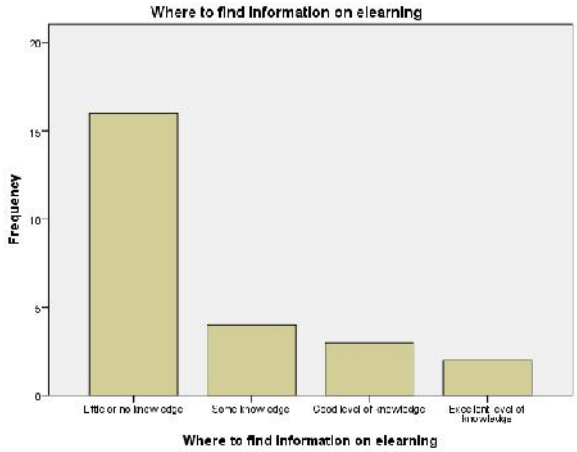
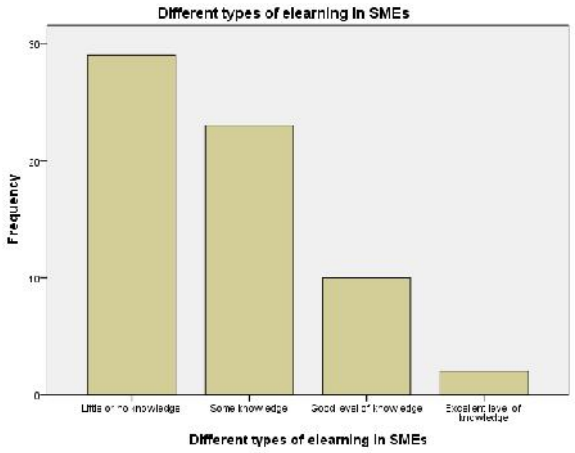
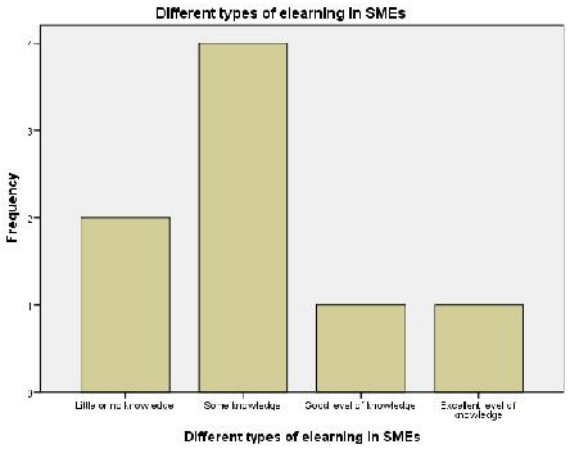


Q.13v Prior Knowledge of e-learning (Different types of e-learning in SMEs)

ALL COUNTRIES



UK



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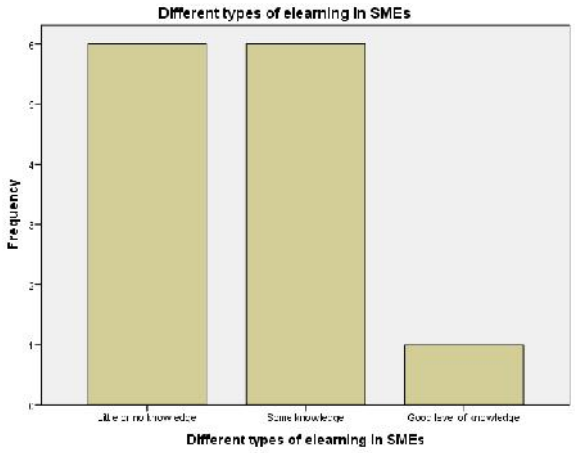

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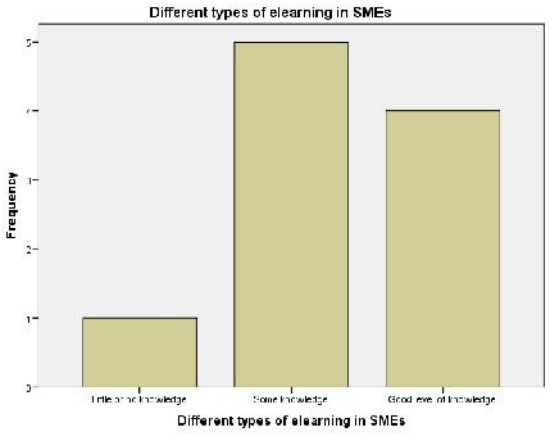

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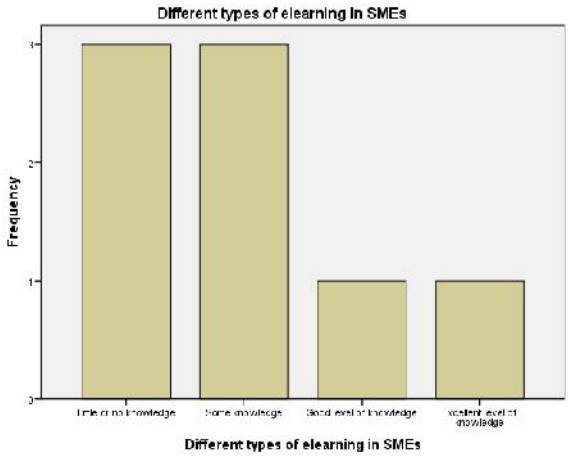

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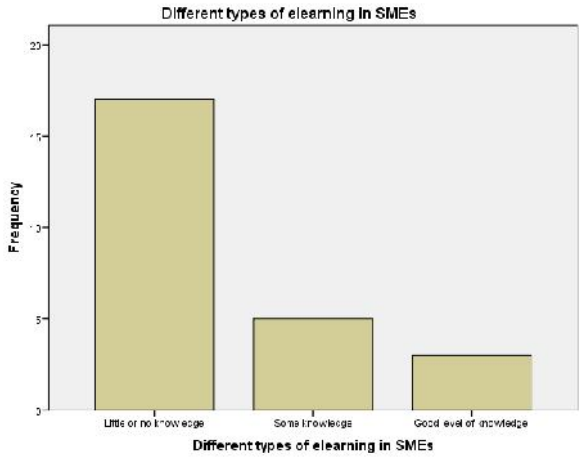
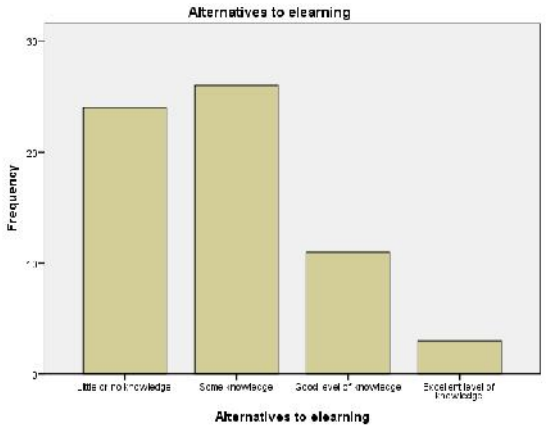


Q.13vi Prior Knowledge of e-learning (Alternatives to e-learning)

ALL COUNTRIES



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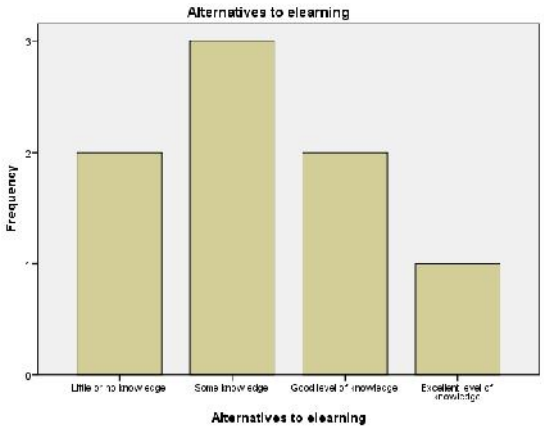
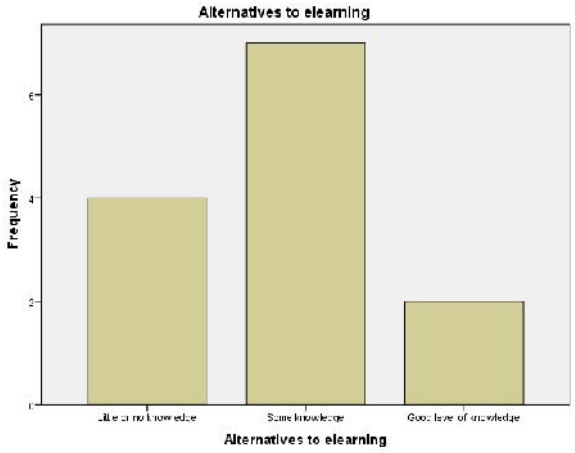


ITALY



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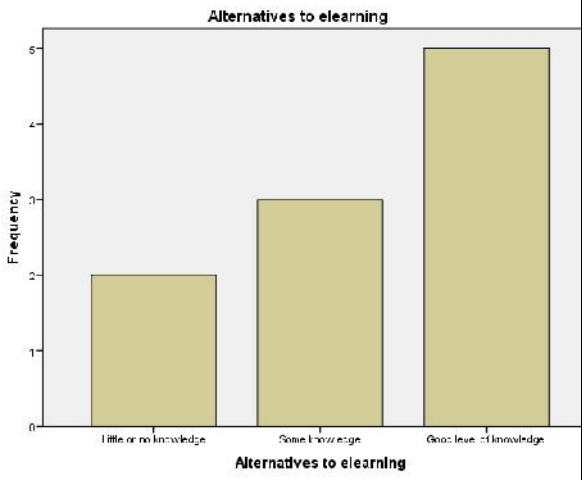
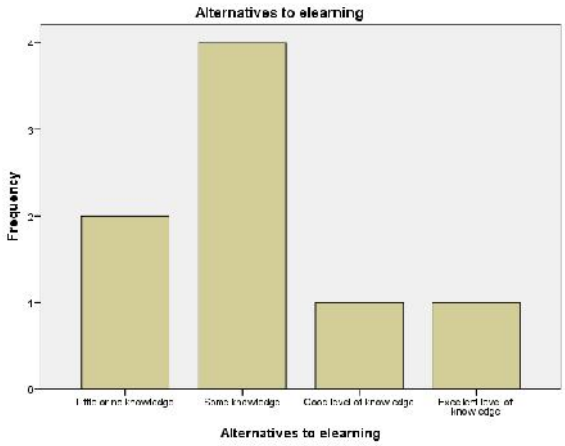
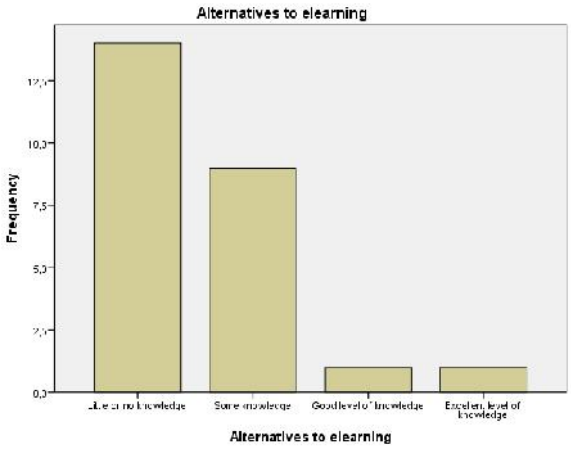


GREECE

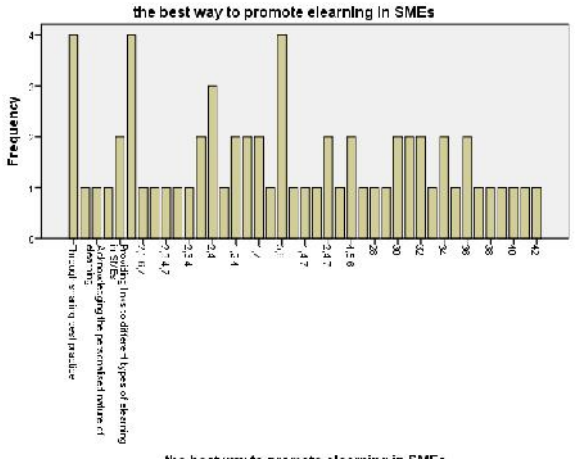


SLOVAKIA

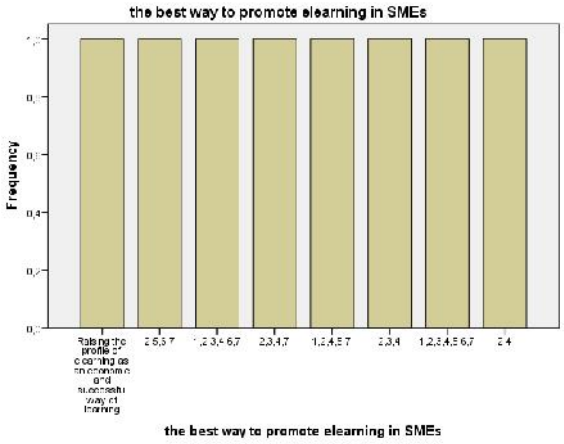


Q.14 What is the best way to promote e-learning in SMEs?

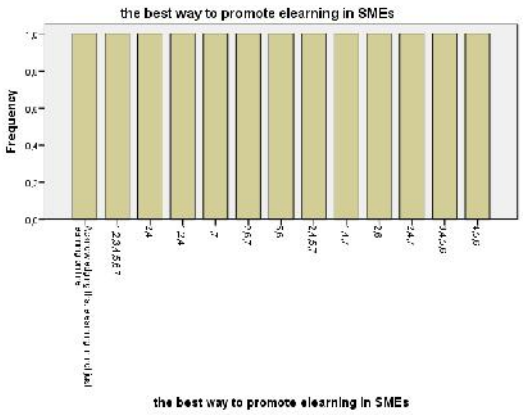
ALL COUNTRIES



UK



ITALY



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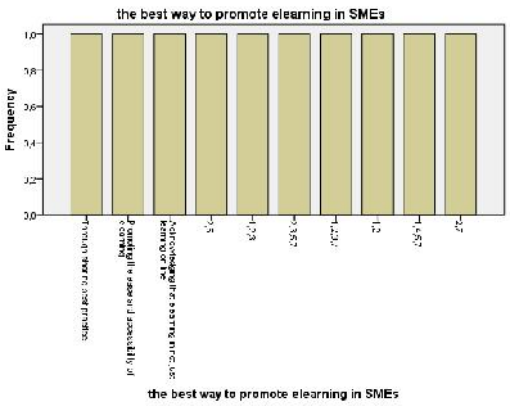

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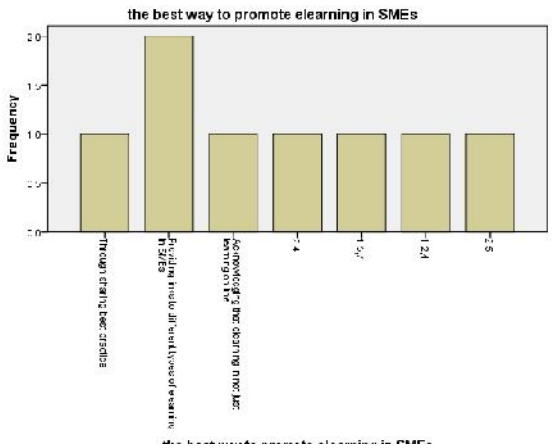
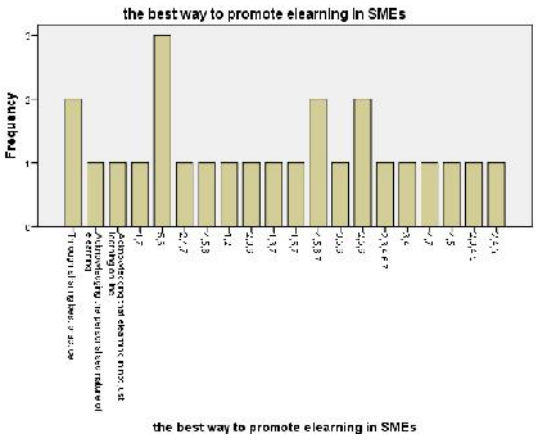
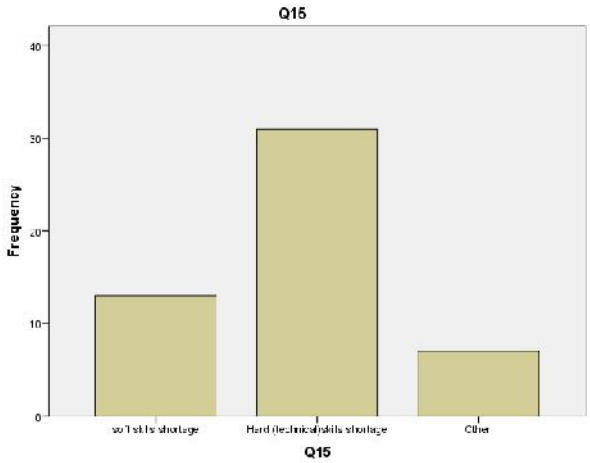
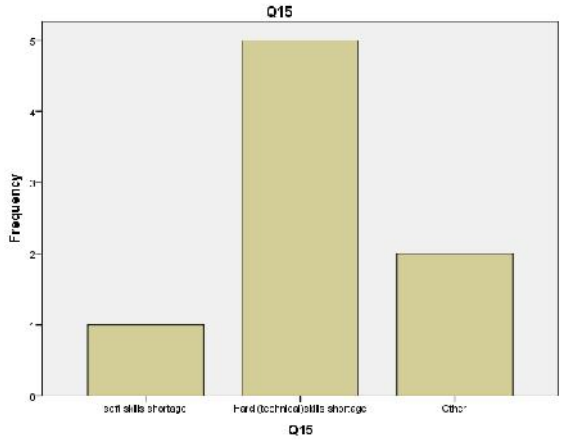
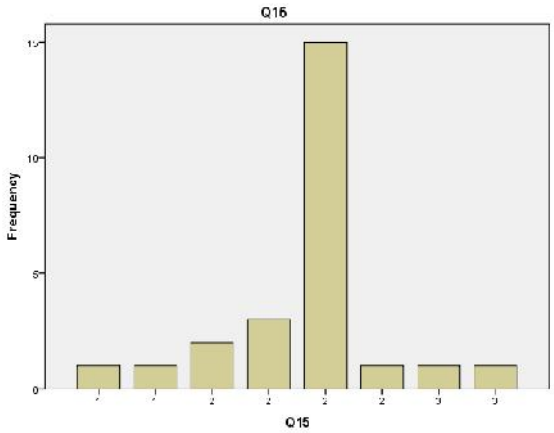
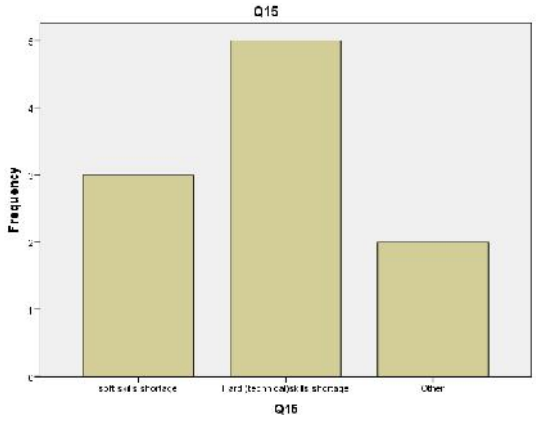
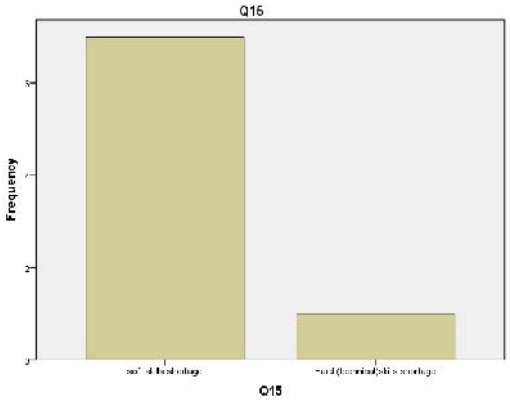
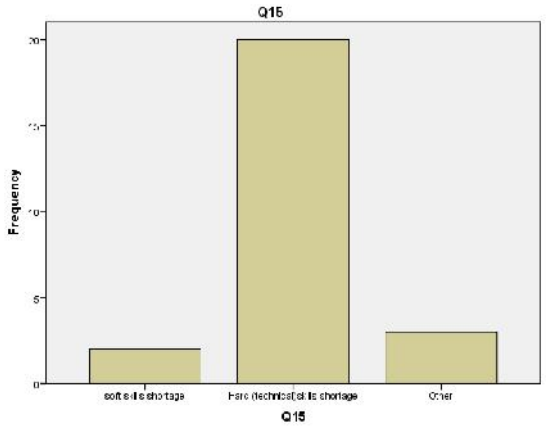


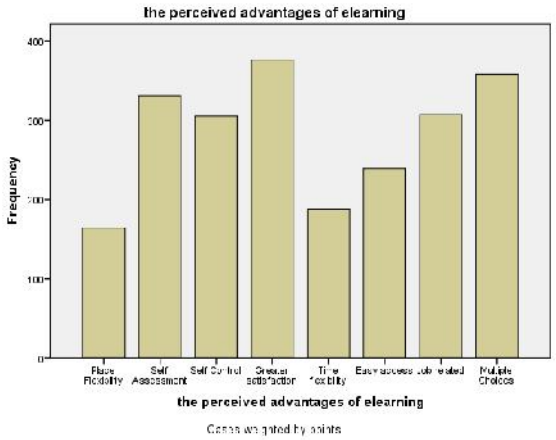
SLOVAKIA



Q.15 What are the issues/problems being addressed by the ICT based learning programme?	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.16 Please rate from 1 to 8 the perceived advantages of e-learning (1 the strongest 8 the weakest)

ALL COUNTRIES



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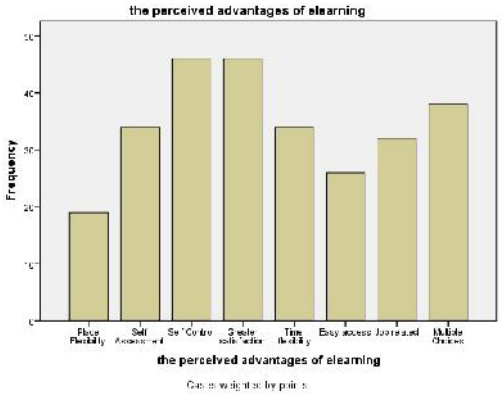
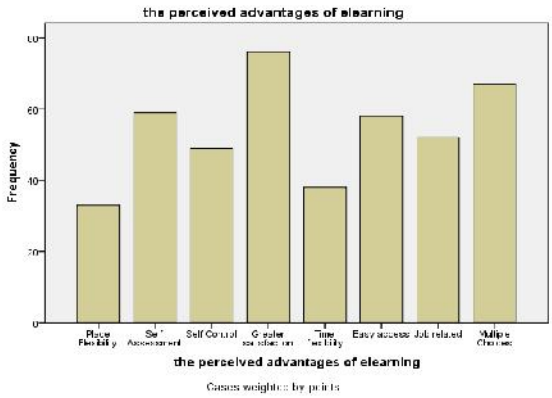
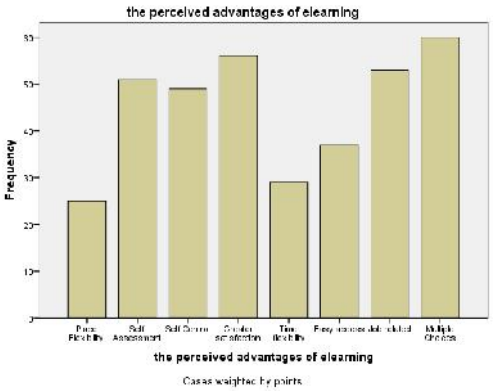


ITALY



SPAIN



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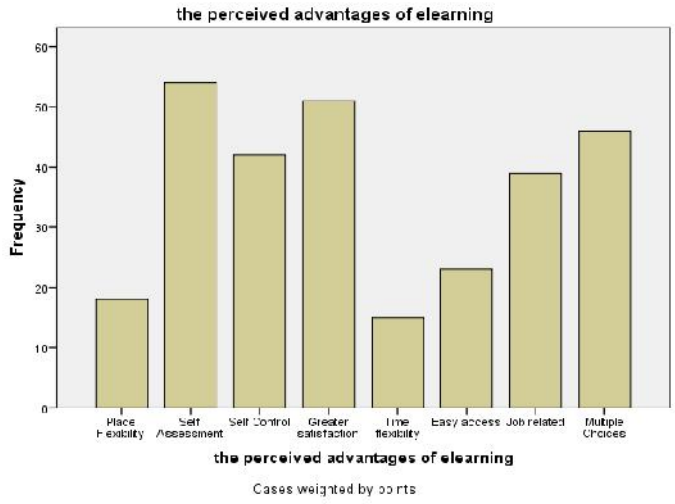
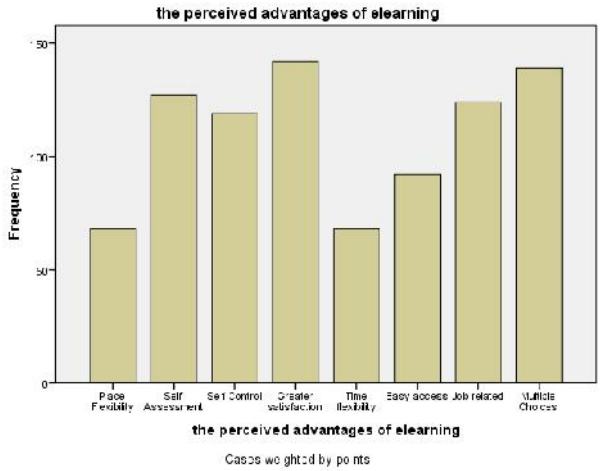
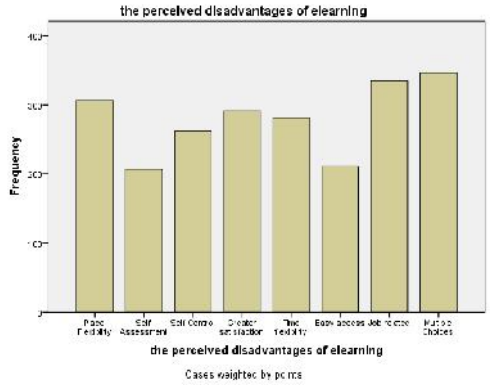


SLOVAKIA

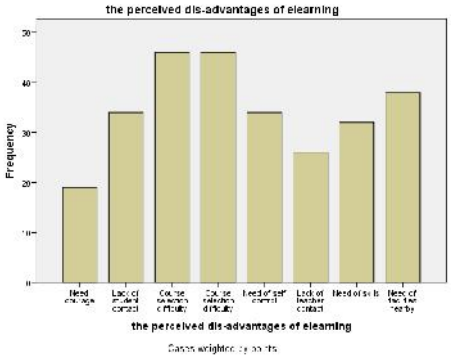


Q.17 Please rate from 1 to 8 the perceived dis-advantages of e-learning (1 the strongest 8 the weakest)

ALL COUNTRIES



UK



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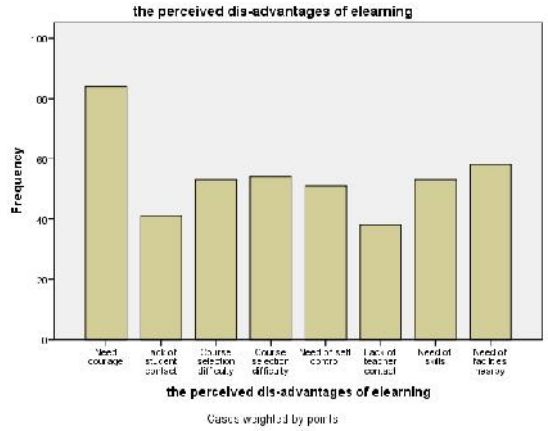

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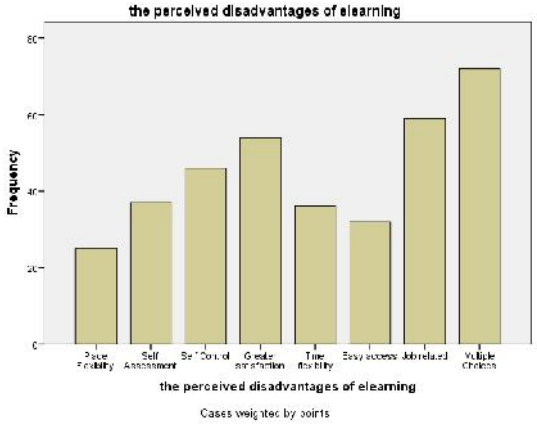

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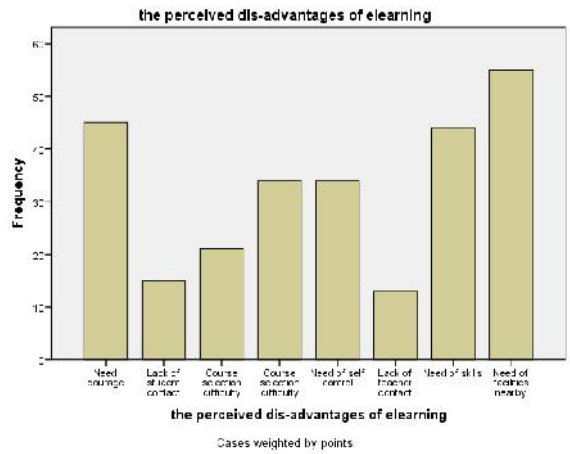
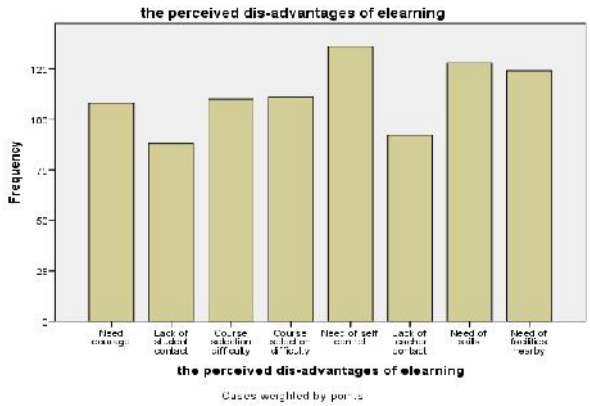
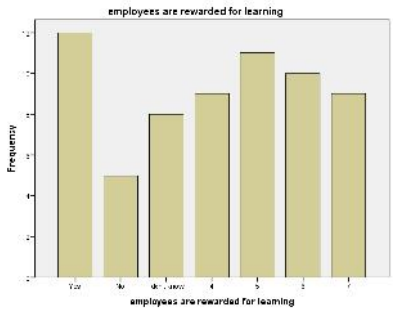
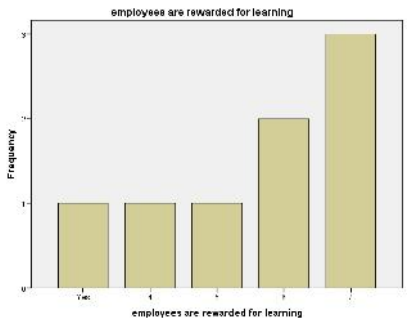
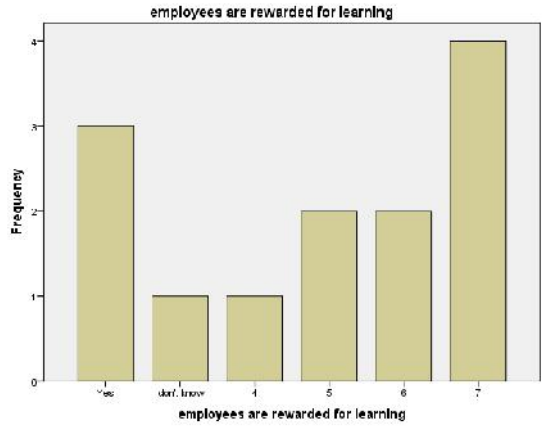
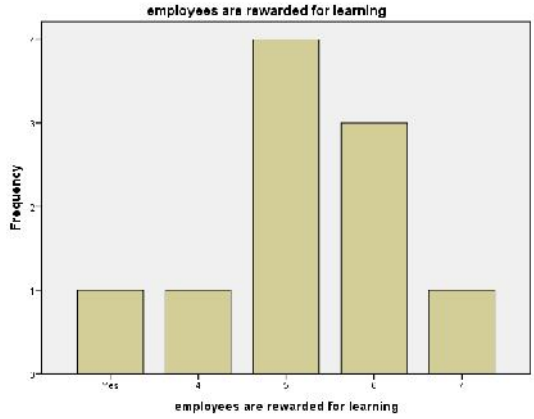
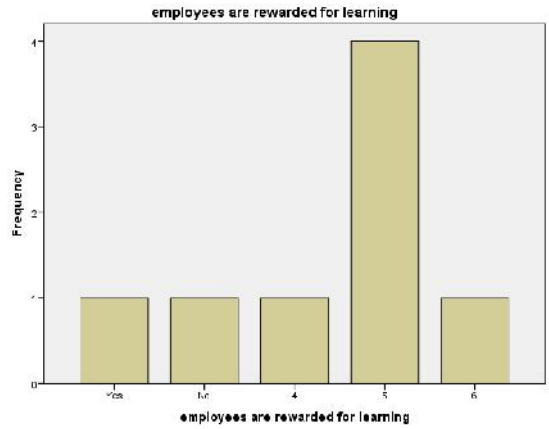
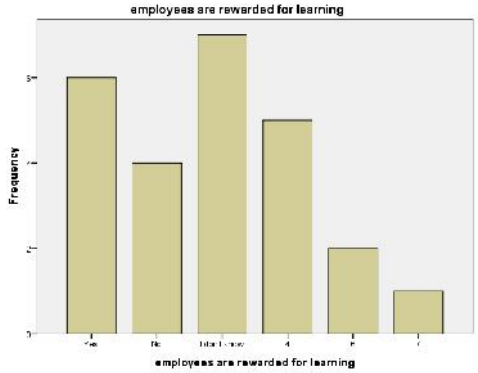


SLOVAKIA



Q.18 Please click on the relevant · in the following tables based on your level of agreement or disagreement with the statements. For example, if you disagree strongly, you should choose · 1 and if you agree strongly with the statement, you should choose 7.

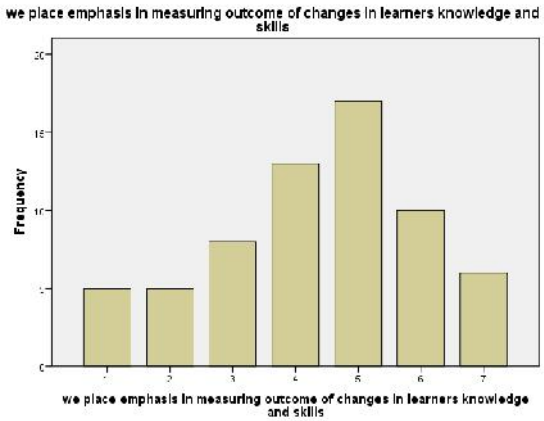
(In) my company:……..

ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

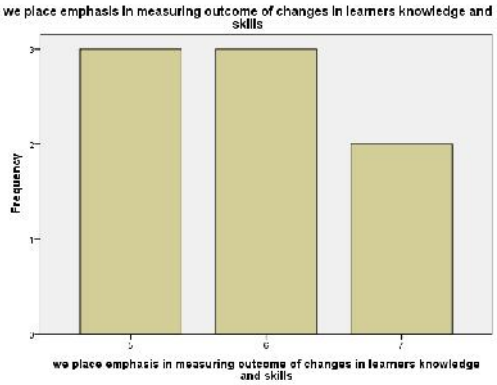
Q.18 Please click on the relevant · in the following tables based on your level of agreement or disagreement with the statements. For example, if you disagree strongly, you should choose · 1 and if you agree strongly with the statement, you should choose 7.

(In) my company:……..

ALL COUNTRIES



UK



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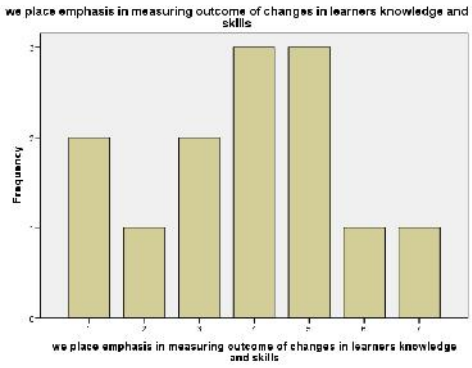

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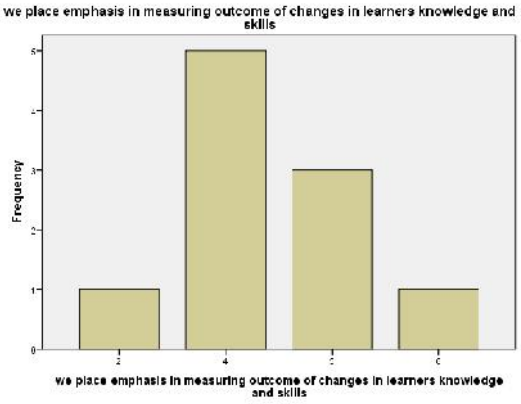

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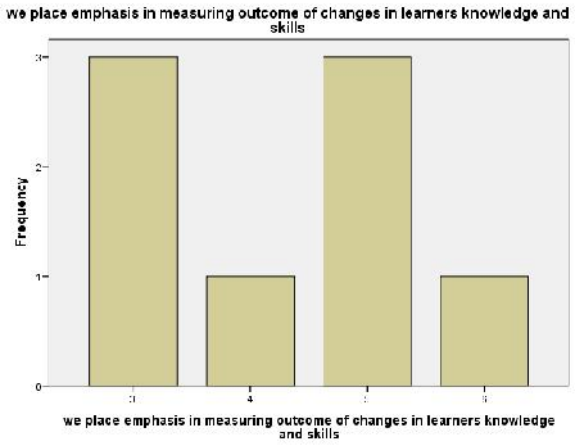

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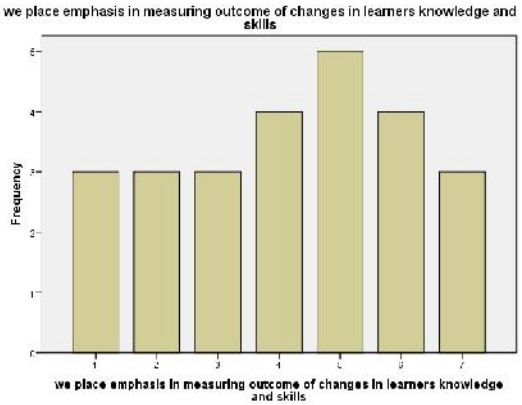
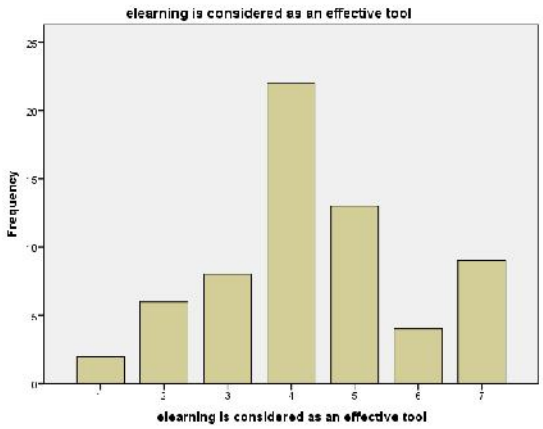


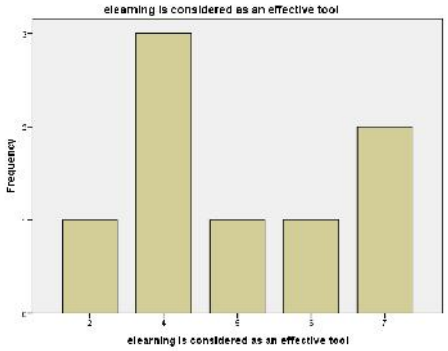
Q.18 Please click on the relevant · in the following tables based on your level of agreement or disagreement with the statements. For example, if you disagree strongly, you should choose · 1 and if you agree strongly with the statement, you should choose 7.

(In) my company:……..

ALL COUNTRIES



UK



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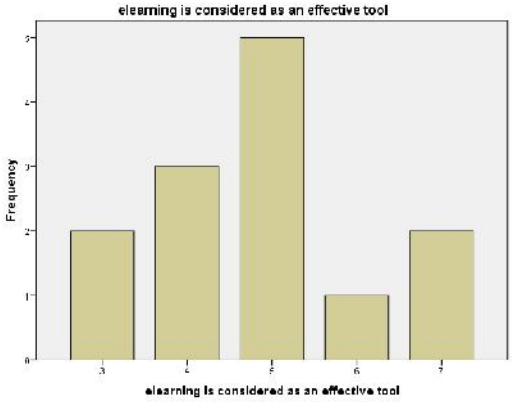

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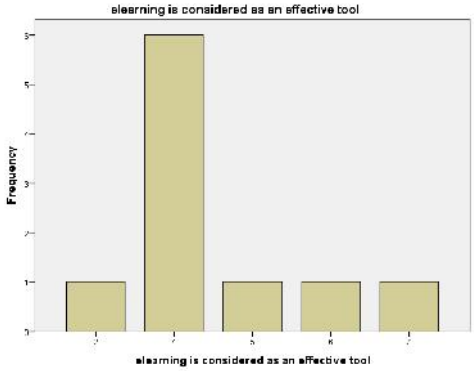

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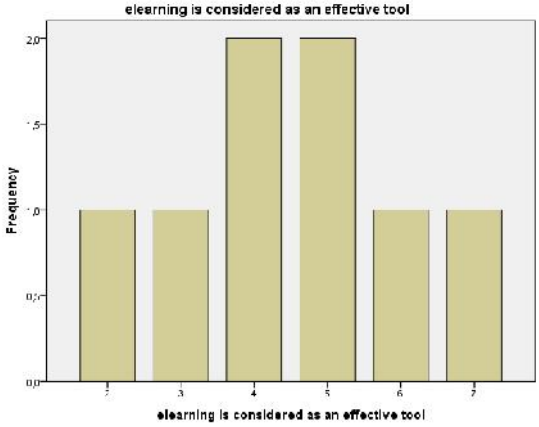

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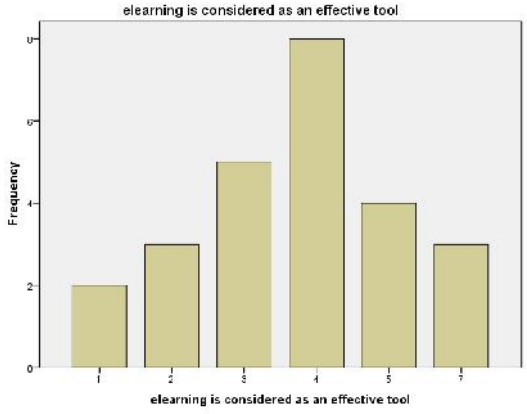
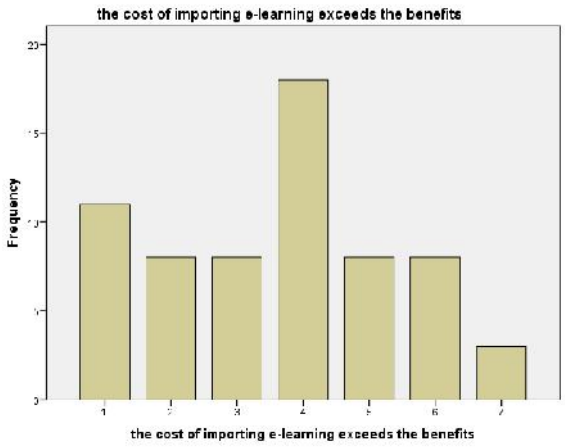


Q.18 Please click on the relevant · in the following tables based on your level of agreement or disagreement with the statements. For example, if you disagree strongly, you should choose · 1 and if you agree strongly with the statement, you should choose 7.

(In) my company:……..

ALL COUNTRIES



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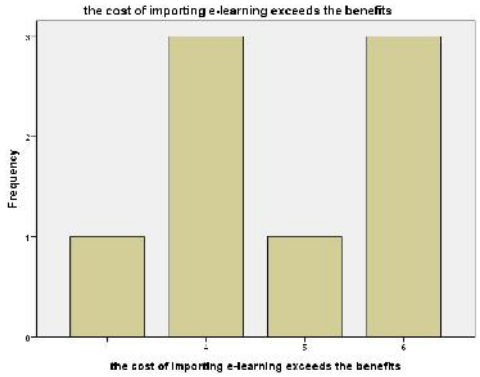

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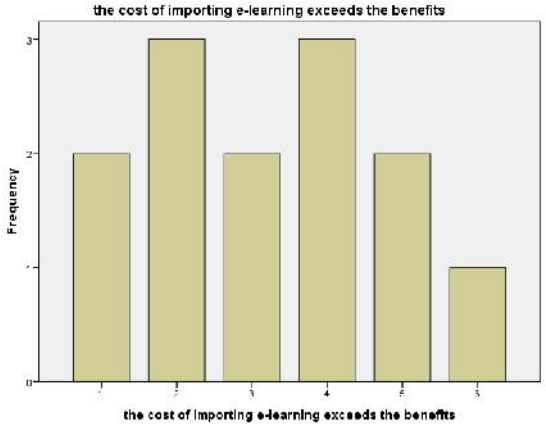

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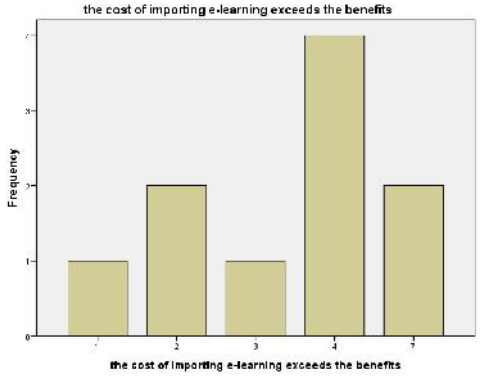

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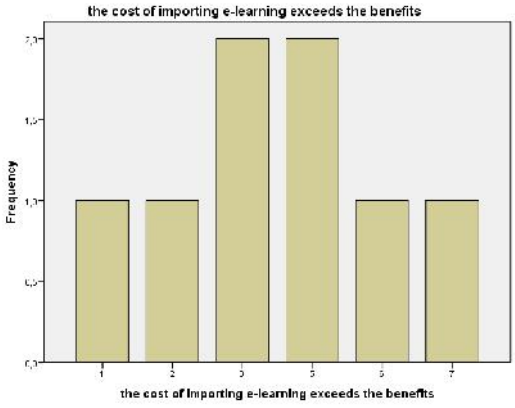

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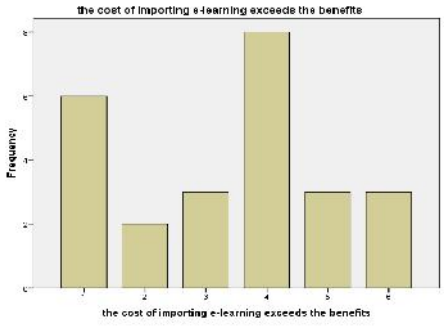
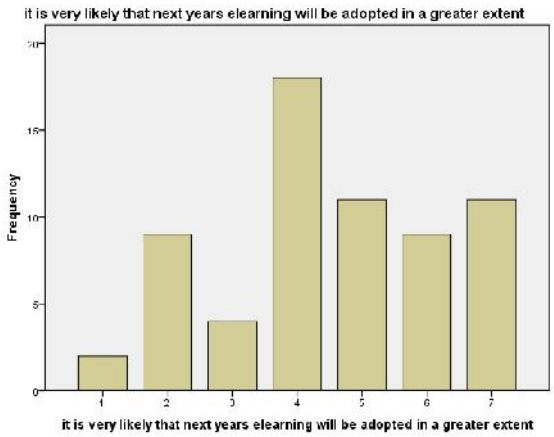


Q.18 Please click on the relevant · in the following tables based on your level of agreement or disagreement with the statements. For example, if you disagree strongly, you should choose · 1 and if you agree strongly with the statement, you should choose 7.

(In) my company:……..

ALL COUNTRIES



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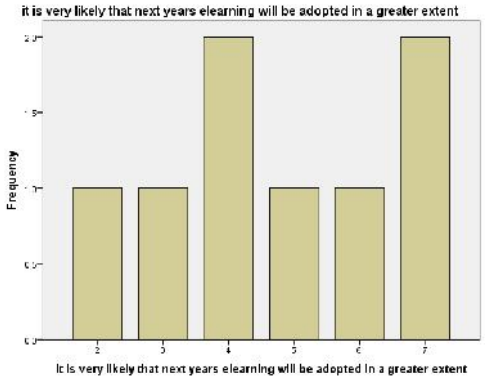

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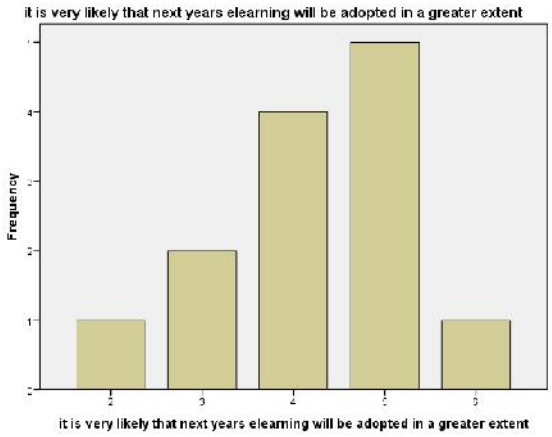

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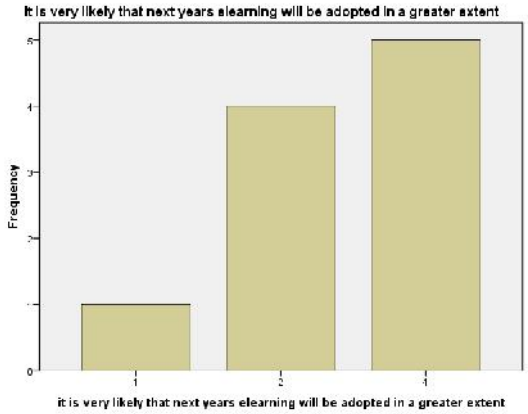

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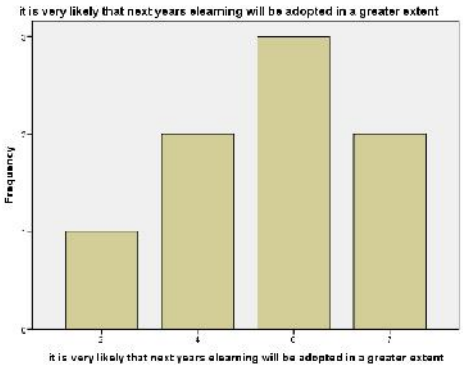

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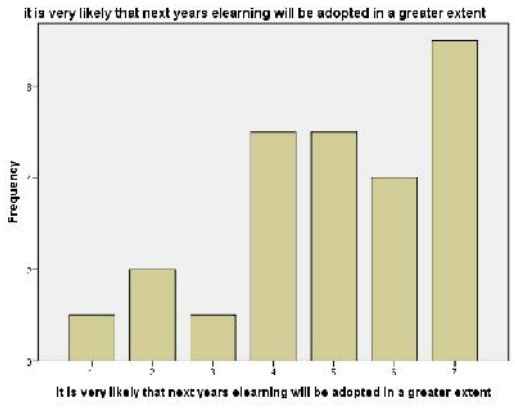
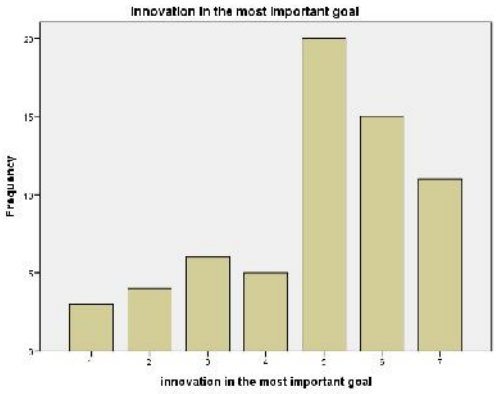


Q.18 Please click on the relevant in the following tables based on your level of agreement or disagreement with the statements. For example, if you disagree strongly, you should choose 1 and if you agree strongly with the statement, you should choose 7.

(In) my company:……..

ALL COUNTRIES



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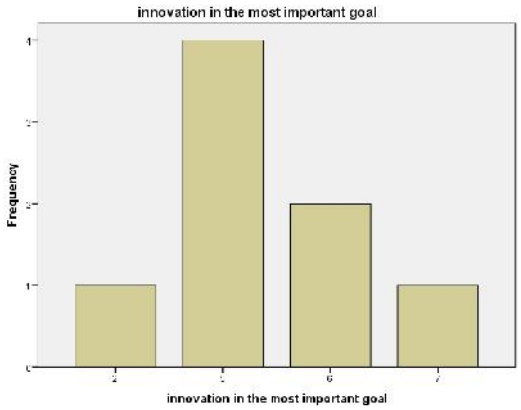

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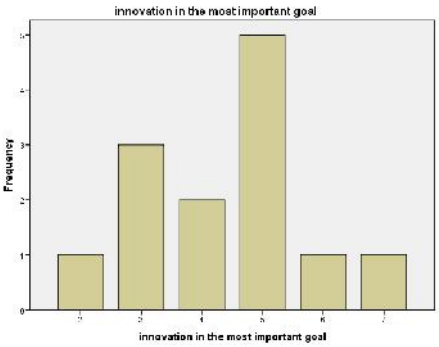

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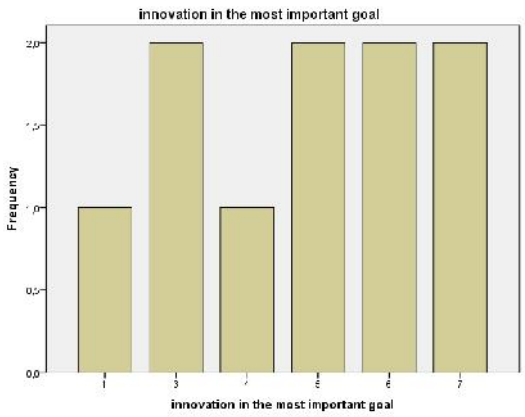

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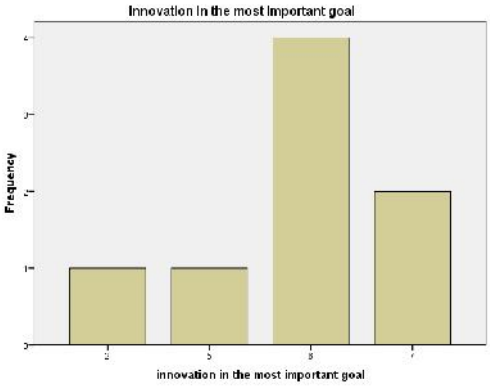

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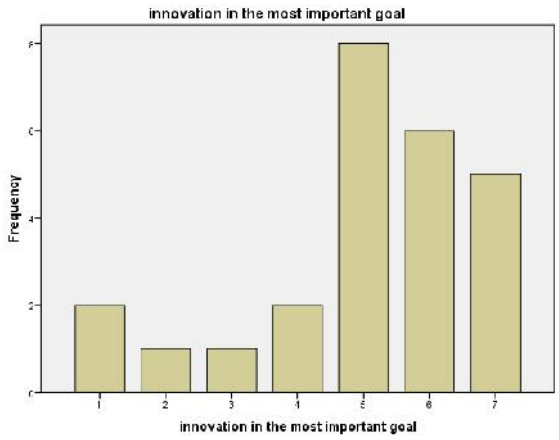
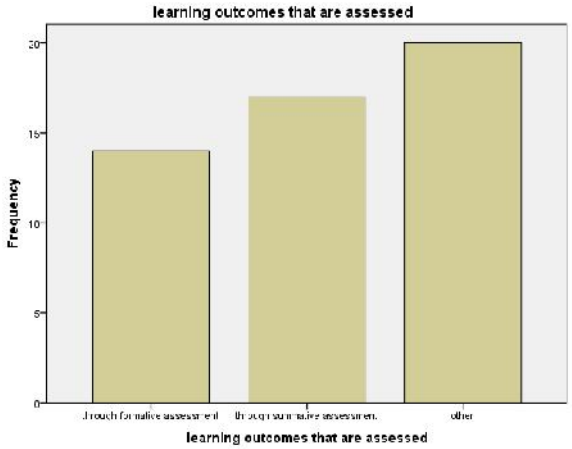


Q.19 How are learning outcomes assessed?

ALL COUNTRIES



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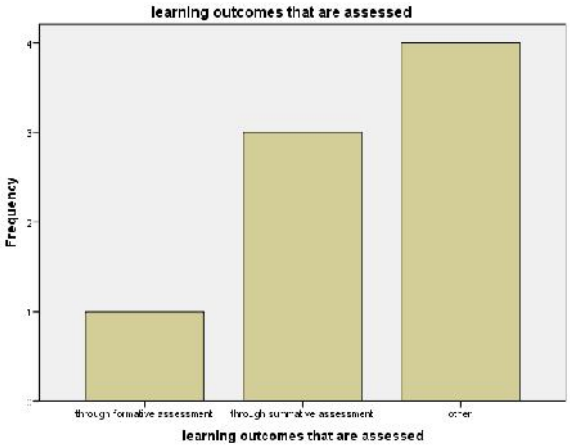
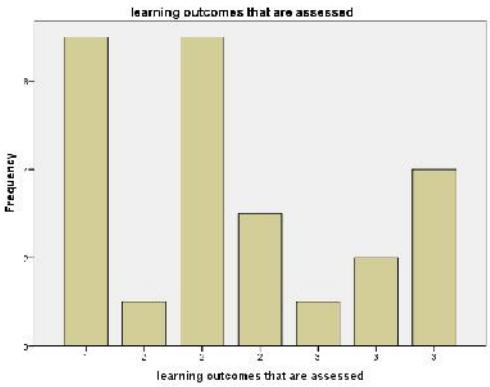


ITALY



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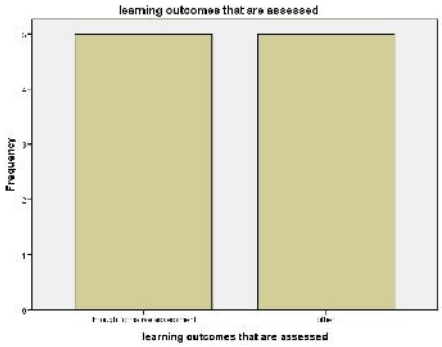

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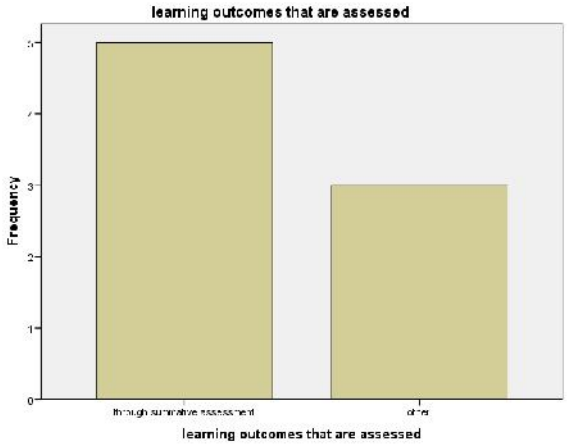
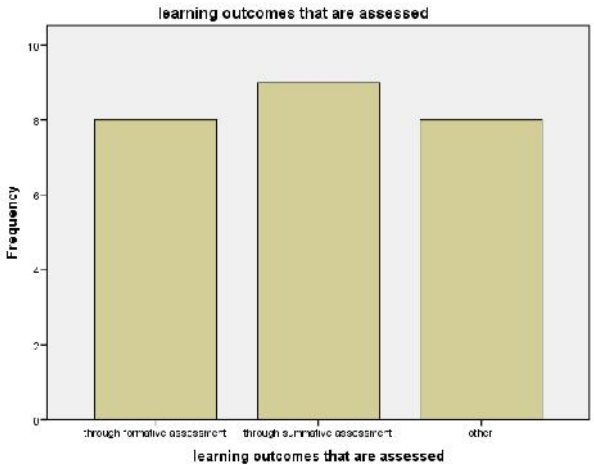
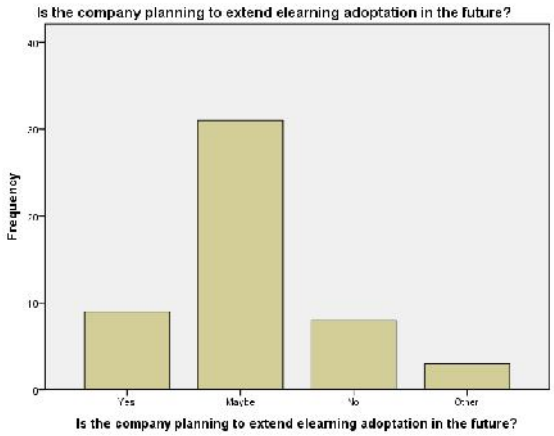


SLOVAKIA

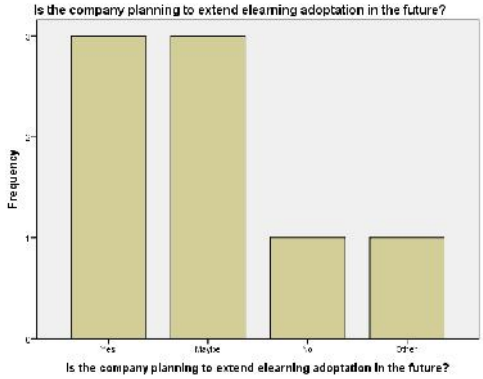


Q. 20 Is the company planning to extend e-learning adoption in the future?

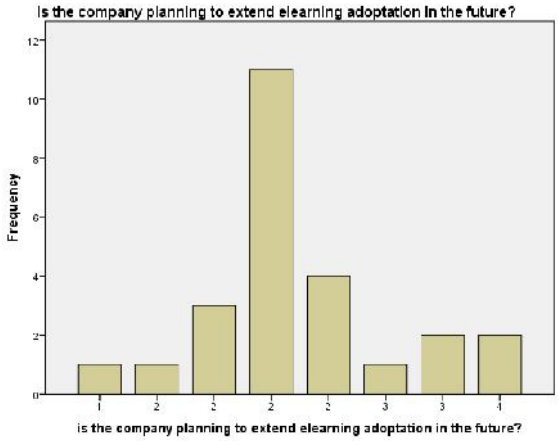
ALL COUNTRIES



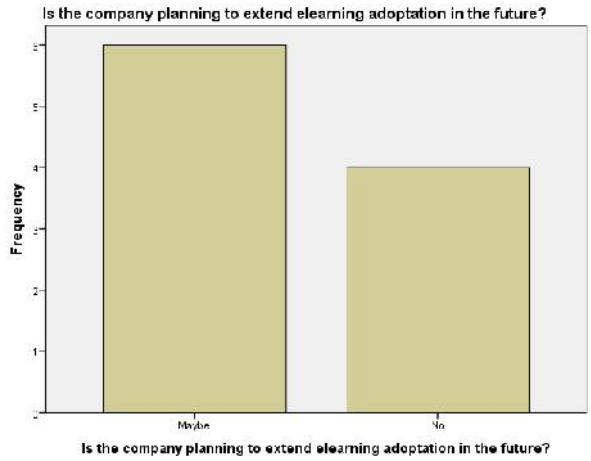
UK



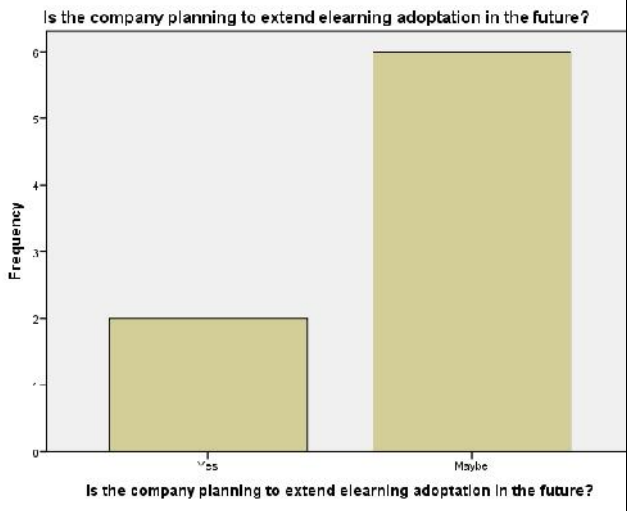
ITALY



SPAIN



GREECE



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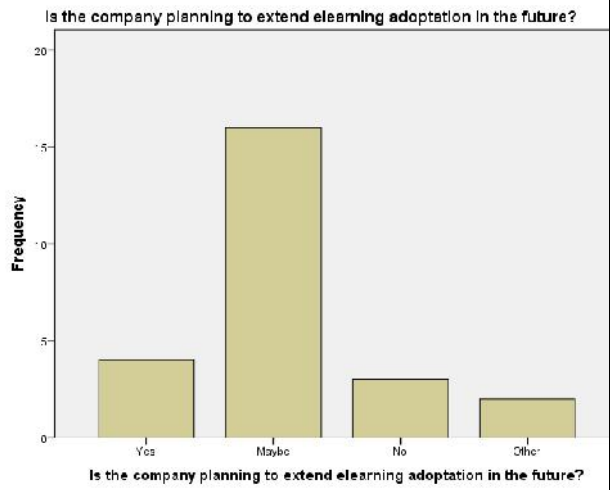
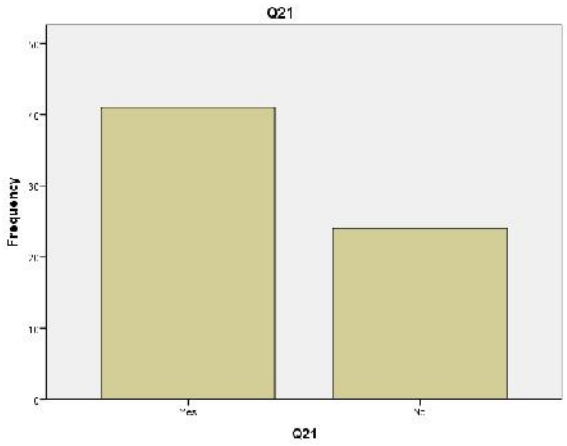
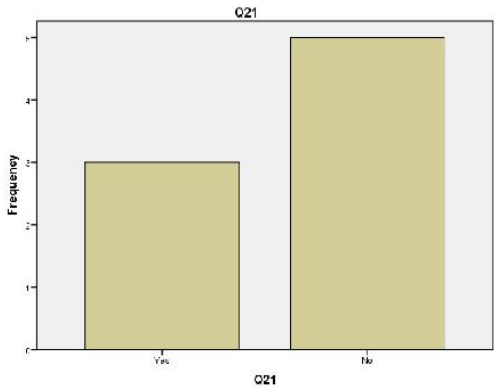
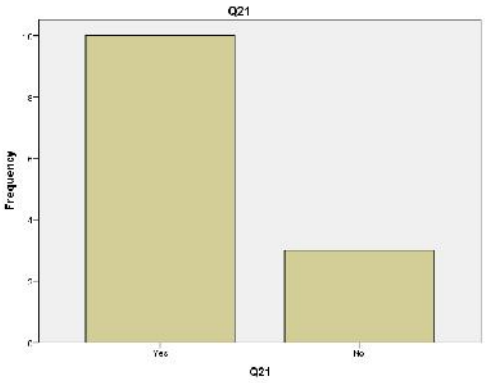
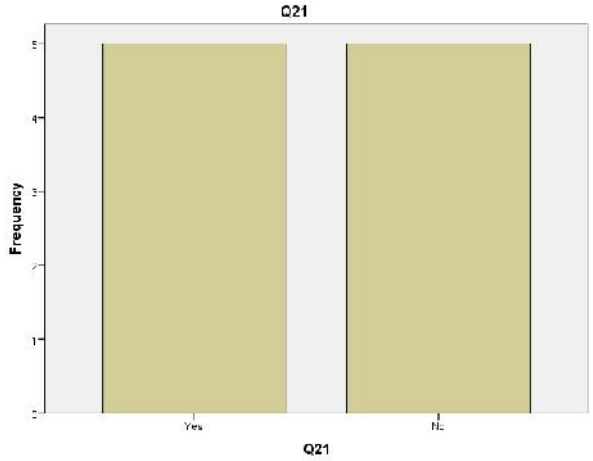
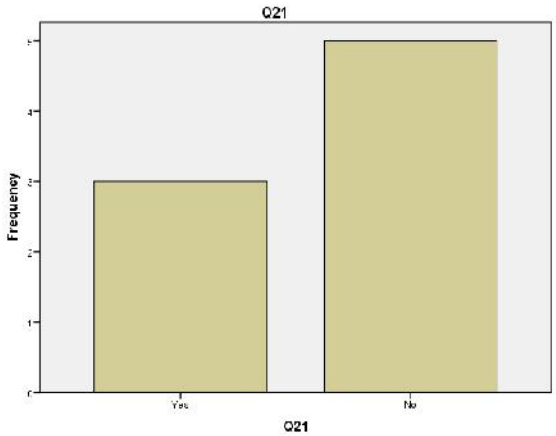
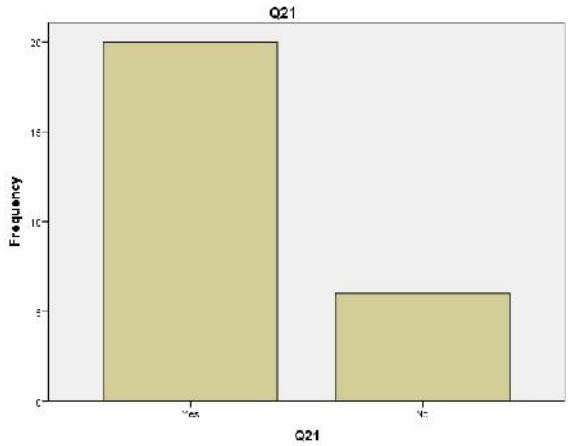
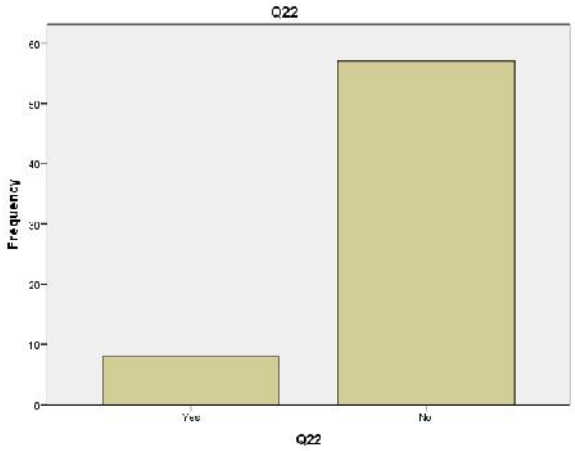


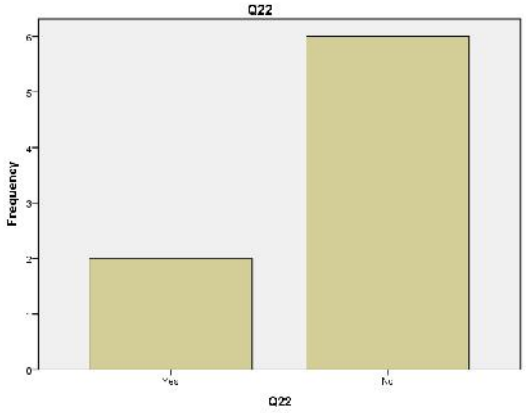
Q.21 Would you be interested in receiving further information about this project?	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.22 Would you be interested in talking part in skype conversation to expand on your answers?

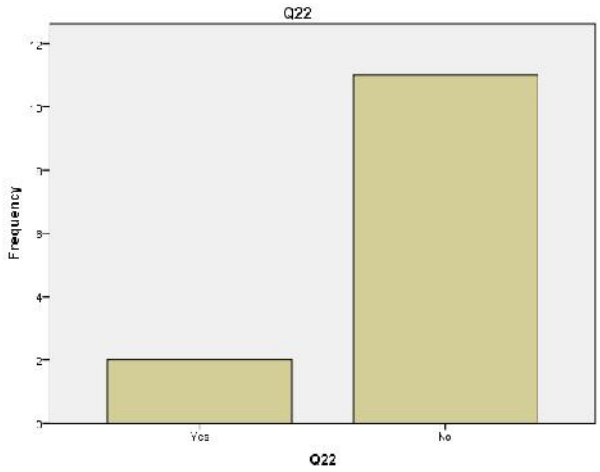
ALL COUNTRIES



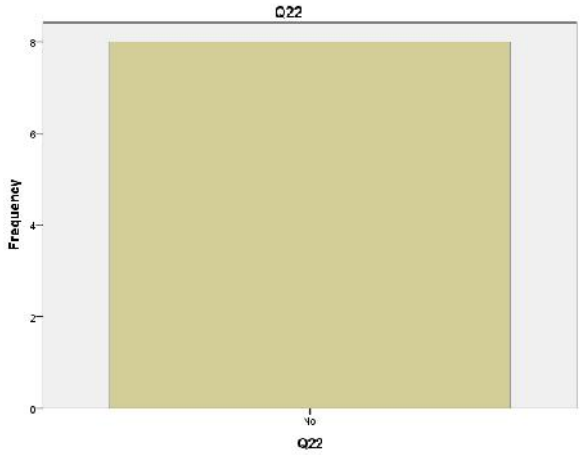
UK



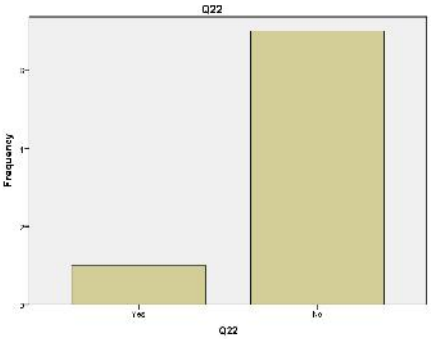
ITALY



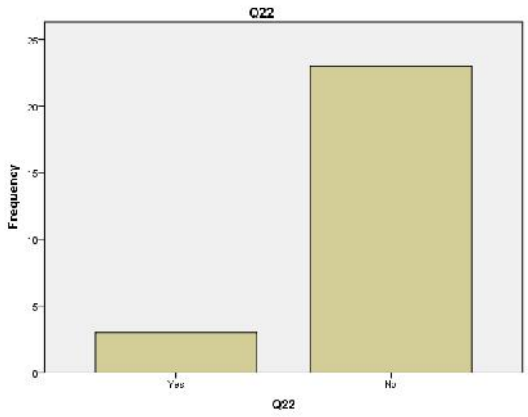
SPAIN



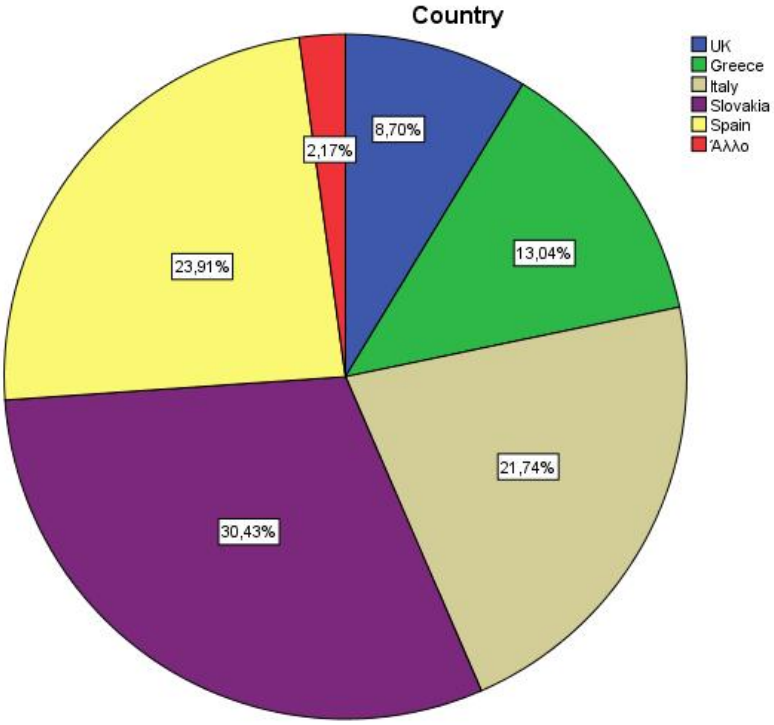
GREECE



SLOVAKIA

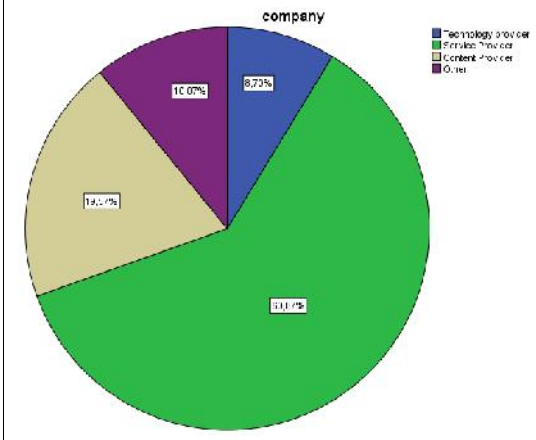
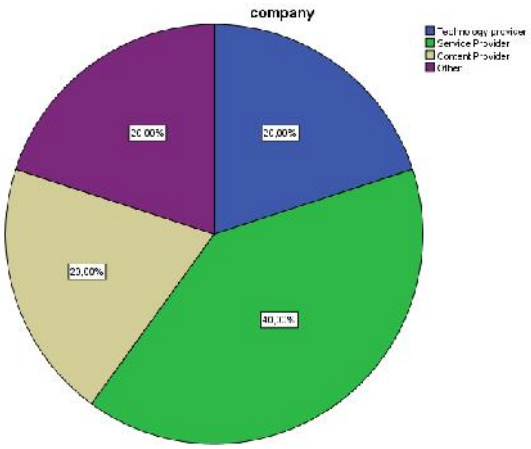
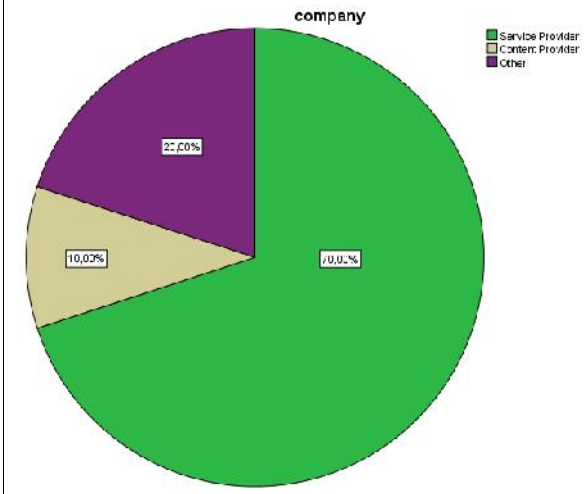
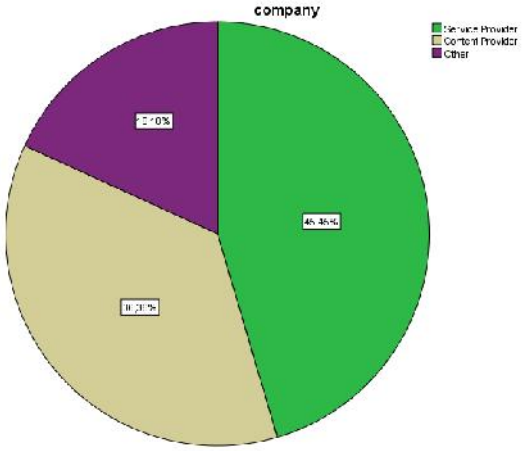
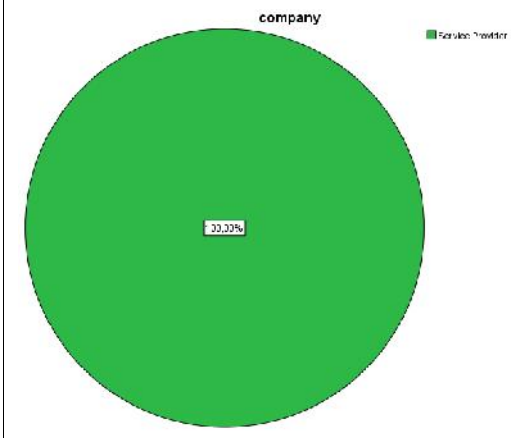
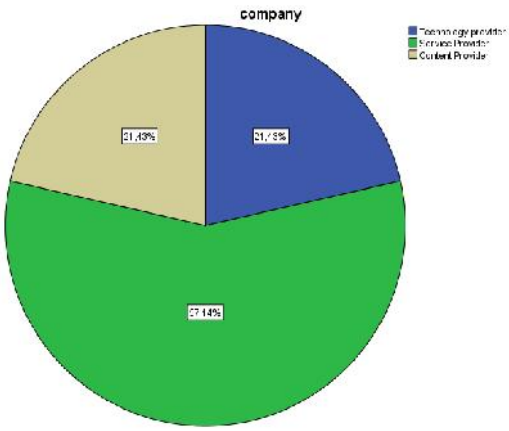


PROVIDER QUESTIONNAIRE – DESCRIPTIVE STATISTICS



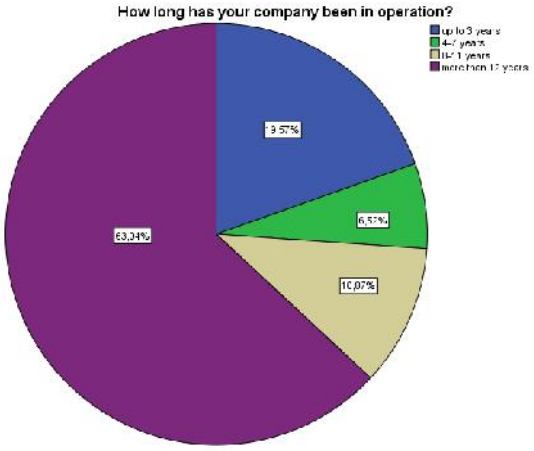
Country

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UK	4	8,7	8,7	8,7
	Greece	6	13,0	13,0	21,7
	Italy	10	21,7	21,7	43,5
	Slovakia	14	30,4	30,4	73,9
	Spain	11	23,9	23,9	97,8
	Άλλο	1	2,2	2,2	100,0
	Total	46	100,0	100,0	

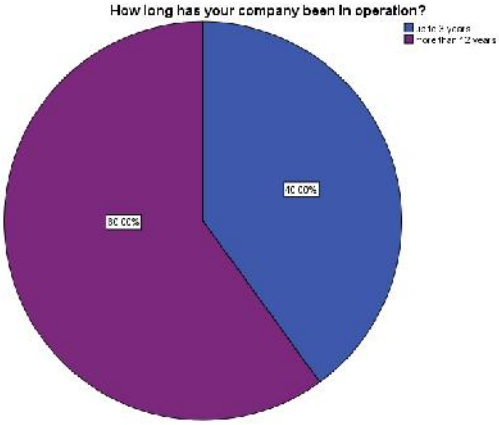
Q.1 Your company classified as	
ALL COUNTRIES	**UK**
	
ITALY	**SPAIN**
	
GREECE	**SLOVAKIA**
	

Q.2 How long has your company been in operation?

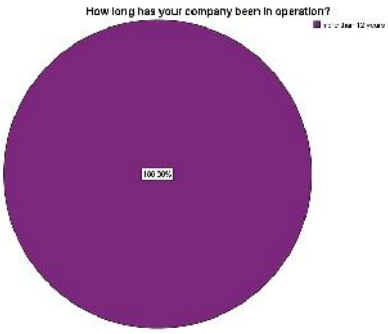
ALL COUNTRIES



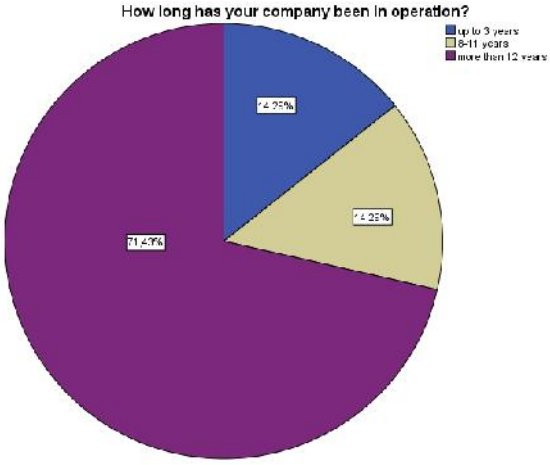
UK



ITALY



SPAIN



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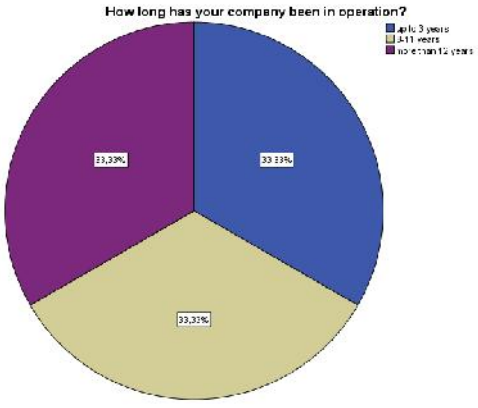
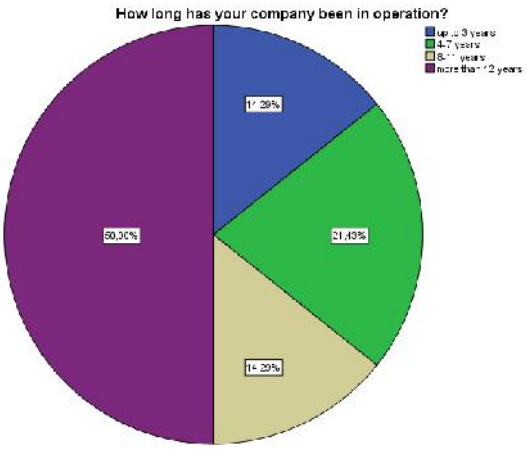
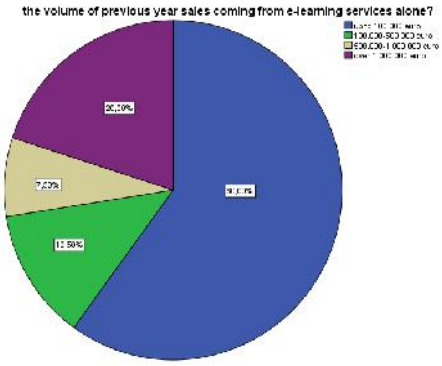


SLOVAKIA

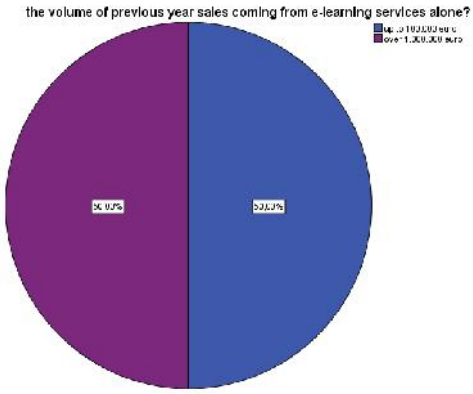


Q.3 What is the volume of previous year sales coming from e-learning services alone?

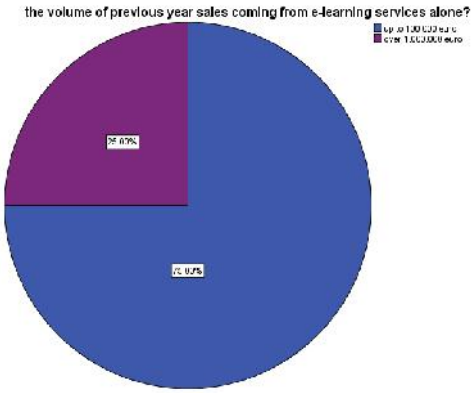
ALL COUNTRIES



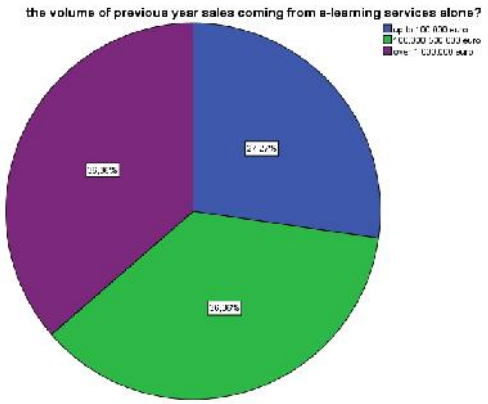
UK



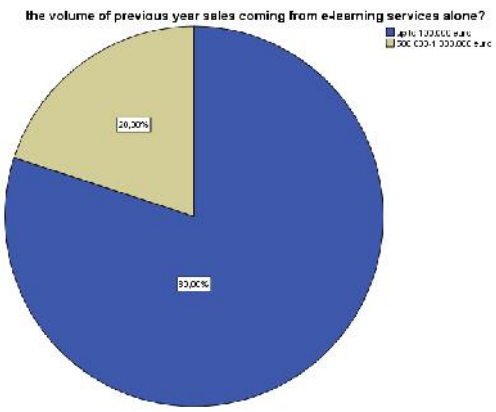
ITALY



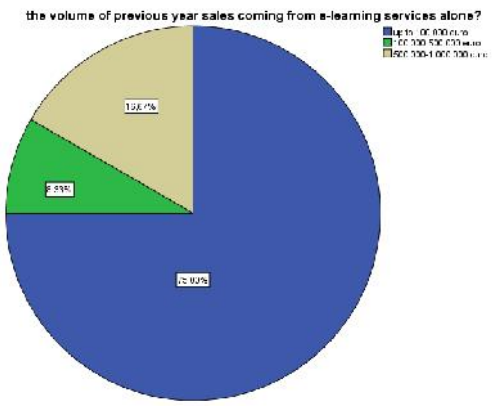
SPAIN



GREECE

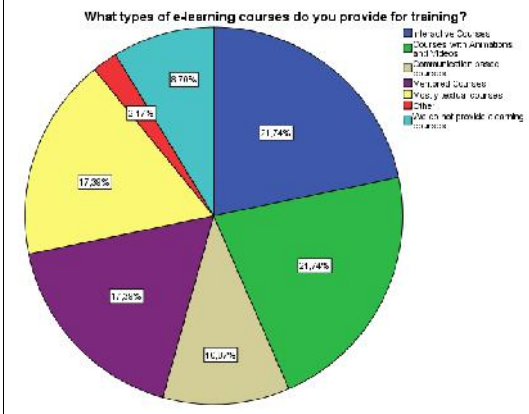


SLOVAKIA

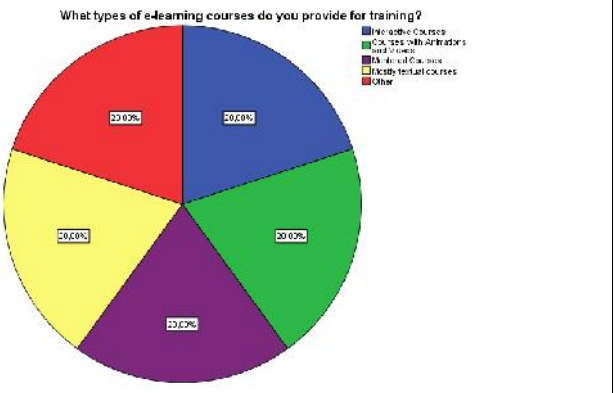


Q.4 What types of e-learning courses do you provide for training?

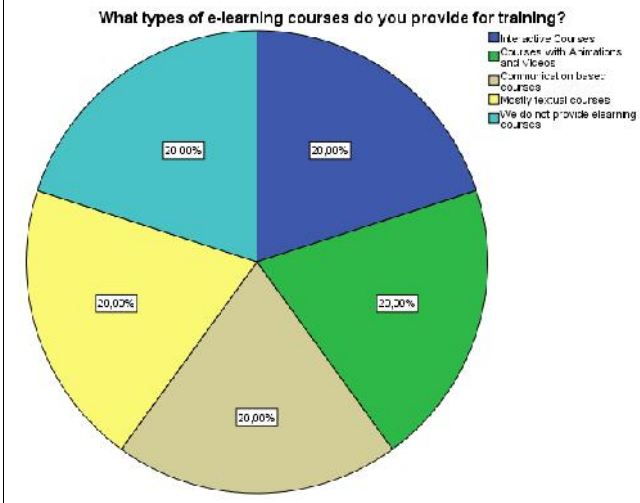
ALL COUNTRIES



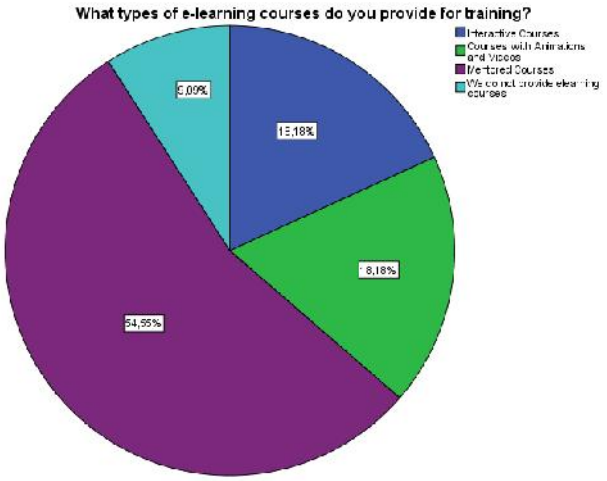
UK



ITALY



SPAIN



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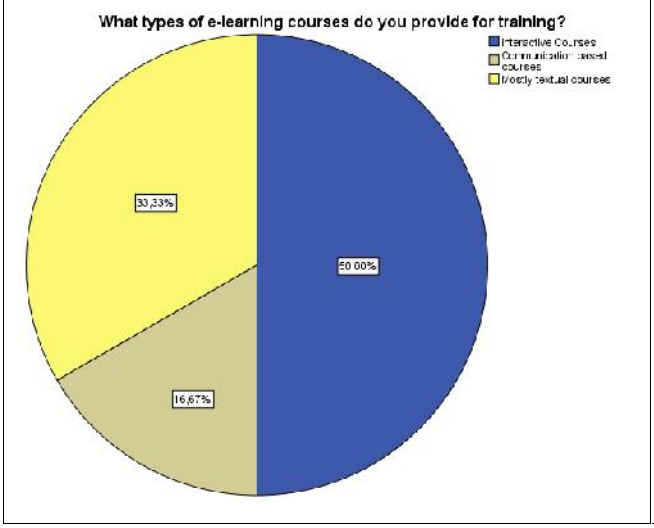
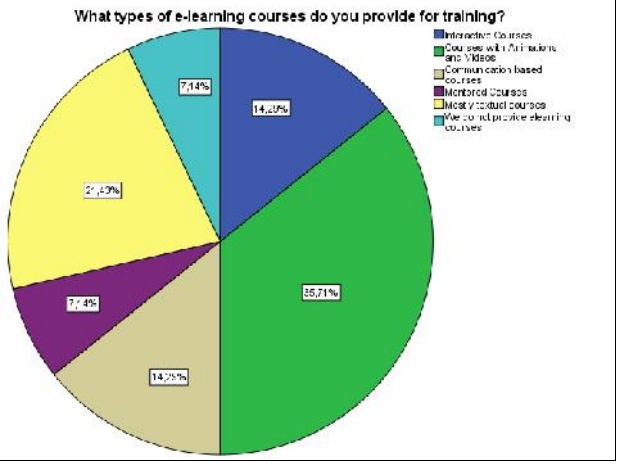
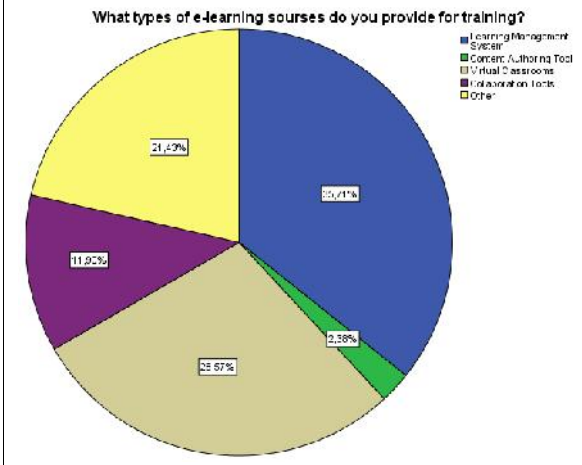


SLOVAKIA

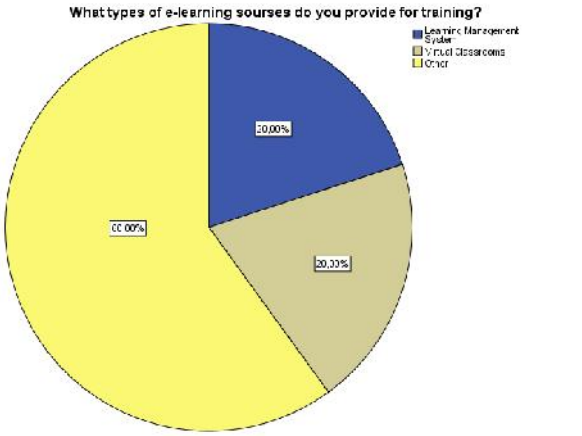


Q.5 What types of e-learning sources do you provide for training?

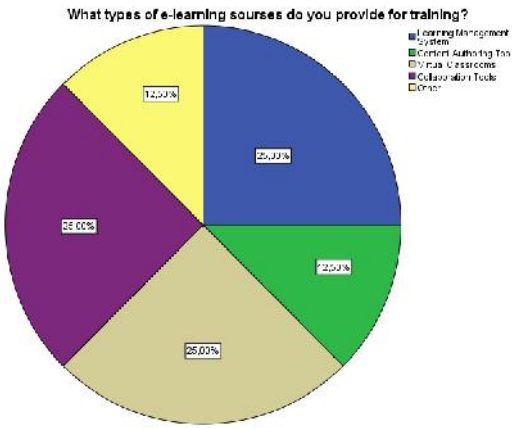
ALL COUNTRIES



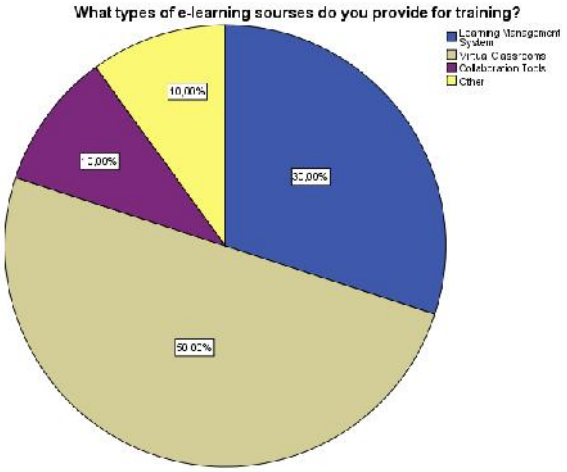
UK



ITALY



SPAIN



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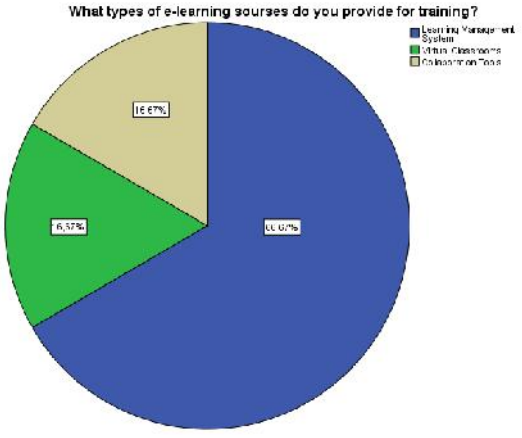
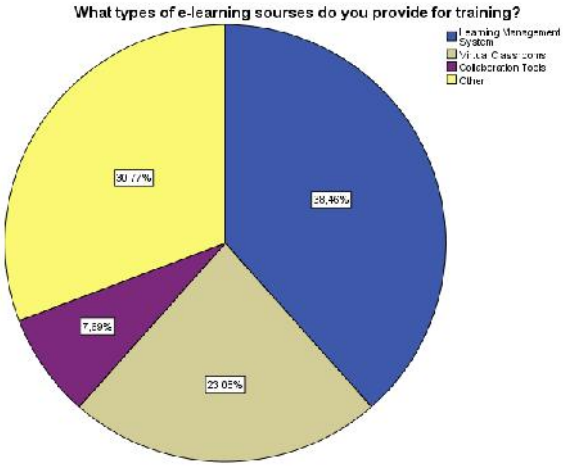
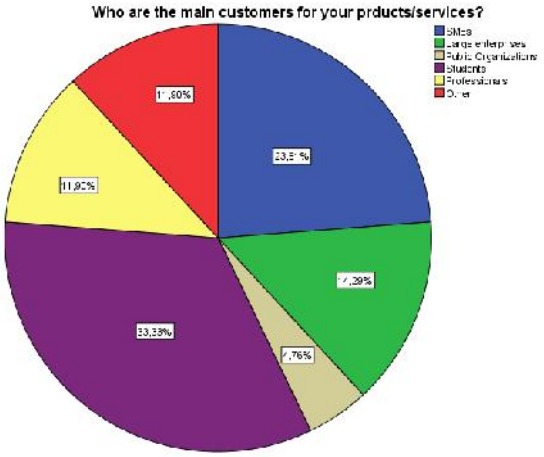


SLOVAKIA

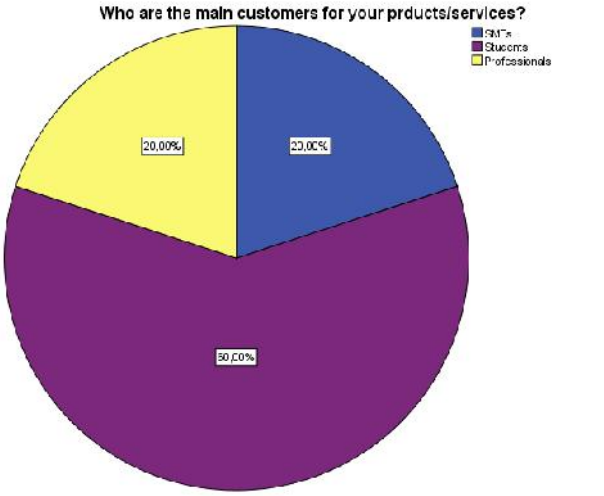


Q.6 Who are the main customers for your products/services?

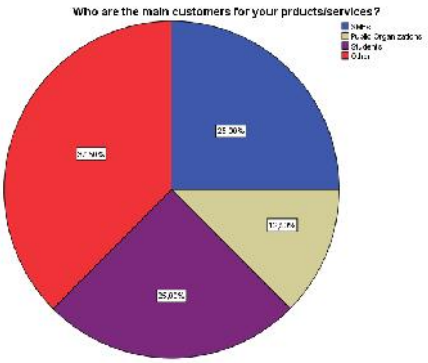
ALL COUNTRIES



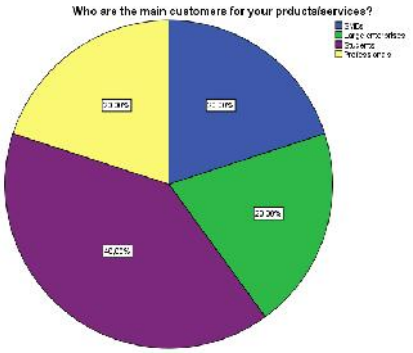
UK



ITALY



SPAIN



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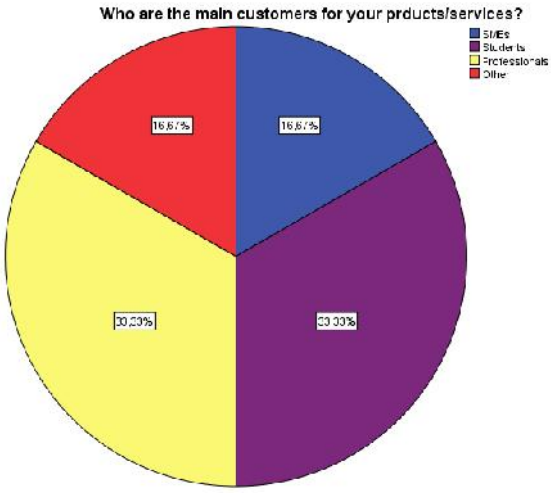

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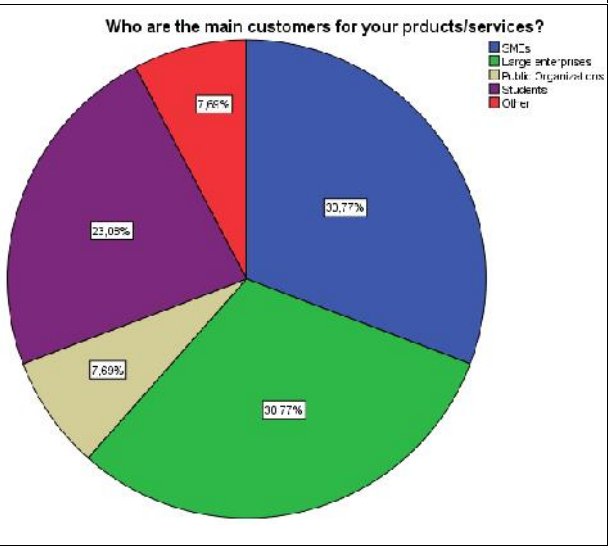
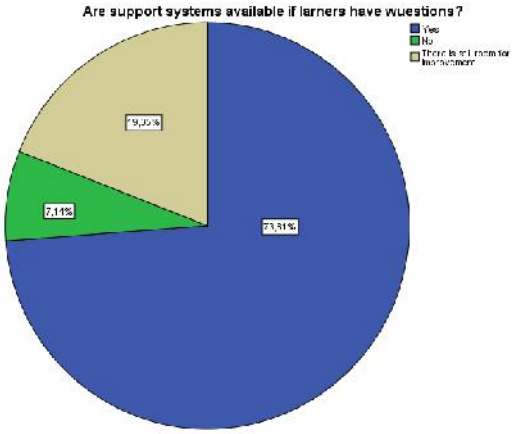
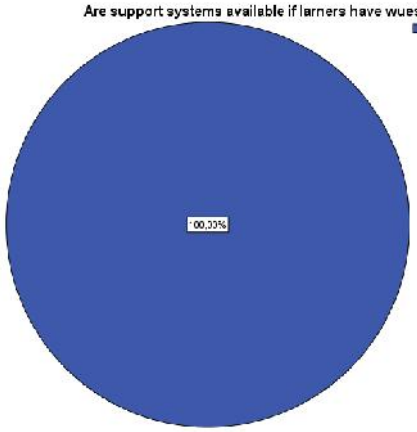


Q.7 Are support systems available if learners have questions or something is not working correctly?

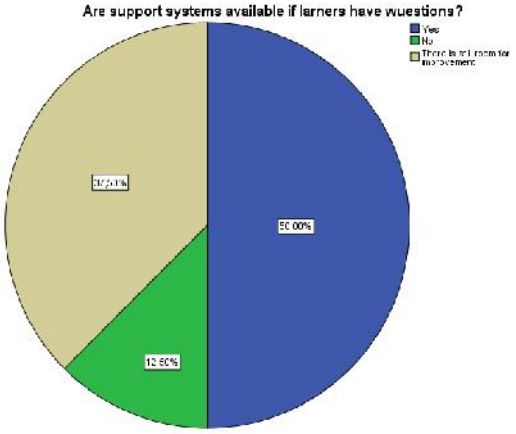
ALL COUNTRIES



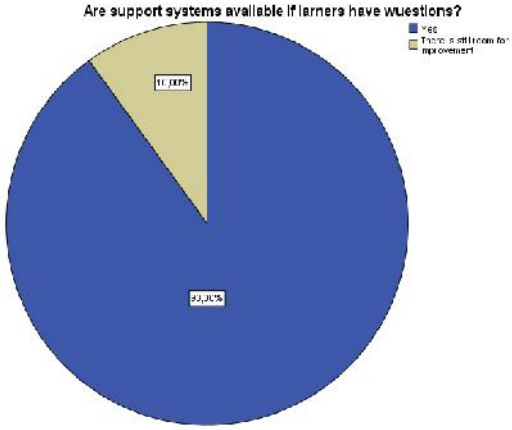
UK



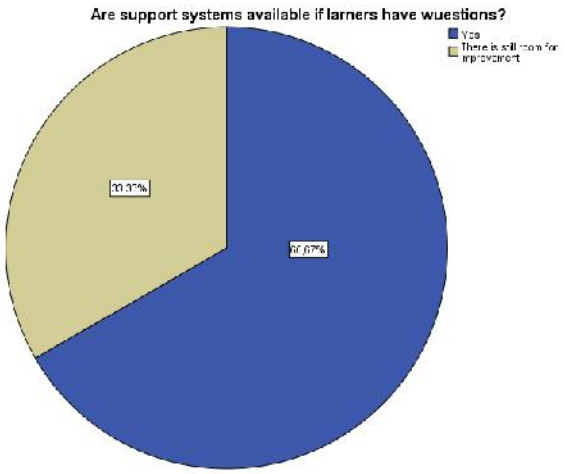
ITALY



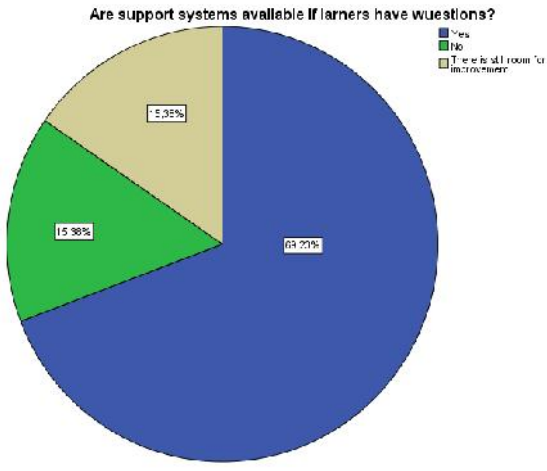
SPAIN



GREECE

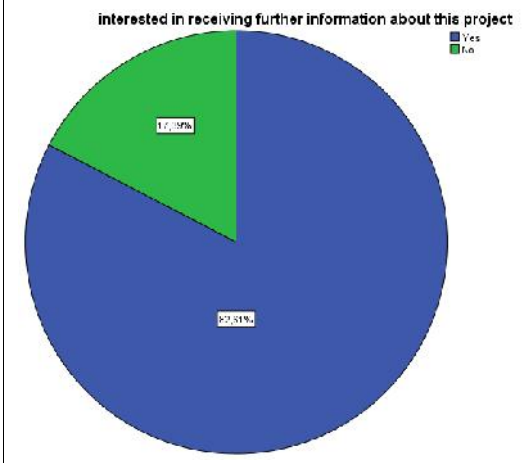


SLOVAKIA

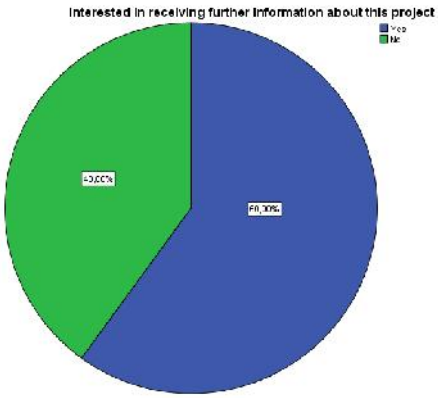


Q.11 Would you be interested in receiving further information about this project?

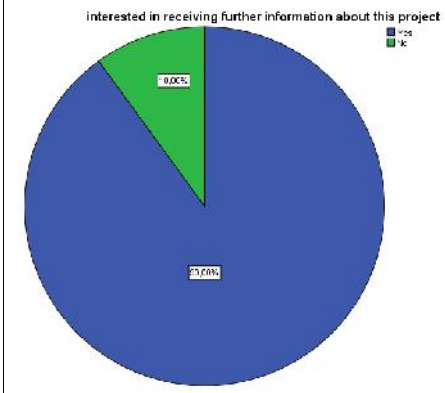
ALL COUNTRIES



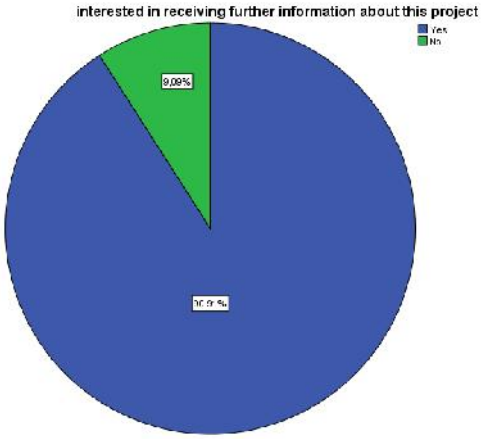
UK



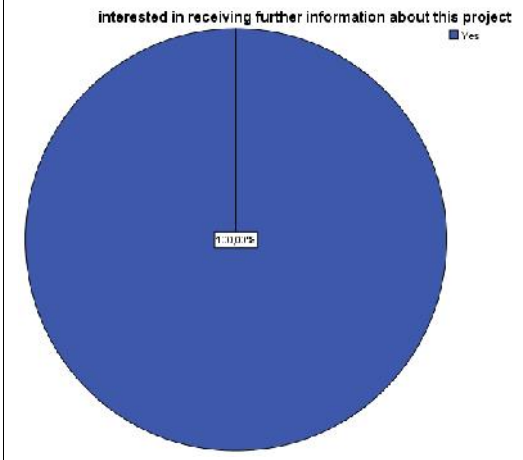
ITALY



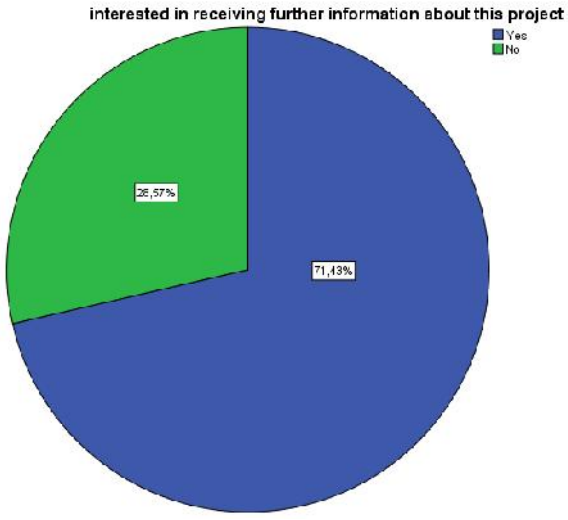
SPAIN



GREECE

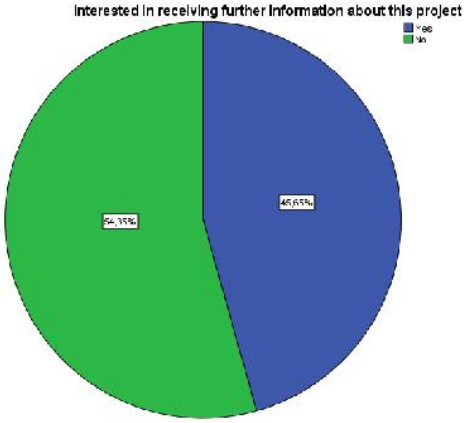


SLOVAKIA

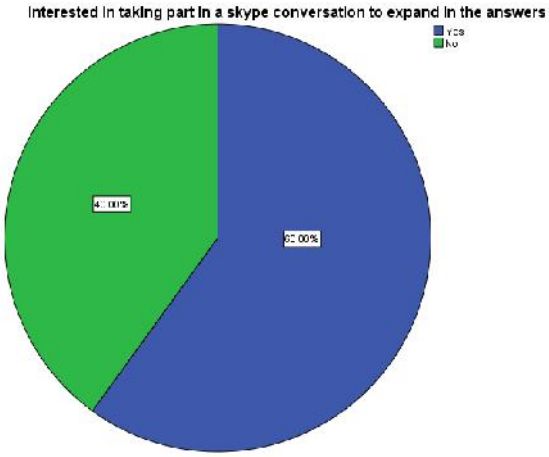


Q.12 Would you be interested in talking part in skype conversation to expand on your answers?

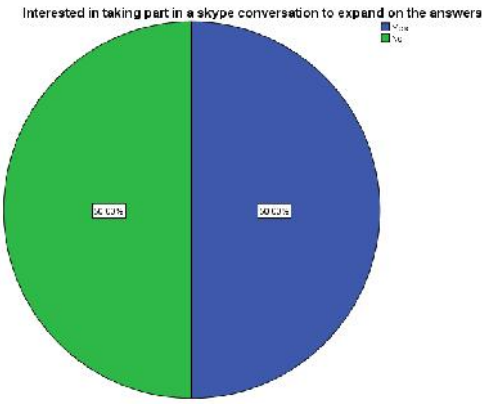
ALL COUNTRIES



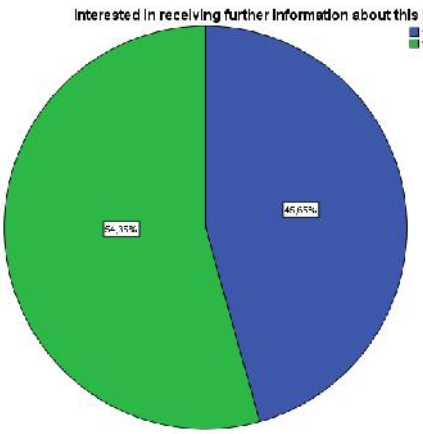
UK



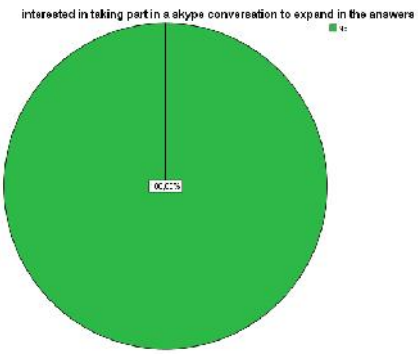
ITALY



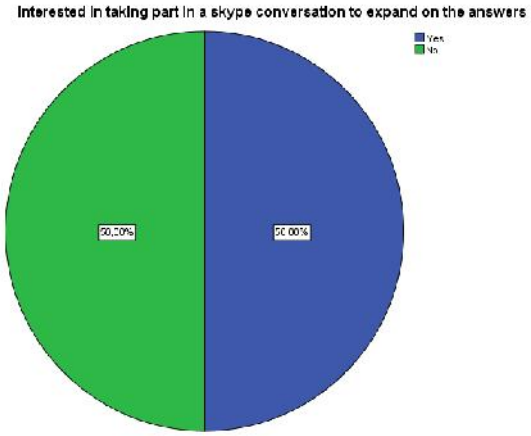
SPAIN



GREECE



SLOVAKIA



4 Partners' Country Report Comparator

Anecdotal evidence suggests that there is a significant correlation between the level of IT infrastructures of a country and the adoption of technology-enabled educational tools such as e-learning by institutions or corporations in this country.

Our purpose in this section is to present comparative statistical data between the five countries of this project (UK, Spain, Italy, Slovakia, Greece) for a number of crucial parameters (including IT infrastructures, internet connectivity etc) so as to get a broader view and be able to better analyze the results of the field study. Therefore, based on the data from Eurostat we present a number of indicative tables below:

Table 1

Level of internet access - households								
%								
geo\time	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EU (28 countries)	**55**	**60**	**66**	**70**	**73**	**76**	**79**	**81**
Greece	25	31	38	46	50	54	56	66
Spain	43	50	53	58	63	67	70	74
Italy	43	47	53	59	62	63	69	73
Slovakia	46	58	62	67	71	75	78	78
UK	67	71	77	80	83	87	88	90

Source : Eurostat

From table 1 above it is evident that, compared to the EU average, in more developed economies (UK) there are higher levels of Internet access whereas in less developed economies lower. The same pattern holds for almost all following tables.

Table 2

Individuals using the internet for looking for information about education, training or course offers						
% of individuals aged 16 to 74						
geo\time	**2007**	**2008**	**2009**	**2010**	**2011**	**2013**
EU (28 countries)	**19**	**20**	**23**	**23**	**29**	**31**
Greece	12	13	12	12	20	21
Spain	22	26	31	33	42	46
Italy	13	16	19	20	21	26
Slovakia	5	11	11	13	25	29
UK	26	24	30	27	32	34

Source : Eurostat

Enterprises having remote employed persons who connect to the enterprise's IT systems from home (2006)						
%						
sizenace\geo	UK	Slovakia	Italy	Spain	Greece	**EU**
Small enterprises (10-49 employed persons)	26	12	2	5	14	**13**
Medium enterprises (50-249 employed persons)	49	17	7	17	25	**30**
Large enterprises (250 employed persons or more)	79	34	23	40	52	**55**

Source : Eurostat

Individuals regularly using the internet								
% of individuals aged 16 to 74								
All Individuals								
geo\time	2007	2008	2009	2010	2011	2012	2013	2014
EU (28 countries)	**51**	**56**	**61**	**65**	**67**	**70**	**72**	**75**
Greece	28	33	38	41	47	50	56	59
Spain	44	48	53	58	61	65	66	71
Italy	34	37	42	48	51	53	56	59
Slovakia	51	62	66	73	72	74	74	76
UK	65	70	76	80	81	84	87	89

Source : Eurostat

Individuals using the internet for doing an online course						
% of individuals aged 16 to 74						
All Individuals						
geo\time	2007	2008	2009	2010	2011	2013
EU (28 countries)	**3**	**3**	**4**	**4**	**5**	**6**
Greece	2	2	2	2	4	4
Spain	4	6	7	8	9	9
Italy	2	2	3	3	4	4
Slovakia	1	1	1	1	1	4
UK	5	5	7	7	6	10

Source : Eurostat

Individuals using the internet for seeking information with the purpose of learning				
% of individuals aged 16 to 74				
geo\time	2007	2008	2009	2010
EU (28 countries)	**23**	**27**	**32**	**32**
Greece	5	22	23	24
Spain	19	24	28	29

Italy	21	24	32	35
Slovakia	3	14	15	21
UK	24	25	31	29

Source : Eurostat

Countries	Min	Max	Mean	Var	Skew	Kurt	Countries	Min	Max	Mean	Var	Skew	Kurt
Italy	4	18	12.86	26.14	-0.79	-0.02	Austria	21	30	25.43	11.29	0.18	-1.52
Denmark	8	30	19.14	97.81	0.12	-2.46	Malta	22	51	29.86	95.14	2.18	5.17
France	10	24	15.57	38.29	0.78	-1.55	Poland	22	42	30.71	54.24	0.86	-0.68
Netherl.	10	17	13.71	7.91	-0.54	-1.44	Ireland	23	41	33.43	61.29	-0.54	-2.13
Luxemb.	12	25	17.29	30.91	0.42	-2.12	Turkey	23	33	29.00	11.33	-0.81	0.60
Hungary	12	22	17.29	12.57	-0.58	-0.59	Cyprus	25	59	46.14	129.81	-1.05	1.23
Germany	14	22	18.43	8.95	-0.21	-1.48	Spain	27	35	31.29	10.24	-0.58	-1.27
Norway	14	43	29.14	112.81	-0.23	-1.25	Czech R.	30	40	33.14	12.14	1.39	2.29
Belgium	15	25	21.57	17.95	-1.09	-0.84	Slovenia	30	49	39.86	44.81	-0.46	-0.62
Iceland	17	20	18.29	1.24	0.25	-0.94	Slovakia	31	50	42.00	43.67	-0.51	-0.35
Portugal	19	36	25.86	34.48	0.76	0.00	Finland	31	41	36.57	19.62	-0.26	-2.40
Croatia	19	31	23.86	15.48	0.89	0.96	Latvia	34	43	38.86	11.14	-0.43	-1.00
Bulgary	20	41	25.86	57.81	1.68	2.35	Greece	36	53	44.86	38.48	-0.06	-1.35
Sweden	20	28	25.00	10.67	-0.84	-1.05	Lithuania	50	59	56.14	9.14	-1.66	3.07
UK	20	28	24.14	11.48	-0.35	-2.13	Romania	56	64	59.29	10.91	0.39	-2.00
Estonia	21	41	32.29	52.57	-0.39	-1.14	UE 27	20	24	22.17	2.967	-0.03	-2.36

Training enterprises as % of all enterprises, by type of training and NACE						
GEO/NACE_R2	Total - All NACE activities	Industry	Construction	Wholesale and retail trade, transport, accommodation and food service activities	Information and communication; financial and insurance activities	Real estate; scientific ,technical administrative, arts, entertainment and other service activities
EU	**66**	**63**	**64**	**63**	**80**	**75**
Greece	28	27	21	25	47	40
Spain	75	74	82	71	80	78
Italy	56	53	67	49	79	60
Slovakia	69	72	80	63	80	66
UK	80	82	79	78	88	81

Source : Euro

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APPENDIX A– FIELD STUDY QUESTIONNAIRES

QUESTIONNAIRE

Dear Partner,

Please take a minute to fulfill this stakeholder aimed questionnaire prepared for the purposes of the SMEELEARN project realized within the Erasmus+ Programme by a consortium of partners from the United Kingdom, Italy, Slovakia, Spain and Greece. SMEELEARN project (http://www.sme-elearning.net/index.html) has as its aim to test and transfer e-learning practices that are common in the formal education sector to SMEs in order to address the vocational skills needed.
As an **SME EMPLOYEE** we would appreciate receiving your view on e-learning and its potential benefits.
Thank you in advance for your cooperation & looking forward to our possible further cooperation!

Company Name:
Company Address:
Your Full name:
Your Job Title
Your E mail:
Company Website:
Country:

QUESTIONS

1. Is your company classified as a SME (with less than 250 employees and either an annual turnover of less than 50 million euro or assets amounting to less than 43 million euro)?
   - ☐ Yes
   - ☐ No Please go to question 20

2. In which sector / field does your company belong?
   - ☐ Retail (e.g. shops)
   - ☐ Services
   - ☐ Production
   - ☐ Other

3. How long has your company been in operation?
   - ☐ up to 3 years
   - ☐ 4-7 years
   - ☐ 8-11 years
   - ☐ more than 12 years

4. What is the volume of your previous year sales (if known)?
   - ☐ up to 1 million euro
   - ☐ 1-5 million euro
   - ☐ 5- 10 million euro
   - ☐ over 10 million euro

5. What is the number of company's employees (if known)?
   - ☐ Less than 10 employees
   - ☐ From 10 to 49 employees
   - ☐ From 50 to 250 employees

6. What is the average age of the employees in your company (if known)?
   - ☐ 25 years or younger
   - ☐ 26-35 years
   - ☐ 36-45 years
   - ☐ 46 years or older

7. What percentage of employees has a College, University degree or any vocational qualifications (if known)?
   - ☐ Less than 10%
   - ☐ From 10% to 50%
   - ☐ More than 50%

8. What is the ratio of men to woman in your company?
   - ☐ Men 100%
   - ☐ more men than women
   - ☐ about 50-50%
   - ☐ more women than men
   - ☐ Woman 100%

9. What is your position in the company?

- ☐ Manager/Owner
- ☐ Professional Staff
- ☐ Administrative staff
- ☐ Self-employed
- ☐ Other

10. Please rate your personal Computer Skills

- ☐ Non-user
- ☐ Novice
- ☐ Proficient
- ☐ Advanced
- ☐ Expert

11.

Prior knowledge of elearning ✓ 1 = Little or no knowledge 2 = Some knowledge 3 = Good level of knowledge 4 = Excellent level of knowledge					
	Level	1.	2.	3.	4.
	Tick as appropriate	✓	✓	✓	✓
i.	Knowledge of elearning				
ii	The uses of elearning				
iii	How elearning works				
iv	Where to find information on elearning				
v	Different types of elearning in SMEs				
vi	Alternatives to elearning				

12. Please rate from 1 to 8 the perceived advantages of elearning (1 the strongest 8 the weakest)

Place flexibility	Self Assessment	Self Control	Greater satisfaction	Time flexibility	Easy access	Job related	Multiple choises

13. Please rate from 1 to 8 the perceived dis-advantages of elearning (1 the strongest 8 the weakest)

Need courage	Lack of student contact	Learning styles	Course selection difficulty	Need of self control	Lack of teacher contact	Need of skills	Need of facilities nearby

14. Please state your preference as to eLearning delivery modes

- ☐ Through the internet only
- ☐ Through the internet and assisted by face to face method
- ☐ Equally through the internet and face to face
- ☐ Mainly through face to face and assisted by the internet

15. Please state your preference as to eLearning delivery method

- ☐ mobile
- ☐ tablet
- ☐ Laptop
- ☐ other

16. As an e-learner, do you understand and apply what you have learned?

- ☐ Yes
- ☐
- ☐ in some cases

17. Is e-learning more convenient for you versus attending a physical class?

- ☐ Yes

☐

☐ i am indifferent

18. Do you feel that the training you receive through e-learning help you perform your job better?

☐ Yes

☐

☐ I don’t know

19. What recommendations would you make to improve the future success of online training?

20. Would you be interested in receiving further information about this project?

☐ Yes

☐ No

21. Would you be interested in taking part in a skype conversation to expand on your answers?

☐ Yes

☐ No

Thank for your participation in this research, if you would like to have a copy of the research results, please write your address or e-mail address in space provided below:
Name : _____
Address : _____
E-mail : _____

Thank you for your cooperation

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

QUESTIONNAIRE

Dear Partner,

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As a **SME EMPLOYER** we would appreciate receiving your view on the e-learning and its potential benefits. Thank you in advance for your cooperation & looking forward to our possible further cooperation!

Company Name:
Company Address:
Your Full name:
Your Job Title
Your E mail:
Company Website:
Country

QUESTIONS

1. Is your company classified as a SME (with less than 250 employees and either an annual turnover of less than 50 million euro or assets amounting to less than 43 million euro)?

   ☐ Yes
   ☐ No Please go to question 21

2. In which sector / field does your company belong?

   ☐ Retail (e.g. shops)
   ☐ Services

- ☐ Production
- ☐ Other

3. How long has your company been in operation?
   - ☐ up to 3 years
   - ☐ 4-7 years
   - ☐ 8-11 years
   - ☐ more than 12 years
4. What is the volume of your previous year sales?
   - ☐ up to 1 million euro
   - ☐ 1-5 million euro
   - ☐ 5- 10 million euro
   - ☐ over 10 million euro
5. What is the number of company's employees?
   - ☐ Less than 10 employees
   - ☐ From 10 to 49 employees
   - ☐ From 50 to 250 employees
6. What is the average age of the employees in your company?
   - ☐ 25 years or younger
   - ☐ 26-35 years
   - ☐ 36-45 years
   - ☐ 46 years or older
7. What percentage of employees has a College, University degree or vocational qualifications?
   - ☐ Less than 10%
   - ☐ From 10% to 50%
   - ☐ More than 50%
8. What is the ratio of men to woman in your company?
   - ☐ Men 100%
   - ☐ more men than women
   - ☐ about 50-50%

- ☐ more women than men
- ☐ Women 100%

9. What is your position in the company?
   - ☐ Manager/Owner
   - ☐ Professional Staff
   - ☐ Administrative staff
   - ☐ Self-employed
   - ☐ Other

10. Please rate your Computer Skills
    - ☐ Non-user
    - ☐ Novice
    - ☐ Proficient
    - ☐ Advanced
    - ☐ Expert

11. Does employee education take place in your company?
    - ☐ YES REGULARLY
    - ☐ YES RARELY
    - ☐ NO (then please ignore next question)

12. What sources of funds you use for educational activities?
    - ☐ EXTERNAL GRANTS
    - ☐ INTERNAL COMPANY GRANTS
    - ☐ OTHER

13.

Prior knowledge of elearning ✓ 1 = Little or no knowledge 2 = Some knowledge 3 = Good level of knowledge 4 = Excellent level of knowledge					
	Level	1.	2.	3.	4.
	Tick as appropriate	✓	✓	✓	✓
i.	Knowledge of elearning				
ii	The uses of elearning				
iii	How elearning works				
iv	Where to find information on elearning				
v	Different types of elearning in SMEs				
vi	Alternatives to elearning				

14.

What is the best way to promote elearning in SMEs?		
Tick ONE or More Boxes		✓
1	Through sharing best practice	
2	Promoting the ease and accessibility of elearning	
3	Acknowledging the personalised nature of elearning	
4	Raising the profile of elearning as an economic and successful way of learning	
5	Establishing a “one-stop information website” for SMEs and elearning	
6	Providing links to different types of elearning in SMEs	
7	Acknowledging that elearning is not just learning on line but may form part of a blended approach to individual learning needs	

15. What are the issues/problems being addressed by the ICT based learning programme i.e.
what skill or information shortfall or problem is being addressed?

- ☐ soft skills shortage
- ☐ hard (technical) skills shortage
- ☐ other

16. Please rate from 1 to 8 the perceived advantages of elearning (1 the strongest 8 the weakest)

Place flexibility	Self Assessment	Self Control	Greater satisfaction	Time flexibility	Easy access	Job related	Multiple choices

17. Please rate from 1 to 8 the perceived dis-advantages of elearning (1 the strongest 8 the weakest)

Need courage	Lack of student contact	Learning styles	Course selection difficulty	Need of self control	Lack of teacher contact	Need of skills	Need of facilities nearby

18. Please click on the relevant · in the following tables based on your level of agreement or disagreement with the statements. For example, if you disagree strongly, you should Choose · 1 and if you agree strongly with the statement, you should choose · 7

Statements	strongly disagree						strongly agree
(In) my company:	1	2	3	4	5	6	7
employees are rewarded for learning	·	○	·	·	·	·	·
we place emphasis in measuring outcome of changes in learners' knowledge and skills	·	○	·	·	·	·	·
elearning is considered as an effective tool	·	○	·	·	·	·	·
the cost of importing e-learning exceeds the benefits	·	○	·	·	·	·	·
it is very likely that next years elearning will be adopted in a greater extent	·	○	·	·	·	·	·
innovation is the most important goal	·	○	·	·	·	·	·

19. How are learning outcomes assessed?

- ☐ through formative assessment
- ☐ through summative assessment
- ☐ other

20. Is the company planning to extend elearning adoption in the future?

- ☐ Yes
- ☐ Maybe
- ☐ No
- ☐ other

21. Would you be interested in receiving further information about this project?
    - ☐ Yes
    - ☐ No
22. Would you be interested in taking part in a skype conversation to expand on your answers?

    - ☐ Yes
    - ☐ No

Thank for your participation in this research, if you would like to have a copy of the research results, please write your address or e-mail address in space provided below:
Name : _____
Address : _____
E-mail : _____

Thank you for your cooperation

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the

Commission cannot be held responsible for any use which may be made of the information contained therein.

QUESTIONNAIRE

Dear Partner,

Please take a minute to fulfill this stakeholder aimed questionnaire prepared for the purposes of the SMEELEARN project realized within the Erasmus+ Programme by a consortium of partners from the United Kingdom, Italy, Slovakia, Spain and Greece. SMEELEARN project (http://www.sme-elearning.net/index.html) has as its aim to test and transfer elearning practices that are common in the formal education sector to SMEs in order to address the vocational skills needed.

As a **TRAINING SERVICE PROVIDER** we would appreciate receiving your view on the e-learning and its potential benefits. Thank you in advance for your cooperation & looking forward to our possible further cooperation!

Company Name:
Company Address:
Your Full name:
Your Job Title
Your E mail:
Company Website:
Country

QUESTIONS

1. Your company is classified as
   - ☐ Technology provider
   - ☐ Service Provider
   - ☐ Content Provider
   - ☐ other

2. How long has your company been in operation?

   - ☐ up to 3 years
   - ☐ 4-7 years
   - ☐ 8-11 years
   - ☐ more than 12 years

3. What is the volume of your previous year sales coming from e-learning services alone?

- ☐ up to 100,000 euro
- ☐ 100.000-500.000 euro
- ☐ 500.000- 1.000.000 euro
- ☐ over 1.000.000 euro

4. What types of e-learning courses do you provide for training?

- ☐ Interactive Courses
- ☐ Courses with Animations and Videos
- ☐ Communication based courses
- ☐ Mentored Courses
- ☐ Mostly textual courses
- ☐ Collaboration based Courses
- ☐ Other
- ☐ We do not provide elearning courses (please go to question 11)

5. What types of e-learning sources do you provide for training?

- ☐ Learning Management System
- ☐ Content Authoring Tools
- ☐ Virtual Clasrooms
- ☐ Collaboration Tools
- ☐ Other

6. Who are the main customers for your products/services?

- ☐ SMEs
- ☐ Large enterprises
- ☐ Public Organizations
- ☐ students

- ☐ professionals
- ☐ Other

7. Are support systems available if learners have questions or something is not working correctly?
   - ☐ Yes
   - ☐ No
   - ☐ there is still room for improvement

8. How do you select content and design?

9. How does the size of a company, the country and connection speed affect e-learning?

10. What technology hurdles are encountered during training?

11. Would you be interested in receiving further information about this project?
    - ☐ Yes
    - ☐ No

12. Would you be interested in taking part in a skype conversation to expand on your answers?
    - ☐ Yes
    - ☐ No

Thank for your participation in this research, if you would like to have a copy of the research results, please write your address or e-mail address in space provided below:
Name : _____
Address : _____
E-mail : _____

Thank you for your cooperation

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APPENDIX B – UK SITUATION REPORT

Introduction

The development and revival of SMEs in the UK is dependent on a number of factors. Current research seems to suggest an increase in the number of people employed although this is not reflected in increased productivity. Business analysts suggest that primary areas for growth include the development of, and access to, e-learning and ICT as a means of communication, business development and training. Currently, e-learning is creating a wealth of opportunities to combine employment with studying. 'In 2013/14, there were 210,005 UK-based students studying for both undergraduate and postgraduate degrees in the UK, of which 150,255 were with the Open University' (The Guardian 2015) UK universities have continued to develop partnerships with business providers increasing the potential to engage in e-learning and open up research opportunities.

A recent study by Brunel University and business product marketplace Applegate, considered the way digitisation is driving the evolution of British businesses of all sizes and the status of digital business in the UK. Although the study noted that larger businesses were leading the field in comparison to SMEs it provided a "snapshot" of the current position. The research noted that 98% have a company website; 88% make extensive use of online banking; 64% find more than half of their suppliers online; 63% expect digitisation to further improve customer satisfaction; 53% provide remote access to staff; 52% research customer requirements online; 46% have an intranet; 45% make more than half of their purchases online; 44% spend more than half of their marketing budget online and 41% have adapted their websites for tablets and smartphones. [Brunel 2015]

The development and exploitation of e-learning as a training mechanism has been successfully adopted by large organisations, particularly but not exclusively, within the public health sector. The National Health Service (NHS) has a long term commitment to ensuring that its workforce are equipped to maintain a high level of care and to share best practice. The eLearning Repository, funded by Health Education England, is an extensible 'search and discover platform' to support the discovery and sharing of e-Learning objects and learning resources held both within the Repository and at external locations. The range of online and e-learning initiatives is impressive including Learnbloodtransfusion - an interactive e-Learning resource developed by the Better Blood Transfusion Continuing Education Programme. [www.learnbloodtransfusion.org.uk/]; e-Learning for Healthcare [www.e-lfh.org.uk]; e-Learning resources covering chemical, biological, radiological and nuclear incidents [http://ehealthlearning.org.uk] and The Social Care Institute for Excellence (SCIE) that offer a series of freely accessible e-Learning modules covering aspects of social care and dementia. [www.scie.org.uk/publications/elearning/index.asp]

Access to learning and its relationship with profit and commercial success has led to the development of e-learning for employees in large companies. Halfords '3 Gears Programme' includes "Structured e-learning -Retail skills -Product knowledge -Customer service" and continued training through the application of blended learning pedagogies. "Our 3-Gears training programme continued to be rolled out: by the end of FY15 nearly all store colleagues had attained Gear 1 accreditation, 46% had qualified for Gear 2, along with over 300 colleagues at Gear 3 level." [Halfords Annual Report April 2015]

Within the retail sector, Waitrose is rolling out an innovative e-learning game about the law on selling alcohol, tobacco and other age restricted products. It is the first 'gamified' training module to be used by Waitrose, part of the John Lewis Partnership, and will be available next month (July) to around 50,000 staff. The *Restricted Sales* module includes a scenario-based game where staff decide on the best course of action when confronted with 7 different situations. [Training Press Release June 2015]

It is apparent that the expansion of digital accessibility, especially with regards to Internet use, and the adaption of websites for tablets and smartphones provides an opportunity for further growth in the field of e-learning. Employee familiarity with these new technologies can facilitate an advance in e-learning although there is still some reluctance to fully exploit its potential. Companies including Barclays Bank continue to promote digital accessibility for all age through the Digital Eagles Initiative that includes a series of prime time television advertisements as part of their campaign. As knowledge of, and a desire to engage with, Internet based learning activities grows, it is important to consider the level of Internet use in the UK.

Internet Use in the UK

In the most recent "Statistical Bulletin: Internet Users, 2015", the Office for National Statistics noted that:

i. From January to March 2015, 86% of adults (44.7 million) in the UK had used the internet in the last 3 months (recent users), an increase of 1 percentage point since the (Jan to Mar) 2014 estimate of 85%.

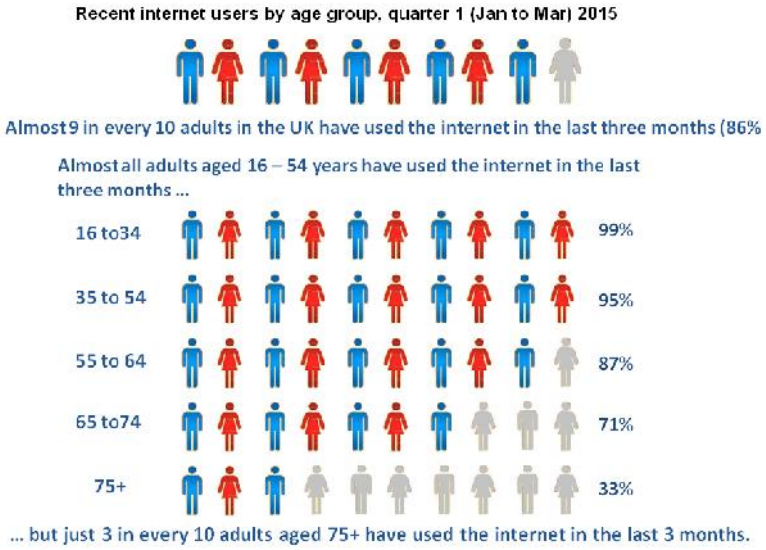
ii. 11% of adults (5.9 million) had never used the internet, falling by 1 percentage point since (Jan to Mar) 2014.

iii. The South East had the highest proportion of recent internet users (90%) and Northern Ireland was the area with the lowest proportion (80%).

iv. From January to March 2015, the proportion of adults who were recent internet users was lower for those that were disabled (68%), compared with those that were

not disabled (92%). The proportion of adults aged 16 to 24 years who were recent internet users was lower for those that were disabled (95% recent users) compared with those that were not disabled (99% recent users). Adults aged 75 years and over who were recent internet users was also lower for those that were disabled (27% recent users) compared with those that were not disabled (40% recent users).

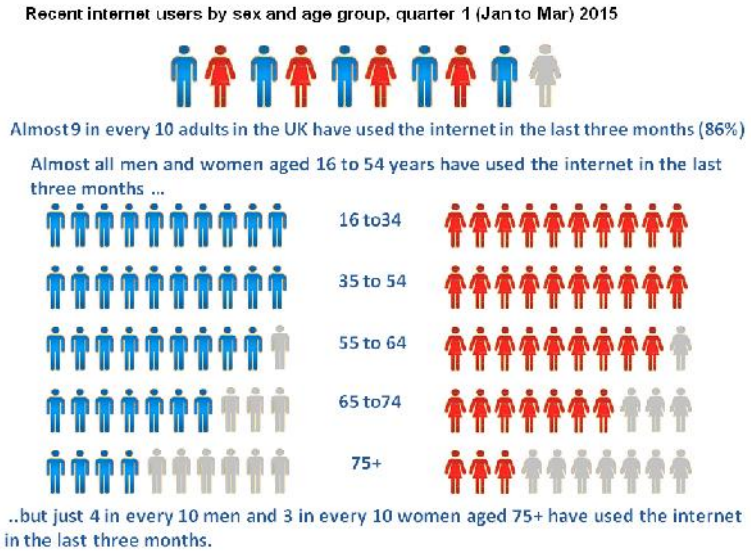
Further analysis of Internet Use in the UK may be expressed diagrammatically as follows:



[Office for National Statistics May 2015]

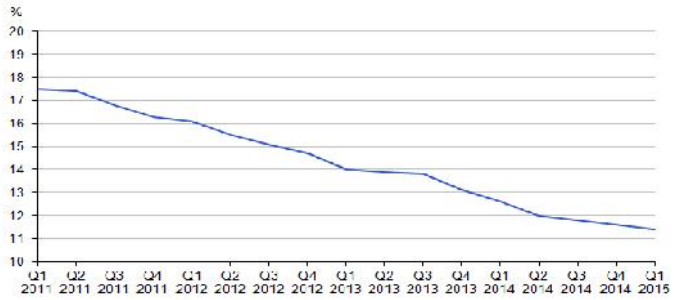
Internet users by gender

UK, 2011 quarter 2 to 2015 quarter 1 [Office for National Statistics]



Internet non-users

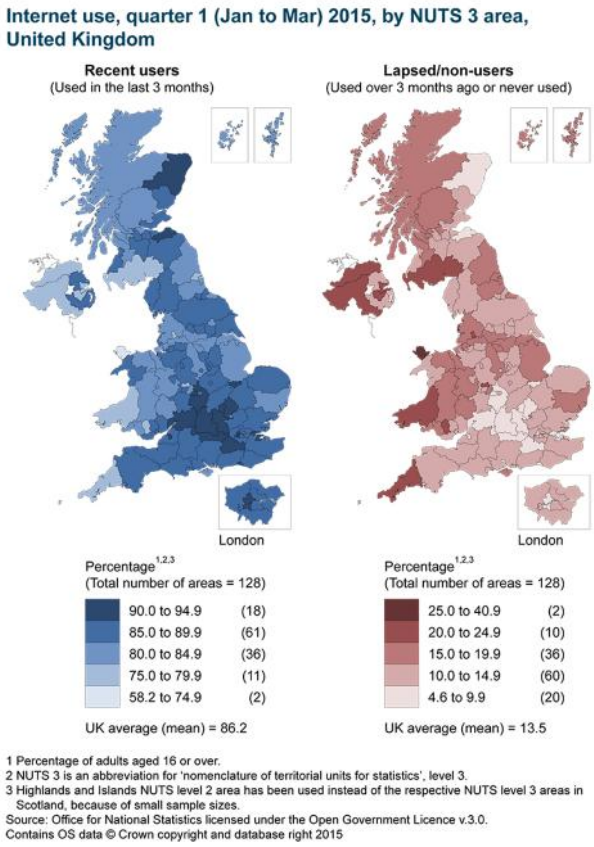
UK, quarter 1 2011 to quarter 1 2015 [Office for National Statistics 2015]



These findings are supported by the following statistics indicating internet use: “Countries by Internet Usage” (Internet Live Stats 2015) [Clarification: An Internet User is defined as an individual who has access to the Internet at home, via computer or mobile device.]

Country	Internet Users	1 Year Growth %	1 Year User Growth	Total Country Population	Penetration (% of Pop. with Internet)	Country's share of World Population	Country's share of World Internet Users
UK	57,075,826	3%	1,574,653	63,489,234	89.90%	0.88%	1.95%

UK coverage and internet use rely on continuing improvements in digital technologies. Initiatives designed to ensure that the internet is accessible nation-wide is still in progress as rural and non-urban areas continue to experience connection, broadband and mobile variations in signal. The effect on e-learning and its potential to maximise its use remains a cause for concern.



UK use of e-learning

Research compiled by *e-Learning Industry* indicate that:

> ***e-learning has the potential to increase retention of information by up to 60%; nearly 25% of employees leave jobs because there is not enough room for training or development, whilst companies who offer e-learning are able to generate 26% more revenue per employee. (e-Learning Industry, 2014)***

Changes in technology, including the use of cloud-computing as a means to access e-learning within SMEs is progressing slowly. Costs implicit in updating operating systems and maintaining secure wireless and broadband connections may restrict higher levels of use by SMEs. The concepts associated with learning via cloud computing are likely to gain credence as employees become more familiar with these systems. A number of e-learning companies and their design teams offer cloud computing as an e-learning tool.

The overall picture remains variable. A recent survey indicates that 'over a million small businesses and charities still lack basic digital skills and the perceived benefits of being digital remain. For example, 25 per cent of all organisations surveyed believe digital is 'irrelevant' to them.' [Lloyds UK 2015] Clearly this influences the capability of SMEs to engage in e-Learning

although ‘even if an organisation does not believe they need to be online, many of their customers already are.’ [Lloyds UK 2015]

This also applies to their employees who readily engage with online technologies. The potential to access e-Learning courses, resources, advice and formal qualifications through e-Learning continues to grow. It is estimated that 74% of people use mobile devices for e-Learning in 2015; 50% of organisations are predicted to use video as part of their digital learning strategy; as 28.5% training hours are delivered via online or computer based technologies. [brayleino learning 2015]

Innovative structures are in place and accessible. The use of LMS and other learning environments are available offering a variety of costed and free resources, shared and virtual environments, in addition to traditionally created “text on the screen” applications. The capacity to share e-Learning outcomes is illustrated by examples including Team Rooms: for group projects ‘where a private “virtual” room is assigned to a group of learners where they can collaborate on a project by sharing files, notes, and having Threaded Discussions and chatting in real-time.’ [Connected Learning LMS 2015]

Availability of, and access to, e-Learning systems in the UK assumes that the take-up from organisations, including business – large corporations and SMEs – as well as academic and public/social institutions, will continue to grow.

In Summary

Accessing e-learning systems in the UK continues to be of interest to the majority of SMEs and larger companies. The need to economise and to encourage growth suggests that e-learning can provide a 21st century alternative to traditional training packages. The “digital divide” may be interpreted in terms of generational use and although one should not generalise, it is apparent that younger employees of large organisations are more likely to consider e-learning as the preferred means of accessing training and information. Social media, including *Facebook*, *Twitter* and *LinkedIn* are often viewed as the preferred means of communication and SMEs, sole traders and larger organisations are becoming adept at sharing, trading and training via these technological hubs. Within these areas, e-learning and SMEs continue to develop a working relationship although there seems to be a gap between what is predicted, proposed and aimed for and what is happening in practice.

The need to capitalise on the high speed broadband and the opportunity to communicate through a multi-spectrum of learning styles should provide the focus for e-learning within the UK.

LINKS

http://www.learnbloodtransfusion.org.uk/

http://www.e-lfh.org.uk
http://ehealthlearning.org.uk
http://www.scie.org.uk/publications/elearning/index.asp
http://www.elearningrepository.nhs.uk
http://www.virtual-college.co.uk/e-academies/Businesses.aspx
Statistical Bulletin: Internet Users, 2015: http://www.ons.gov.uk/ons/dcp171778_404497.pdf
Internet Live Stats 2015:
http://www.internetlivestats.com/internet-users/
eLearning Industry, 2014
http://ocbmedia.com/blog/the-top-e-learning-stats-for-2014/
http://internetretailing.net/2015/02/uk-smes-to-make-mobile-breakthrough-in-2015/
http://www.royalmailgroup.com/uk-sme-e-retailers-target-growth-through-increased-use-online-marketplace-sites-2015
http://talkbusinessmagazine.co.uk/2015/01/29/1-4-uk-smes-dont-use-business-plan/

APPENDIX C – SPANISH SITUATION REPORT

Providing small and medium-sized enterprises ("SMEs") with the information on e-learning opportunities available to them through the development of "SME e-learning portal" for making the best use of e-learning and adoption of innovative teaching methods by their managers and employees is the principal aim of the project SMEELEARN, for the purposes of which was prepared this report. The role of the present report is to complement wider project analysis of perception and state of e-learning in partner countries involved in the project, which will help to set up the main output of the project, the SME e-learning portal, to the needs of SMEs. The report also provides an overview of the basic characteristics of SMEs in Spain, the computer penetration in Spanish society and the use of e-learning in Spain.

1. SMEs in Spain

The small and medium sized enterprises are major players in the Spanish economy, owing to their significant contribution to the total economic value added and, in particular, to the large share of workforce they employ. As a general overview, taking into account the recent data published by the Spanish Statistics Institute (DIRCE), at 1st January 2014 Spain accounted for 3,114,361 businesses, 3,110,522 (99.88 %) of which were SMEs (from 0 to 249 employees). Compared with the EU, micro companies (from 0 to 9 employees) in Spain account for the 95.8% of the total number of companies, 3,4 percentage points above the recent estimates by the European Union in 2013 (92,4%). Moreover, still in comparison with the EU, it must be noted that there is a significant difference in terms of representativeness of Spanish small companies (3,5%), 2.9 percentage points below the reference value for the EU28 (6,4%). Between 2003 and 2013, the total number of companies in Spain increased in 172.019 units, which means a cumulative 5.8% percentage point increase in this period.

According to the European Commission, Spanish SMEs provide almost three quarters of all private sector jobs and 64 % of value added, rates which significantly surpass the EU average. As for sectors, the most important sectors for SMEs are wholesale and retail trade, manufacturing and construction. However, Spanish SMEs are less prevalent in the so-called knowledge economy (consisting of R&D-intensive industries and knowledge-intensive services). In 2013, Spain showed an incipient recovery (post crisis) which was driven by a boom in exports, growing by 5.2 % in 2013 and reaching the record level of EUR 234 billion.

In line with the EC 2014 Fact Sheet, since 2008, value added and employment in the private sector decreased by 21 % and 22 % respectively, with SMEs experiencing greater losses than large firms. Thus, SMEs' employment declined by 26 % and their added value by 25 % (large firms: -13 % for both). This difference in performance is explained by the large proportion of SMEs dependent on local markets and which are under strong pressure due to high unemployment, weak internal demand, and the high indebtedness of consumers and firms. However, as losses in medium-sized firms are also significantly higher than those of large companies, it is possible that traditional SME problems — lack of financing, higher

administrative burden, low productivity, etc. — may have also become more acute with the crisis.

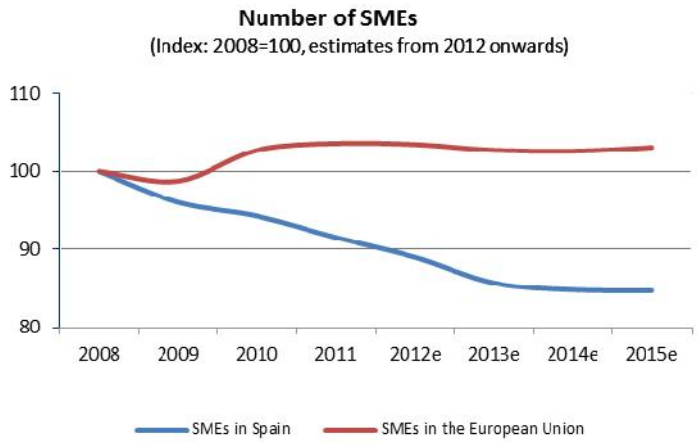


Fig. 1 Number of SMEs (Source: 2014 SBA Fact Sheet (EC))

As for specialization, Spanish firms are specialized in low-tech manufacturing (manufacturing of food products and beverages, textiles and wearing apparel, furniture, etc.) and less-knowledge-intensive services (trade, accommodation and food services, travel agencies, etc.). High value added sectors such as high-tech manufacturing and knowledge intensive services are still under-represented in terms of the number of firms, employment and value added, putting a dent in the competitiveness of the overall economy. The desired transition towards more knowledge-intensive activities is still in a weak position due to the lack of further liberalization of professional services, which should allow freedom of access and exercise of high value-added activities such as the liberal professions.

As shown in the table below, in accordance with the Spanish Statistics Institute (DIRCE), at 1st January 2014 Spain, 80.5% of the Spanish companies (99.88 % being SMEs) carry out their activity in the services sector, and in this sector, the 24.3% accounts for trade.

Table 1. Sector Distribution of Spanish Companies

Industry	Construction	Trade	Rest of services	Total
199.483	408.443	756.805	1.749.630	3.114.361
6,4 %	13,1 %	24,3 %	56,2 %	100 %

Source: Spanish Statistics Institute. INE, DIRCE 2014.

2. Overview of the e-learning situation in Spain

E-Learning is an effective learning process which combines digitally delivered content with learning support and services. It provides a new perspective in the understanding of distance training and learning thanks to the possibilities provided by the Internet and the new information and communication technologies (ICT).

Although distance training was implemented in Spain a long time ago, at all training levels (from university level to training by dossiers), Internet and ICT have introduced new ways to complement the traditional methods of distance learning. As far as university level education is concerned, the creation of UOC, the first virtual Open University in Spain, represented a revolution in the university environment. In the academic year 1995-1996, the UOC launched its teaching activity by means of a pilot course with 200 students. Today, in 2015, the reality is that it counts with a community of 200.000 people connecting from over 70 different countries around the world. The e-learning offer ranges more than 850 qualifications: Bachelor degrees and 1st and 2nd-cycle studies, Postgraduate Training, Open Programmes & PhD. This growth has been possible thanks to the fact that, due to its wide acceptance, the supply of continual education in Spanish has been expanded.

As a general overview, although e-learning has seen a huge increase in recent years, Spain remains below in terms of adoption of e-learning as an effective educational option, compared to the EU or the United States. Several studies found that there is no direct relationship between Internet penetration in the country and the demand for online training. In 2013 the penetration of e-learning accounted for 18% in Spain, above Portugal, Austria and Sweden, but clearly below other EU Member States.

The implementation of e-learning in Spain has been characterized by two main features: its late date as compared to other European countries and its slow market development. The main market trends as per use of e-learning can be summarized as follows:

- The use of e-learning has been doubled for training of workers in corporations and big enterprises while SME's or individual remain at medium levels of use.
- The public administrations being the last in incorporating e-learning to their training practices are slowly being incorporated to the market (the main restrain in this sector is the legislation and the different accreditations and authorizations needed for the implementation of new methodologies or systems).
- In general e-learning practices are concentrated in the professional sector of advanced services (banking, insurances, ICT, marketing and publicity) but it is being opened into the industrial sector.

E-learning student profile in Spain

Most students in online education in Spain have a medium or high level of training. In fact, users with a medium or high education duplicate those with basic schooling. Therefore, the more education the individual has, the more this person will use the online training. The same is true and applies in other EU Member States: users with a high level of education tend to use more online training, so that we could deduce that e-learning methods are mainly used for complementary postgraduate studies. That is also reflected in the fact that 75% of users of e-learning are older than 25 years.

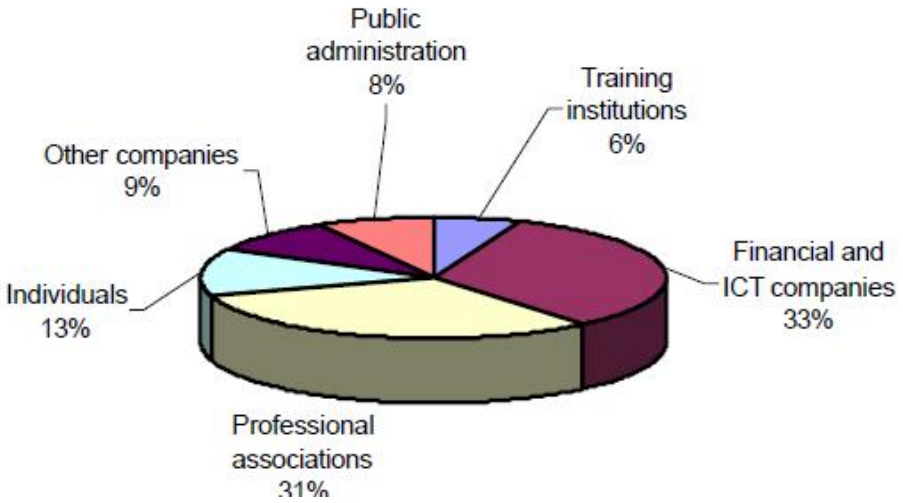


Fig. 2. Main e-learning target groups in Spain (source: Asociación de Proveedores de e-Learning, APEL).

E-learning & Spanish companies

In Spain, continuing training is widely implemented by companies. For 80% of Spanish firms it is a strategic decision related to policy. However, the size of the company determines the duration of training actions, as well as the development of specific training plans personalized for each employee[1].

Even though e-learning is most frequently found in big companies' training plans, it is also present in SMEs, thanks to the training actions promoted by chambers of commerce and professional associations, which usually cover over 30% of e-learning training actions. This

[1] CEOE, La formación en las empresas españolas. (http://www.ceoeformacion.es/)

means that the employees of SMEs following e-learning courses are using the services offered by their professional associations or chambers of commerce.

For SMEs, most frequent services required are e-learning training courses with tutorials and evaluation services. As the investment required in order to develop personalized platforms and courses is too high for Spanish SMEs (taking into account that most Spanish SMEs have less than 10 employees), the most common solution adopted is the purchase of e-learning courses. The content is standardised and the employees are treated individually, like the other participants on the course.

Still in accordance with the Spanish Confederation of Business organizations (CEOE), concerning the benefits and barriers, whilst flexibility and the adaptability for the employees are seen as big benefits, the barriers are related to technological investments as well as the uncertainty about the most convenient technologies to use.

Anyhow, it is generally accepted among all agents involved in the development of an e-learning programme that its success in a business environment depends on two critical aspects:

→The development or adaptation of the technological platform.
→The quality of the contents, which must be directly related to the real training needs of the customers.

E-learning providers

With the raise of online training in Spain, small businesses and schools have proliferated offering distance courses on very different topics.

All these academies have a similar methodology, based on the permanent contact with the tutor who informs on the processes, advises and assesses the exercises and work to be delivered, etc. The variety of courses offers is also remarkable, it ranges from language courses, music or image creation to business topics. However, there are e-learning providers focusing only in a specific domain: this is the case of CEF (www.cef.es), with an online teaching offer devoted to public examinations. In this case, besides assessing and advising online students, the center offers self-diagnoses and assessments, so that everyone can analyze the level of knowledge acquired.

With regard to the type of courses offered, there are e-learning companies who create customized courses according to the needs of the client company. This is the case of EPISE (www.epise.es), specialized in the training of staff involved in the banking and finance sectors. In general, these companies allow flexibility in the duration of the courses.

One of the most widespread problems in relation to distance education is the difficulty of tutoring courses. To do this, some centers are incorporating in their virtual campuses, intelligent tracking systems. These systems simulate real tutors and monitor the students throughout the virtual space in order to give each user the information required according to their knowledge and learning skills.

3. Internet penetration in Spain

To study the Internet penetration we used the report "Socio-demographic profile of the Internet"[2] published in 2013 by the Spanish Statistics Institute, where the Spanish population is studied in terms of the number of Internet users, frequency of Internet usage, type of activity performed by users on the Internet, information is collected on intensity Internet usage by certain sociodemographic characteristics of the Spaniards. Some of the data from the study are:

The number of people aged 10 and older who have accessed the Internet at some point increased by 3.7% last year to 28.9 million,

- More than 18.6 million people aged 16 to 74 are connected to the Internet every day,
- The Internet activities that have greater intensity of use among 16- to 24 are enrollment in higher education or university and / or public libraries and participation in social networks, and
- 70% of Internet in the last three months has accessed the Internet away from home or office using a mobile device.

Internet penetration is continuously increasing, but still has great room for improvement especially in the areas of population over age.

According to recent data by the European Commission, Spanish citizens are using the internet almost as often as the average European citizen. In 2012 65% of them went online regularly, i.e. at least once a week, compared to 62% last year, whilst 51% did so frequently, i.e. every day, compared to 48% last year. In Europe on average regular users reached 70% and frequent users reached 59%. More and more people are using the internet in Spain with the rate of non-users falling gradually from 32% in 2010 to 27% in 2012, however, still above the EU average of 22%[3].

[2] http://www.ontsi.red.es/ontsi/sites/default/files/perfil_sociodemografico_de_los_internautas_2013_0.pdf

[3] Digital Agenda Scoreboard, 2013 (EC).

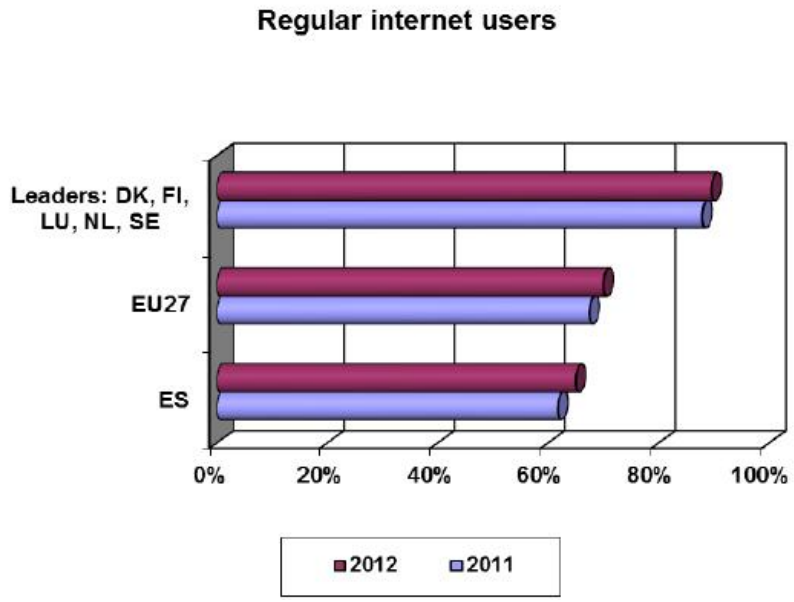


Fig. 3. Spain: Internet usage and digital skills. Source: Digital Agenda, 2013 (EC).

In accordance with the Digital Agenda Scoreboard 2013, new data on mobile use of the internet shows that in Spain access to the internet via mobile devices is a little above the EU average: while an average 36% of EU citizens accessed the internet via a mobile device in 2012, in Spain that rate was 39%. On the other hand, enterprises in Spain are below the EU average (48%) in providing their staff with portable devices for accessing the internet. The figure for Spain is 45%.

Internet is for most people in Spain an informational tool. The most popular activity is finding information about goods and services with a rate of 61%, in line with the EU average.

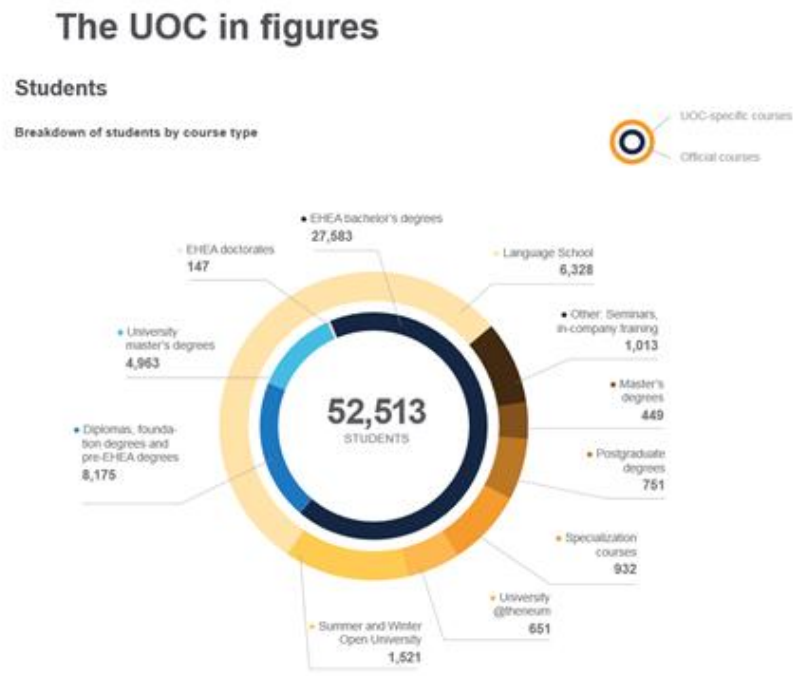
Case Study relating to the use of e-learning – University/training provider: UOC

Origin and background

During the academic year 1995-1996, the UOC launched its teaching activity by means of a pilot course with 200 students. The following year (1996-1997), the number of students grew to 1,500. This University has now a community of over 200,000 people (teaching staff, IT development, students, researchers, etc.) taking part in this educational activity, and this figure will probably increase in the future thanks to the expansion of the university in the Latin American market with university studies accredited in the Spanish language.

The UOC is an innovative university rooted in Catalonia, that offers people lifelong learning to help them advance, while carrying out research into the knowledge society. Its educational

model is based on personalization and accompanying students using e-learning. The University offers them a quality and personalized education that helps them to be more competitive.



Source: UOC Annual Report of the academic year 2013/2014

UOC's educational e-learning model is featured as follows:

Flexibility: overcoming the barriers of space and time.

Asynchronicity: It plays an important role, allowing each student to adapt their studies at the UOC to their lifestyle and career. The UOC has proven that studying asynchronously is possible, that faculty and students (or even the students themselves) need not coincide in time or space.

Personalisation has allowed the UOC to overcome, to a great extent, the industrial models on which distance education was based in the 1970s and 1980s. These models developed a uniform vision for all students, with automated processes which could not be adapted to the needs of each of them. The UOC's collaborating teaching staff and their interactions with students and, above all, the teaching plan around which the learning of each subject hinges have been the elements that have allowed the University to personalize the dealings between teachers and students.

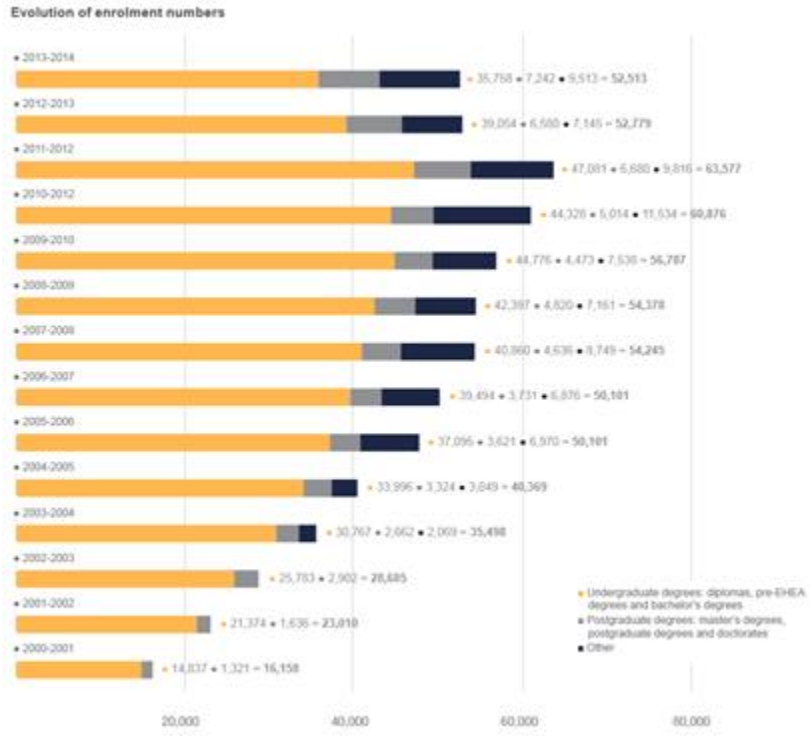
Interactiveness has been one of the principles developed from the options that the Virtual Campus has made available. The distance learning with which the UOC began its operations

involved virtual learning environments, in which the World Wide Web and hypertext played important roles.

The UOC's teaching materials have been a very important element and have developed as far as **technological innovations** have allowed, although it is important to consider the economic restrictions which have often limited how much the possibilities for interaction have been updated.

Finally, **cooperation** has been one of the principles closely linked to the possibilities that the resources have provided for establishing joint working relations between students. Building knowledge together has been one of the foundations of the information and knowledge society, as is reflected in the UOC's educational model.

How to Study at the UOC:



Source: UOC Annual Report of the academic year 2013/2014

There can be no doubt that the UOC is a successful knowledge venture that has helped thousands of people mainly in Catalonia and Spain but also overseas who otherwise would have had difficulties in achieving a university degree. UOC embodied a knowledge opportunity giving a second chance to many prospective students. It is a highly adequate instrument to elevate the educational level of society. Having said that, it is not the objective of this research to assess the impact UOC has on society, but rather- to investigate what enables it and its stakeholders to engage in effective knowledge entrepreneurship.

APPENDIX D – ITALIAN SITUATION REPORT

1. Overview of the e-learning situation in Italy

In big multinational companies and international universities, the e-learning has long been an integral part of the training process addressed not only to students and employees but also to a global audience of young and adult people that use new communication technologies to update, study, follow their own interests and dreams.

In particular, in the field of university and education, quality online courses permanently integrates the provision of training, facilitating the course of study for students who have difficulty in attending the classrooms. Moreover, all the free online educational contents become an opportunity to reaffirm (or improve) the visibility and the appeal of an institute or a university. Large e-learning platforms with many training contents - the MOOC, Massive Open Online Courses - are having a great success, measured in millions of students and thousands of courses offered[4].

This is a very successful model because it responds to the needs of a society where there is no longer a clear separation between individual training projects and working life.

A model that can be introduced also in Italy. In this country training online has been for years almost exclusively on telecommunications universities and considered as less important and valuable from the academic culture. But in recent years an increasing number of universities that offer a serious proposal of distance learning courses and use e-learning also to integrate face to face learning can be registered. But proposals are generally limited to members only.
The e-learning and its developments are changing the concept of education, and the change is driven by a growing demand also by big and small companies.

The e-learning sector in Italy has a turnover of half a billion euro, with positive growth prospects. According to a recent research lead by Ambient Insight, a company specialized in online training, in 2013 the e-learning market in Western Europe was worth nearly EUR 7 billion and in 2016 will exceed 8 billion, with an annual growth to nearly 6%. Small numbers if we consider the double-digit percentage in Asia, Africa and Latin America (between 15 and 17%), but enough to be the second area in the world, after the United States, for the purchase of online training products and services.

From a global point of view, according to a report published in 2014 by the e-learning company Docebo, 30% of the demand comes from large companies, for a turnover of about $ 17 billion out of a total of over 50 billion. To endure and succeed in a rapidly changing and increasingly competitive market, companies are focusing on employees' knowledge through online learning,

[4] Piergiovanni Mometto, “e-Learning opportunità d’Italia”, Il Sole 24 Ore.

considering continuing education a strategic issue for the competitiveness of the company, even in Italy.

According to recent data, Italian SMEs are more and more approaching to e-learning, with an interesting increase in small and medium size companies that have begun to adopt sophisticated technologies for learning.

A recent survey on e-learning spread in Europe conducted by Ipsos together with CrossKnowledge (European leader in distance education), and the French research center Fefaur, shows that in Italy 63% of the responding enterprises have integrated the online courses in their refresher courses programmes for employees only between 2008 and 2011.
In this period, at a European level, 56% of companies with less than one thousand employees discovered the digital training, compared with 31% of those with more than 10,000 workers, most of whom had already adopted this methodology before 2008. According to the dossier, the goal of the companies is to maximize the effectiveness of the refresher courses optimizing costs.

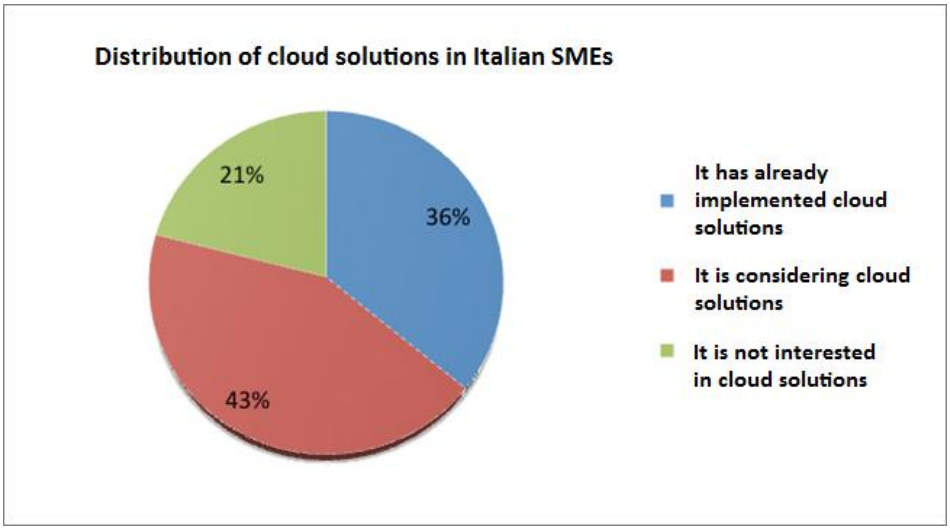
Therefore, the demand for training increases even in Italy, both from entrepreneurs who want to understand all the opportunities, especially in the ICT sector, and from operational workers. The most popular courses in which ICT professionals are interested are those connected to privacy and network security, web development and database administration.

But there is still much to do. Today in Italy, but also in Europe, 99% of companies are SMEs and they are the core of the Italian economy.

According to a recent article written by the Italian entrepreneur Claudio Erba[5], one of the key components in which SMEs need to invest in order to increase their level of competitiveness, is the enhancement and training of internal resources.

As shown in the pie chart below, there is a positive trend highlighting that SMEs, mainly due to their high flexibility, are more likely than large companies to explore the opportunities offered by the web.

[5] http://www.techeconomy.it/2013/06/27/e-learning-unopportunita-per-le-pmi-adesso/



As a matter of fact, Italian SMEs invest more than large companies in training (up to more than 30% of training hours per year), providing employees with quality training, using the technological tools for training available in the market.

e-Learning is universally recognized as de facto standard in the process of business training, since it does not involve space-time limits typical of traditional training, allowing companies to implement an "asynchronous" training model which exploits optimally the time of the resources involved.

To compete at the highest levels and maintain a competitive advantage in the market, SMEs need to manage a highly qualified labor force, in accordance with the standards of national and international safety.

e-Learning is not only an appropriate tool for small and medium enterprises, but it is above all the ideal complement to a training strategy that sees the human capital as a keystone for their economic and organizational development.

2.3.4. Internet penetration in Italy and demographic of its use

Compared to 2013, 2014 saw an increase in the number of Italian families with Internet access at home (from 60.7% to 64%), but there are still 21.9 million people that don't “surf” (38.3% of the resident population), especially the elderly, according to a report from Istat6 (the Italian National Statistical System) on “Citizens and new technologies” in 2014.

The report highlights that nearly 22 million people have never used the Internet. Italy brings up the rear in Europe for the use of the web. The only countries behind Italy are Bulgaria and

[6] http://www.istat.it/it/archivio/143073

Romania. Moreover, Istat showed that the biggest numbers of “non-users” are concentrated amongst the elderly and those going into retirement: the percentage of non-users between the age of 65 and 74 years is 74.8% and it goes up to 93.4% among those over seventy-five.

Nevertheless, the nearly 22 million Italians (from 6 years) that have never used the web are not composed only of the elderly.
The number of children that don't use the internet is also quite high (1.5 million between ages 6-10) despite being considered “digital natives”.

Moreover, in those families in which parents use the internet, such behavior is encouraged by their children. In fact, in families where both parents use the web, the percentage of children between 11 and 14 years old that don't use the web falls to 6.7%, while in the ones where both parents don't use the web, the percentage goes up to 40.1%.

On a geographical level, non-users prevail in the southern Italy and on the islands (respectively 45.5% and 43%), while in northern and central Italy nearly two thirds of the population browses the internet.

However, Italy remains at the bottom of the rankings among European countries for people between 16 and 74 years old who use the internet. Compared to a European average of 72% and to countries such as Holland, Luxembourg, Sweden and Denmark which have reached very high levels, Italy remains third to last in the international ranking with 56%, same as Greece, just better than Romania and Bulgaria.

After the analysis of 33 parameters in five different areas (connectivity, digital skills, online activities, integration of businesses, public digital services), European Commission showed that Italy "is among the countries with low performance, i.e. below the EU average that is 0.47 points.

According to Brussels Italy must also "make progress in increasing demand", because "only 59% of users, one of the lowest EU percentages, use internet regularly and 31% has never used it".

For what concerns Italian companies, they registered some "progress" in the last year, but only 5.1% of SMEs uses e-commerce, while as regards online public services "Italy is approaching the European average", but the use of e-government is still low, both for its insufficient level of development and for the lack of digital skills among the citizens.

Italy is the 26th country for reading news on the internet, 22nd for the use of social networks but 12th for video, music and online games.

Even more significant are the motivations behind these data: 41.7% of families say they do not have Internet access because they are not able to use it; 26.7% considers the Internet useless

and uninteresting, 12.7% have no access to the Internet at home because they access from another place, 8.5% considers the internet connection too expensive.

The technological divide[7] connected to the territory and to the social differences remains stable: families coming from the northern and central Italy having a personal computer and the access to the Internet at home are respectively 66% and 66.6%, against 57.3 % and 58.3% of families in the south Italy. The latter division also recorded a significant delay in access to broadband: 56.4% against 65.4% in the Centre-North.

There is also a little difference as regards the gender of the Internet users: 59.3% of men use a personal computer, compared to 50.2% of women, while 62.3% of men surf the Internet against 52.7% women. The biggest users of personal computers and the Internet are young people aged 15-24 (respectively over 83% and over 89%).

Despite these discouraging data and the scarce public investments, according to a recent Istat report, Italian companies invest and believe in the digital economy.

This is what emerges from the summary report of the best known Italian research institute.
98.2% of Italian companies with at least 10 employees have an Internet connection (it was 96.8% in 2013) and 95% use fixed and mobile broadband.

The adoption of software for the collection and sharing of information for customer profiling (CRM) rose from 13.3% to 28.2%.
The use of software for automatic sharing of information between different areas of the company is also increasing.

Only 69.2% of companies with at least 10 employees has a website (even if the datum rises to 88.9% among companies with 250 or more employees), almost 32% use social networks (51.9% between the ones with at least 250 employees).

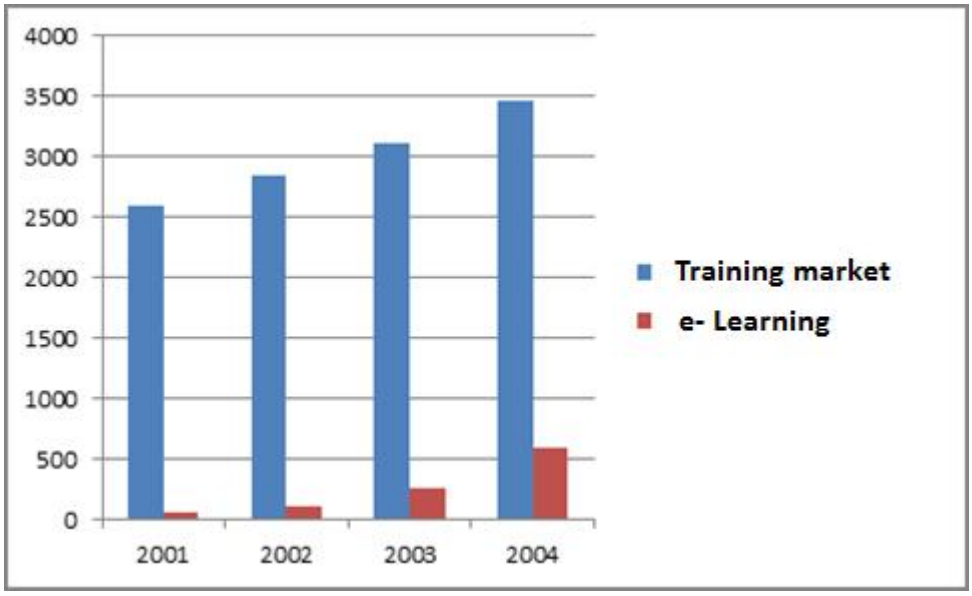
As regards e-commerce, it enhances the number of companies that sell their products or services online (from 7.6% in 2012 to 8.2% in 2013), so that the total turnover generated from e-commerce activities is 7.1% of the total (2.3% in small enterprises and 10.7% in big companies).

5. State of e-learning in Italy

In Italy e-learning was introduced at the end of 90s. In the early 2000s the e-learning market value increased a lot.

[7] http://www.istat.it/it/archivio/internet

The chart below shows the e-learning's market value on the total amount of revenues generated by the training market from 2001 to 2004.



It is evident that the growth of the value of e-learning is considerable especially in consideration of the growth of the global Italian training market. Investment in e-learning in 2002 is equal to 3,8% of the total investment in training while it rose to 8,2% in 2003.

An estimation for the year 2004 defined a turnover of 600.000.000 € for corporate training[8].

If we compare the development of e-learning in Italy and USA (5% on the total training market in 2000 and prevision of 10% in 2004) the huge potential of e-learning is evident.

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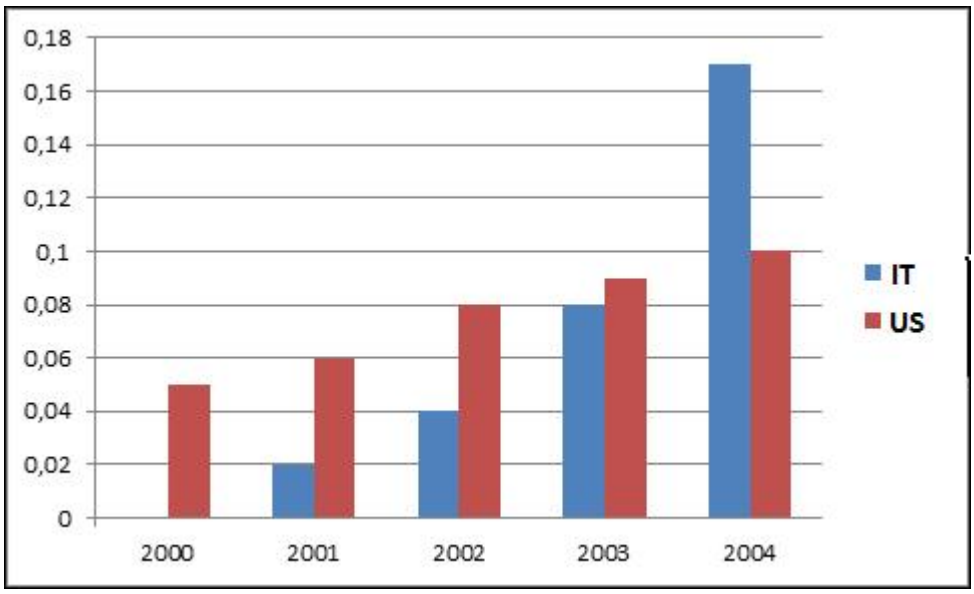
[8] Gian Paolo Bonani, Massimiliano Di Pace, Fiorina Ludovisi, Giorgio Paglia, Franco Vitucci, *Guida all' e-learning. Scenari e prospettive di utilizzo per il management di PMI*

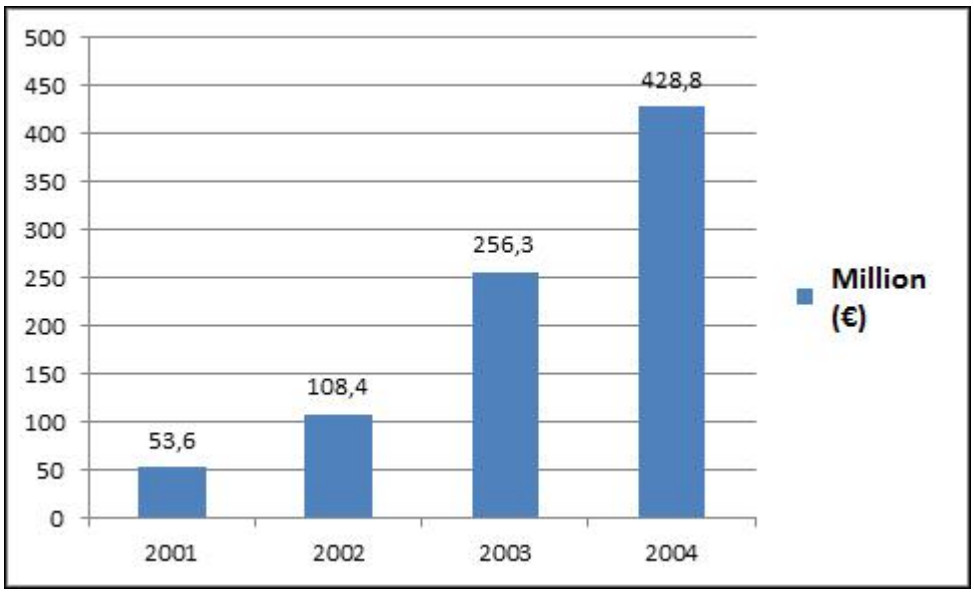


Research carried out in 2002 on 257 e-learning courses in Italy shows a prevalence of courses in Computer Science (27.6%), economy and business economics (21%), marketing, communication (16.3%) and teaching and training (14.8%). There is also a considerable percentage of e-learning courses about internet and ICT (10.1%). There are not many courses on language learning (3.5%), cultural heritage, environment (3.5%), graphics, publishing and design (2.7%) and medical science (0.4%)[9].

With regard to the training methods, the sample analyzed shows that in most cases the methodology used was self-learning (57.4%). A high percentage of the courses is based on planned lessons (31.9%). The remaining courses used a collaborative learning methodology (4.3%) or other methodologies (4,3%)[10].

In 2004 the research "Rapporto Assintel" highlighted a turnover of about €430.000.000 including contents (57%) technologies (21%) and services (22%).

[9] Alessandro Obino, Simona Rossano, *Indagine sull'e-learning in Italia*
http://www.academia.edu/8421656/Indagine_sulle-learning_in_Italia_-_Internetime
[10] *Ibidem*



The same research stated that the Italian e-learning market was still at the initial stages in comparison with other more developed markets such as, for example, USA or North Europe.

Despite this situation, the companies considered e-learning useful to:

- ➔ Reduce costs;
- ➔ Improve the training flexibility;
- ➔ Improve the involvement of participants;
- ➔ Personalise the training;
- ➔ Reuse and update continuously the contents.

The online courses were carried out mainly with three methods: in house, with access to the intranet hosted by the company and through the access to the provider's website.
In 2003 and 2004 it was estimated that the on-line training is 8% of the total amount of investments in education and training. The predictions estimated a growth of this percentage of about 50% per year, until 2006. These predictions considered also the improvement of the broadband in Italy, the development of ICT and digital literacy.

The contents gained more importance with respect to other two business areas: technology and services. Companies, both private and public, are the main actors in the e-learning course demand (82%), followed by Schools and Universities (11%) and single users (7%). The blended learning methodology (face to face + online) is the more widespread methodology in Italy[11].

In 2007 the Ministry for reforms and innovation in Public Administration ("Ministro per le Riforme e le Innovazioni nella PA") expressed the need to implement e-learning projects with the aim of supporting continuous training in public administrations. The Ministry suggested to

[11] Maurizio Cucchiara, *Il mondo dell'e-learning* - http://www.mc2elearning.com/html/e-learning.html

use e-learning methodologies and tools to produce digital educational contents and create a network for sharing them. A research carried out by Osservatorio e-learning, on 251 public bodies (Regions and Provinces), showed that 40% of the target group was involved in some e-learning projects. The contents are related to ICT (30%), laws and regulations (15,38%) and language learning (14,10%)[12].

In Italy, another very important sector for e-learning courses is represented by the universities. In 2008 the universities offering online courses increased from 24 in the previous year to 45, with more than 50.000 students involved.
The full time students are 24%. 36% have a part-time job and 40% have a full time job. 19% of the students is about 20 years old and 30% is more than 30 years old[13].

A national research carried out in 2007 by "Società Italiana di E-learning (Sie-l) highlighted a significant level of dissatisfaction for the quality of e-learning services. 63% of the respondents declared a low quality level of the courses mainly due to the lack of the theoretical references or correct design. These factors reduced the potential of the e-learning methodology[14].

The "Osservatorio Italia Digitale 2.0 report" published by Confindustria in 2009 showed that in Italy the slow diffusion of the broadband has a negative impact on the e-learning implementation. Only 47% of the Italians use internet. 22.000.000 of people don't have access to 20Mbps band and 48% of the Italian families don't have a PC.

In these conditions , it is not surprising that the e-learning market in Italy is not comparable to that of the developed countries and the teaching programs are limited and technologically outdated[15].

The Italian Institute of Statistics (ISTAT) stated that the persons that used internet to search information related to training materials are 36% of the internet users. This percentage increased of 0.5% in the period 2009-2010. 51% are 18-24 years old, 39,3% are females and 34,1% males.

72% of the people that use internet to learn something is made of youth people (15-24 years old)[16].

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[12] E-Learning e Innovazione, Isfol 2008 - http://isfoloa.isfol.it/bitstream/123456789/97/1/Isfol_Convegno_elearning_innovazione.pdf

[13] Monica Beltrametti, Riccardo Lattanzi, Monica Coppi, Paolo Vincenzo Genovese, Pupa Gilbert, E-learning: la rivoluzione in corso e l'impatto sul sistema della formazione in italia - https://www.aspeninstitute.it/system/files/private_files/2014-09/doc/Formazione_Online_exec_summary.pdf

[14] http://bricks.maieutiche.economia.unitn.it/?p=2170

[15] Osservatorio Digitale 2.0 report - http://www.confindustriasi.it/news-671.html
http://lorenz77.altervista.org/wordpress/category/elearning/

[16] E-learning: i dati del Cedefop e dell'Istat sull'utilizzo di internet in Italia nei paesi dell'Unione europea http://www.rivistauniversitas.it/Articoli.aspx?IDC=2183

6. Overview of the general attitude to e-learning in Italy

According to experts, the Italian situation is characterized by the coexistence of best practices and poor practices. Unfortunately, it is difficult to capitalize and share the lessons learned and improve the general level of the e-learning services. There is a clear need to increase the quality of the e-learning offer supporting the development of the technological infrastructure and the networks. The main critical factors are the fragmentation of the different initiatives, the waste of public resources and the lack of a common evaluation system. There is no communication between e-learning providers and the best practices are not so visible and shared.

Another critical point is the perception of e-learning as a non-functional system for innovation and development of the organisations and work processes. This is because e-learning, in Italy, is not yet work-based or project-based, but is based on traditional contents.
The research carried out by ISFOL highlighted the need to improve two main point: to collect and capitalize the experiences, knowledge and competences developed in e-learning projects and improve the quality of the services and resources[17].

In Italy there are different organisations (Regions, providers, Universities, companies etc...) that are using e-learning methodology to improve competences. Some public bodies, in particular, implemented innovative e-learning projects through the creation of European partnership. The funds provided by the Government for the development of e-learning in public bodies, although without a coherent strategy, has produced some effect in the adoption of this methodology. The lack of a coherent strategy produced a very confused scenario. This involves the continuous need to create “ex novo” new parameters to plan e-learning courses. Instead of this, it would be easier to create repositories to share good practices and common standards to manage the processes.

In Italy there are some e-learning projects, but these are hindered by technological and bureaucratic issues. Also the best practices carried out in Italy showed the use of basic technologies. There are no innovative elements that allow to carry out the course in more effective and collaborative way. This is due to the lack of funds and the consciousness about the e-learning potential.

The interest of the public bodies is constantly increasing (especially the Regions). Some of the Italian Regions are involved in sharing reusable educational material. Without any doubt, e-learning could be a key factor for the raising of the public bodies and Italian economy.

For the companies we can observe different dynamics. In large enterprises we can find an increase of e-learning activities (for example, in large enterprises, 60% of training in ICT is delivered by e-learning systems). However in SMEs the implementation of e-learning systems is

[17] E-Learning e Innovazione, Isfol 2008 - http://isfoloa.isfol.it/bitstream/123456789/97/1/Isfol_Convegno_elearning_innovazione.pdf

very slow and doesn't meet the expectations. There are two ways to use e-learning in SMEs: as formal and structured activity with pre-made programs for self-study and as information and communication tool (i.e. e-learning resources) to support the employees.

The development of e-learning in companies encountered four typical obstacles in Italy:

- An aversion rooted in popular culture related to new technologies;
- The lack of appropriate technological infrastructure;
- The habit of giving rise to the projects at the university level by penalizing the dissemination and field-testing by companies;
- Thinking to solve rapidly all the problems related to the costs of training.

The ***e-learning in Italy*** in companies *was first ridiculized, then gnawed (too fast and in the wrong way) and finally abandoned. It has been rejected. Very many times we have heard:*

- *"Yes, I tried it, but does not work" or*
- "*We had a lot of problems with e-learning*" or
- "*We started, but the person who dealt with it no longer works here or abandoned the project*".

Today the Italian companies need e-learning as a useful tool to improve their knowledge, abilities and competences. From a few years now, thanks to the fact that several multinational companies in our country have accepted and exported e-learning as a training tool rooted in its structure, ***our managers have begun to take courage and invest in the sector.***

A lot of developers around the planet and even in Italy, are abandoning the production of costly and cumbersome courses in favour of new 2.0 standards[18].

7. "Case Study" related to the use of e-learning

What is TRIO[19]

TRIO (technology, research, innovation and orientation) is the web learning system of the Tuscany Region. It makes available to citizens and public and private organizations a catalogue of more than 1,700 teaching resources and free courses. It offers also free tutoring services, assistance and services dedicated to collaborative learning, all accessible remotely by the Internet.
TRIO was born in 1998, as tele-training project financed by Tuscany Region through the Social European Fund (FSE).

[18] Gabriele Dovis, *E-learning in Italy needs to run* - http://elearningindustry.com/e-learning-in-italy-needs-to-run
[19] http://www.progettotrio.it/trio/

TRIO is located in all the Tuscany provinces with a network of learning centers where users can bear to take courses. Within the learning centers there are workstations equipped with PC and Internet access for free and tutors who provide assistance to those who want to take TRIO courses.

The TRIO system is open to all. It offers a wide usability, both at a national and international level, thanks to its multilingual courses.

The TRIO system is based on an open source web learning platform that allows to reduce operating costs, ensuring a training offer in line with European standards in the field of e-learning completely free for the final user.

TRIO has more than 1,700 free learning resources organized in 16 thematic areas. Each course consists of several modules, accompanied by audio, video, images that simplify navigation and improve the quality of learning. The courses are also distinct in training collections or thematic pathways in order to undertake a multi-disciplinary approach and successfully achieve the final certificate for the users.

8. Conclusions

E-learning is considered as one of the global driving factors for the development of education and economy in countries. The recent developments of e-learning methodologies characterised by the diffusion of MOOCs, Open Educational Contents, cloud based tools and other elements, improved the effectiveness of the courses and reduced costs.
This awareness is emerging also in Italy, although there is still a long way to go before a systemic implementation of this methodology is reached.

The e-learning landscape in Italy is characterized by the presence of three main actors: Universities, Public Bodies and Companies.

The Universities were one of the first organisations that implemented the e-learning in Italy. Today in Italy there are different telematic universities and most of the traditional Italian universities offer e-learning courses that permanently integrate the standard training offer, facilitating the course of study for students who have difficulty in attending the classrooms.

Also the interest of the public bodies is constantly increasing. In 2007 the Ministry for reforms and innovation in Public Administration expressed the need to implement e-learning projects with the aim of supporting continuous training in public administrations. Some of the Italian Regions have created e-learning portals to offer courses on specific topics to different target groups within public administration offices.

For the companies, although lifelong learning is considered one of the strategic factors for innovation and competitiveness, we can observe different dynamics. E-learning is used mainly in large enterprises. In SMEs, at the moment, the implementation of e-learning systems is very slow and doesn't meet the expectations and/or needs of the users.

The e-learning sector in Italy has a great growth potential but the current situation cannot be compared to other countries (USA, Northern Europe, Asia etc...). This is due to several factors among which there is definitely the lack of powerful infrastructures.

The slow diffusion of the broadband has a negative impact on e-learning implementation. 22.000.000 of people don't have access to 20Mbps band. In 2014 64% of the Italian families have an internet access but there are still 21.9 million people that don't use internet. Among these people, elderly, children (1-6 years), Southern Italy and the islands.

An analysis carried out by the European Commission on the integration of the digital technologies in member states, showed that Italy ranks 25th out of 28 EU Member States.

In these conditions, it is not surprising that the e-learning market in Italy is not comparable to the one of the developed countries and the teaching Programmes are limited and technologically outdated.

There is a clear need to increase the quality of the e-learning offer. The fragmentation of the initiatives, the waste of public resources and the lack of a common evaluation system are the main critical factors. There is no communication between e-learning providers and the best practices are not so visible and shared.
The e-learning system in Italy needs to have a coherent strategy that foresees the definition of some parameters to plan e-learning courses, common evaluation guidelines and repositories to share good practices and common standards to manage the processes.

In-depth Interviews – SMEs

Positive stories (Best practices):

A face to face interview has been carried out with *Systems Projects Services srl* of Fano. The company, which employs 80% men staff, carries out pipeline planning activities - land/off shore, gas pipelines in Europe, Africa and Mexico.

Considering that the service offered is very specific, most of the training carried out is on how to use CAD systems and software for planning purposes - stress analysis, Cathode protection and English language.

In the past some members of the staff have participated in an e-learning experience, however, at the moment the training takes place face to face although considered to be very heavy in terms of staff-timing.

Therefore, in general SPS does recognize the fact that e-learning needs to be promoted within the enterprise, but does not know how yet.

Some advantages of e-learning for SPS are:

- Flexibility in terms of space and time;
- Less costs compared to face to face training.

Disadvantages to be considered:

- Lack of contact with others;
- motivation which needs to be followed by the on-line tutor.

At the moment, the enterprise is searching for specific online material for the construction of pipelines – oil and gas and is looking for a flexible open source LMS.

In-depth Interviews – Providers

Formodena - Formazione professionale per i territori modenesi soc. cons. a r.l.

Formodena is one of the training providers which has been interviewed. The training company carries out training for adults in three different premises in the Emilia Romagna Region (Modena-Carpi-San Felice sul Panaro) and is copartner with the Municipality of Modena (public body).

The training offer is addressed to adults, women, disadvantaged groups and in particular it has developed experience in training carers, home carers, in the textile sector and the biomedical sector.

The main training methodology used is face to face with distribution of paper material none always up to date. However, through a regional funding of 2013 the enterprise has developed a DVD to train carers and home carers (the material used was meant to be uploaded online on the Regions home page but this activity was never completed). The DVD is still used today.

In the future the training provider would like to implement an e-learning system to create an online community to be in contact with the trainees during and after the course; and to receive feedback and share material for the course.

As of today, the only e-learning experience of the training provider is the production of a DVD which seems expensive.

According to Formodena, e-learning may have the following obstacles:

- if the training would be 100% e-learning there would be no contact with other peers and with the trainer; it is therefore more difficult to get to know the student, increase relationships and social aspects, the relationship with the trainer would decrease (considered to be only a guide), and there would be very little moments of sharing opinions on extra-course elements (family, work, etc);
- The organisation of information would increase – ie. Information in little time;
- It would be difficult to trace trainees presences during the training course.

When asked specific DOs and DON'Ts for providers who would like to implement e.learning, Formodena answered as follows:

- DO: identify the right media and technology based on the target group;
- DO: be present on the platform to seek possible requests for information or help;
- DO: create a community for trainers to share information and manage different contents;
- DO: Train the trainers adequately from a tecnological and methdological point of view;
- DON'T: exclude students who are not able to use the online tools

L.A.B. soc. coop.

L.A.B. soc. coop. is a training provider accredited in the Marche region, and offers training courses to: unemployed, employed and whoever needs to develop skills.
The training provider started using e-learning platforms, with quite some difficulties, in order to provide part of the training online and avoid some face to face training.

L.A.B. uses Moodle with different classes mainly in fixed training hours when the trainer is online for interaction (questions and exercises), on chat and forums.

According to L.A.B. the positive aspects are:
- Diminishment of costs;
- Speed in disseminating material;
- New ways of collaboration and identification of new topics which in class would not be discussed at all;

While the obstacles are:
- Tecnology: the trainees browser is not always compatible with the platform, connection, software which does not open the uploaded files;

- Trainers who are not technologically up to date;
- Trainees competences and IT skills;
- Tecnical difficulties on the use of the platform which is not always intuitive;
- More training is needed for tutors;
- The platform does not always function properly when all trainees are connected at the same time:
- There is no control of the material selected and shared on the platform;
- Trainees are connected without participating, just to show that they are online and that they have been present during the hour;
- Trainees connected without motivation, only to upload/download material and no interaction with the trainers.

APPENDIX E – SLOVAKIAN SITUATION REPORT

Providing small and medium-sized enterprises ("SMEs") with the information on e-learning opportunities available to them through the development of "SME e-learning portal" for making the best use of e-learning and adoption of innovative teaching methods by their managers and employees is the principal aim of the project SMEELEARN ("Project"), for the purposes of which was prepared this report. The role of the present report is to complement wider project analysis of perception and state of e-learning in partner countries involved in the project, which will help to set up the main output of the project, the SME e-learning portal, to the needs of SMEs. The report also provides an overview of the basic characteristics of SMEs in Slovakia, the informatisation of Slovak society and the use of e-learning in Slovakia.

First section provides basic information on Slovak SMEs in terms of size, structure, sector focus, employment and export activities. Next part focuses on the use of computers and the internet at home and in the SME sector, as these are essential tools for the use of e-learning. The state of e-learning in Slovakia and its use in universities, public sector and especially in the private sector is treated in the last part, which also summarizes some of the findings resulting from the research undertaken under the Project.

1. SMEs in Slovakia

The state of SMEs in the Slovak Republic

Small and medium-sized enterprises in Slovakia are an important part of the economy. They are a stabilizing element of the economic system and sector with the greatest potential for growth. In particular, the irreplaceable role of the SMEs is in the area of job creation, balancing regional disparities in development and the implementation of innovation in economic practice.

The structure of SMEs by legal forms

More than two thirds (65.4%) of the total number of active SMEs in Slovakia in 2014 (565,241) were natural persons – entrepreneurs. The representation of SMEs – legal entities reached 34.6%. Within natural persons – entrepreneurs there remains a dominant representation of small trade licensees (91.3%). Persons doing business as freelancers make up 6.6% and independent farmers 2.1% of the total number of natural persons – entrepreneurs.

The structure of SMEs by size categories

According to the size structure of enterprises the largest group of enterprises (96.9%) are micro-enterprises (0-9), small enterprises (10-49) accounting for 2.5%, medium enterprises (50-249) for 0.5% and large enterprises (250 and above) 0.1%. Compared with other countries, Slovakia ranks among countries with the highest share of micro-enterprises.

Tab. no. 1: The size structure of the business sector by individual legal forms as of 31 December 2014

Size category/legal forms	enterprises	small trade licensees	entrepreneurs – freelancers	Independent farmers	total abs.	total in %
Micro enterprises (0-9)	180 542	335 551	24 411	7 826	548 330	96,9%
Small enterprises (10-49)	12 499	1 565	71	23	14 158	2,5%
Medium enterprises (50-249)	2 686	66	1	0	2 753	0,5%
Large enterprises (250 or more)	628	0	0	0	628	0,1%
Total SME (0-249)	**195 727**	**337 182**	**24 483**	**7 849**	**565 241**	**99,9%**
Total Enterprises	196 355	337 182	24 483	7 849	565 869	100,0%

Source: Statistical Office of the Slovak Republic, processed by SBA

The structure of SMEs by sectors

From the sector point of view, the largest portion of SMEs carries out their main business activities in trade (25.2%). More than one-fifth of SMEs (23.0%) work in trade services (SK NACE K to N section), 16.4% work in construction, 12.7% carry out their main activities in industry and 7.2% in other services (SK NACE P to S). In the sector of transport, information and communication activities (SK NACE H, J section) work 6.9 % of SMEs, in agriculture 4.9% of SMEs and in accommodation and catering 3.6% of SMEs.

Employment of SMEs

Small and medium-sized enterprises (including NP – entrepreneurs employing less than 250) in 2014 accounted for 72.7% of employment in the corporate economy and 59.6% of the total employment in the national economy. In view of the different size categories and legal forms to total employment in the business sector in 2014 NP – entrepreneurs (natural persons – entrepreneurs and their employed people) accounted for 35.5%, micro-enterprises 10.6%, small enterprises 12.1%, medium enterprises 14.5% and large enterprises 27.3%. In Slovakia the achieved share of SMEs in employment in the business economy is currently higher than in the EU – 28.

Added value of SMEs

In 2014, the share of SMEs – legal entities in creating added value in the non-financial corporate sector reached 53.3%. In absolute terms it amounted to EUR 18,342 million. The share of micro-enterprises (0-9) in added value accounted for 16.8%, the share of small enterprises (10-49) reached 15.9%, while medium enterprises (50-249) 20.5%. In 2014, the share of SMEs (including natural persons – entrepreneurs) featured in GDP by about 32%.

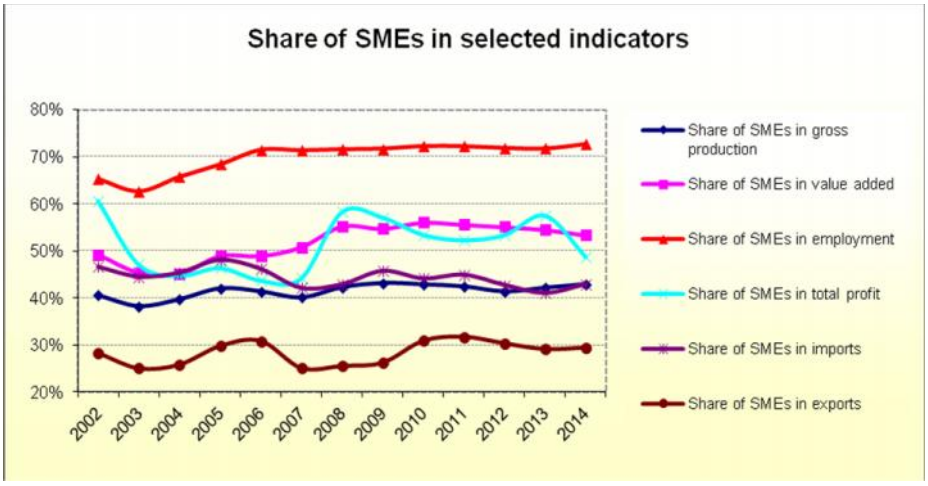
More than one quarter of the total added value of SMEs–legal entities were created by SMEs in industry (25.2%). The share of trade of the total value created by SMEs reached 22.5%, the share of trade services reached (SK NACE Sections K and N) 22.8%, the share of transport, information and communication activities amounted to 10.6%, 7.5% for other services (SK NACE Sections P to S), construction 5.6%, agriculture 2.4% and hotels and restaurants 1.8%

Exports of SMEs

In 2014, the share of SME on total exports reached 29.4% (EUR 17,292 million). The share of micro-enterprises (0-9) on total export reached 11.1%, small enterprises (10-49) accounted for 5.8%, and medium enterprises (50-249) 12.5%. Of the total number of SMEs, the export of goods is carried out by 5.2% of SMEs. The territorial structure of SME exports is characterized by significant dominance of the EU markets. In 2014 the total exports of small and medium-sized enterprises export to the EU-28 countries amounted to an 89.1% share.

Compared to other EU countries, Slovakia is among the countries with the lowest share of SMEs in total exports.

Chart No. 1



Source: SBA, on the basis of data of Statistical Office of the SR

Gender and age structure of entrepreneurs

In the share of women in the total number of entrepreneurs (28.3%, which is 3.3 p.p. less than in the EU), Slovakia has reached in a long-term ranking among the countries with the lowest female entrepreneurship (data of Eurostat, 2014).

In the context of a comparison of the age structure of Slovak entrepreneurs with selected EU countries, Slovakia is characterized by the highest representation of entrepreneurs in the age group of 25-39 years and the fifth highest representation of entrepreneurs in the age group of 15-24 years. By contrast, in the age group of over 50 years, Slovakia reached the lowest representation of entrepreneurs among compared countries, indicating the very low business activity of older age groups in Slovakia.

2. Internet in Slovakia

2.1 Use of the internet in enterprises

Use of computers and computer networks

Use of internet by enterprises is closely linked with the rate of use of computers and computer networks. According to the results of SOSR survey "Survey on information and communication technologies usage in enterprises in 2014", more than 98% of enterprises in Slovakia use computers and computer networks. The rate of the use of computers in SMEs is directly proportional to the enterprise's size category. Within the category of micro enterprises more than four fifths (81.5%) of subjects use computers. Within the category of small enterprises, 97.7% of subjects use computers and within medium enterprises the percentage of use is 99.7%.

Tab. no. 2: Use of computers and computer networks in Slovakia by size categories of enterprises

Size category of enterprise	% of the total population
Micro enterprises (1-9)	81,5
Small enterprises (10-49)	97,7
Medium enterprises (50-249)	99,7
Large enterprises (250 or more)	99,5
Total	**98,1**

Source: SO SR, Survey on information and communication technologies usage in enterprises in 2014

Use of the internet

In 2014, the use of internet by enterprises that use computer reached 99.6% in Slovakia. The lowest rate of Internet use within SMEs was reached by micro enterprises (98.0%) while the highest level was reached by medium enterprises (99.9%).

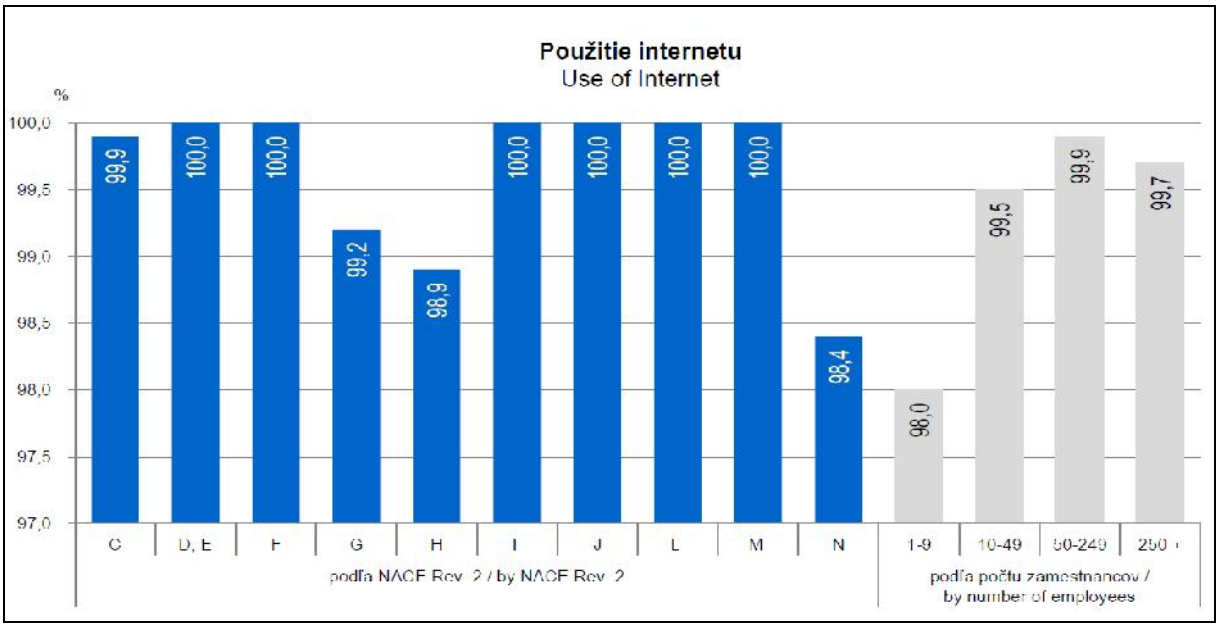
Tab. no. 3: Use of the internet by size categories, in 2014

Size category of enterprise	% of all enterprises using PC
Micro enterprises (1-9)	98,0
Small enterprises (10-49)	99,5
Medium enterprises (50-249)	99,9
Large enterprises (250 or more)	99,7
Total	**99,6**

Source: SO SR, Survey on information and communication technologies usage in enterprises in 2014

From the sector perspective the highest rate of the use of internet was recorded by enterprises operating in industry (C, D, E), construction (F) and services (I, J, L, M). Lower level of Internet use is typical for enterprises operating in administrative and support service activities (N), in transport and storage (H) and in trade (G).

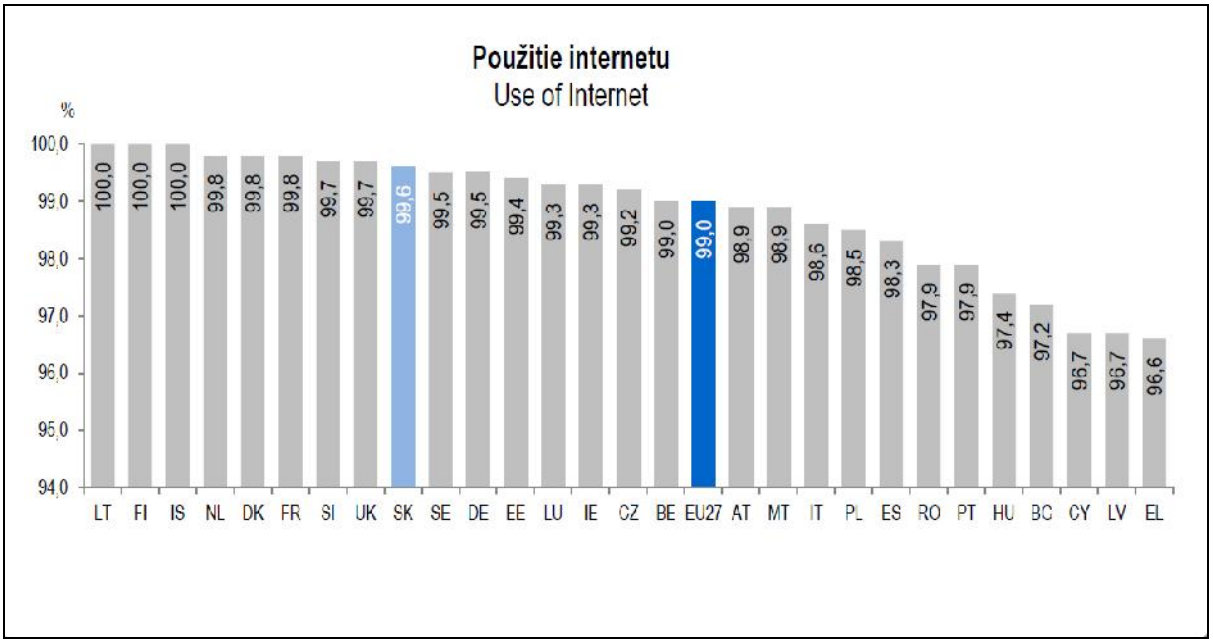
Chart No. 2



Source: SO SR, Survey on information and communication technologies usage in enterprises in 2014

Compared with other countries, Slovakia ranks among the countries with the highest share (99.6 %) of enterprises using internet.

Chart No. 3



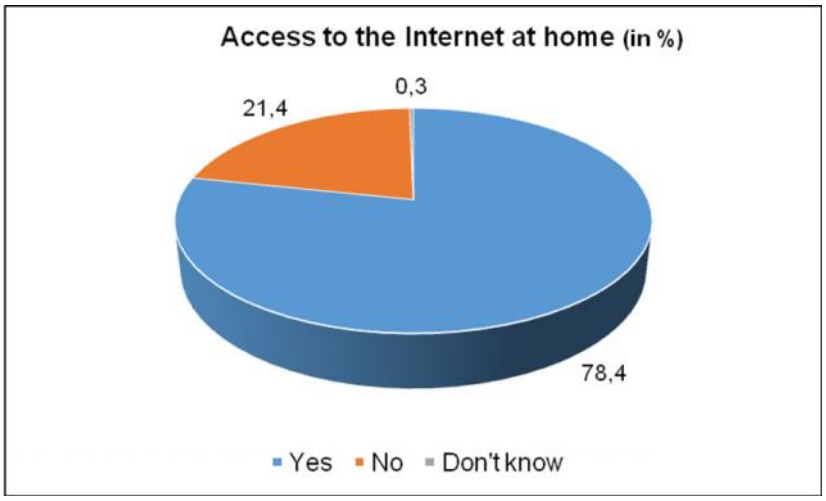
Source: SO SR, Survey on information and communication technologies usage in enterprises in 2014

2.2 Internet in Slovak households

Access to the Internet

According to the results of SOSR survey "Survey on usage of information and communication technology in households – 2014", 78.4% of households in Slovakia have access to internet.

Chart No. 4



Source: SOSR, Survey on usage of information and communication technology in households – 2014.

Use of the Internet by individuals, by age and gender

Four fifths (80%) of the Slovak population aged 16 to 74 years used the Internet in the last three months. The highest rate of the Internet use is achieved in younger age groups (16-24: 97.9%; 25-34: 96.5%), while the lowest in age group over 65 years (30.8%).

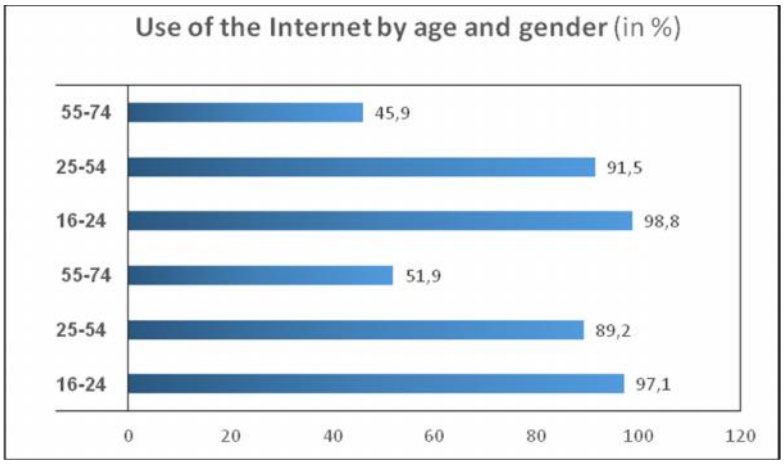
Tab. no. 4: Use of the Internet by age

	Total	Age					
Age	**16 -74**	**16-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
Within the last 3 months	80	97,9	96,5	90,5	83,5	60,2	30,8

Source: SO SR, Survey on usage of information and communication technology in households – 2014.

The rate of the internet use among individuals shows no significant gender differences. A more significant difference is achieved only in the category of 55-74 year olds, in which women using internet have lower representation than men by 6 percentage points.

Chart no.5



Source: SO SR, Survey on usage of information and communication technology in households – 2014.

3. E-learning in v Slovakia

E-learning can be defined as "[...] education that is provided or mediated by digital technologies and software applications and is connected with interactive activities for the purposes of training or organisational development" (CIPS 2014). E-learning also envisages the use of offline products and resources as DVDs and CDs that do not require internet or intranet connection. In order to facilitate teaching and learning, the definition, in support of an inclusive approach to e-learning, includes the use of mobile devices, including cellular phones (JISC). Part of the definition is also recognition of individual learning processes and access to education anytime and anywhere.

3.1 An overview of the e-learning situation in Slovakia

Several sources indicate that in recent years the demand for e-learning education has increased both in the private and public sector as well as in academic sector. This statement is also documented by the share of persons who ordered (purchased) electronic materials for the study during the last 12 months via the Internet (% of all those who ordered, purchased goods and services during last 12 months via internet), which in 2014 reached 4.1 %.

Tab. no. 5: Share of persons purchasing (ordering) e-learning materials via internet during the last 12 months (from total number of persons purchasing (ordering) goods or services via internet during the last 12 months) in %.

Gender	TOTAL	All						Men				Women			
Age	16 -74	16-24	25-34	35-44	45-54	55-64	65-74	16-74	16-24	25-54	55-74	16-74	16-24	25-54	55-74
Purchasing of E-learning materials	4,1	6,7	4,6	3,1	2,7	3,2	-	4,8	7,9	4	3,5	3,5	5,5	3,2	1,5

Source: SOSR, Survey on the use of information and communication technologies in households

The research on needs and potential of online education in the Central European context and development of software prototype solutions within the project "Creating a software prototype for online education for public sector, support of dissemination of the results of applied research" undertaken in 2011 (the "Research"), which was the primary source of information for this part of study, shows that within the private sector in Slovakia increased the number of companies that provide e-learning education to different target groups with different types of services. From the target group point of view prevails the focus on private companies and educational institutions (mainly universities). Given the size of the Slovak market, we may conclude that in the field of e-learning the market is covered sufficiently and the range of services has sufficient diversity. However, there is a minimum of companies that would provide complex e-learning solutions to its clients, from the actual solution, to the creation of the necessary infrastructure and regular support. Companies are in fact focusing on providing one of these three components. Nevertheless, Slovak enterprises and educational institutions have a good lot to choose from. Research shows that awareness of the existence of e-learning as a method of education is sufficient. 56.3% of students who are actively working with e-learning software uses e-learning on daily basis. In the case of teachers, similar positive trend may be observed when up to 41.7% of all teachers involved in the survey realised within the Research said that they work with e-learnig for more than seven years. In the case of public sector employees up to 74.5% of respondents said that they have met with the notion of e-learning in the past.

The key to increasing these numbers is, according to the Research, the focus on "user-friendly" approach to programming of new solutions. Many existing portals are difficult to understand for the less computer-literate users content and technically wise. Emphasis should thus be placed on the aspect of technical support to users by creating transparent user manuals, clearly structured user portals and also an attractive visualization. The working group administrating e-learning portal should also provide sufficient information campaign to raise awareness of the existence of e-learning portal as high as possible. Management of schools and faculties should also put emphasis on expanding e-learning at the individual faculties and university portals.

E-learning as a form of education in universities

In Slovakia, other than businesses, a number of universities such as FM UK, Trenčín University, University of Constantine the Philosopher in Nitra and Slovak Medical University have introduced e-learning and others will undoubtedly do so in the near future. E-learning solutions

are also used by municipalities and other governmental organisations to educate officials and subsequently test their knowledge.

However, in higher education, unlike neighboring V4 countries, e-learning is developed with no specific institutional coverage. In the Czech Republic and Poland state-funded public institutions were established, that engage in the development of e-learning as part of distance learning and Hungary has even developed a universal e-learning solution NEPTUN, which is used by a number of Hungarian universities. Based on available figures, we may conclude that among V4 countries the e-learning is used least in Slovakia and most in Poland. In terms of using Moodle, which is the most frequently used software solution at Slovak universities; website Moodle.org registers 184 certified e-learning portals in Slovakia. However, expansion of e-learning in most cases refers only to a minimum number of university faculties and the degree of its use in teaching is very volatile. Within the Slovak environment are e-learning tools used most frequently for sharing teaching materials and syllabi for individual subjects. The degree of utilisation of tools for communication, submission of seminar papers, testing and collectively created works varies between schools.

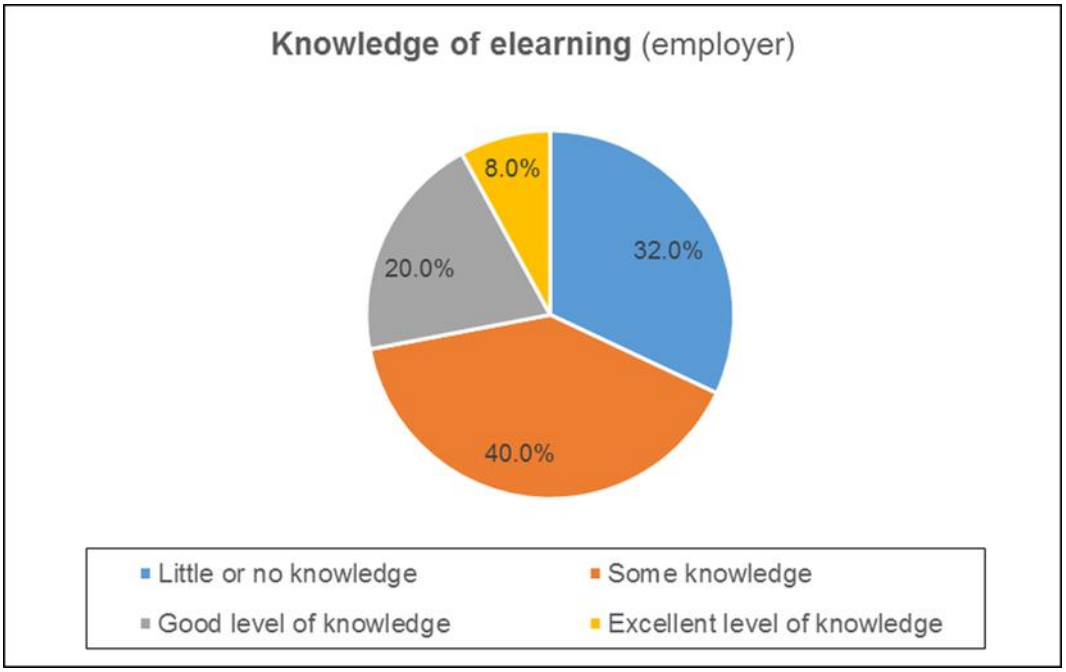
E-learning as a form of education in the public sphere

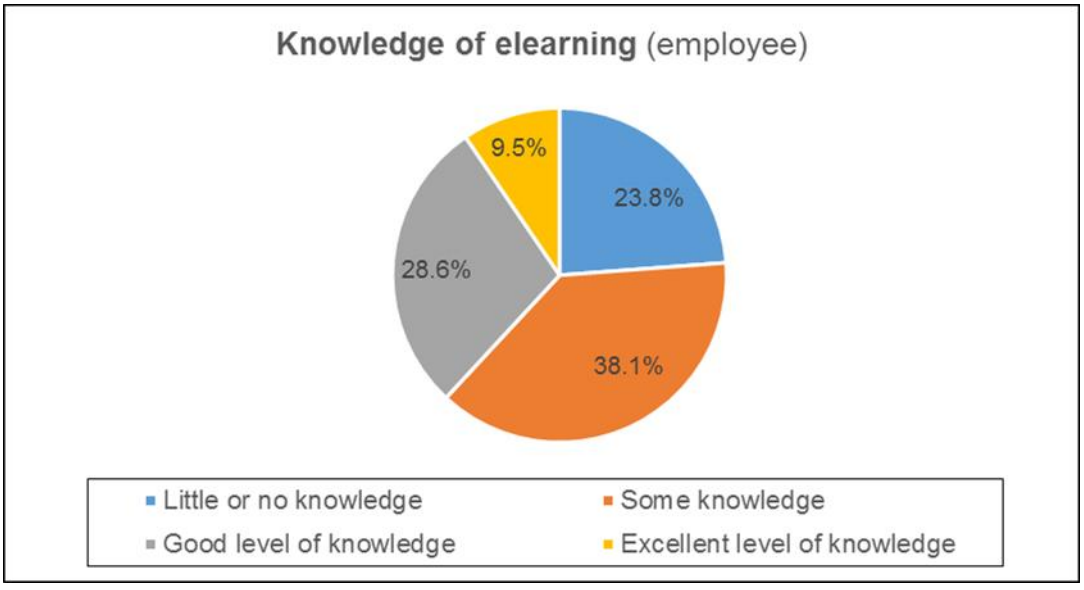
The problem of insufficient use of e-learning in terms of employees in the public sphere is mainly due to poor penetration of methods of e-learning in to public sphere in Slovakia. In the context of the individual's needs it is essential to future software solutions and e-learning portal to focus, in addition to the aforementioned "user-friendliness", on a strong information campaign to the public and municipal institutions using positive examples from abroad and offering the best possible ratio between price and quality of services provided. When offering e-learning solutions, emphasis should be placed on adequate promotion through the examples of e-learning use in Slovak private sector where it is possible to identify a number of successful solutions for employee training.

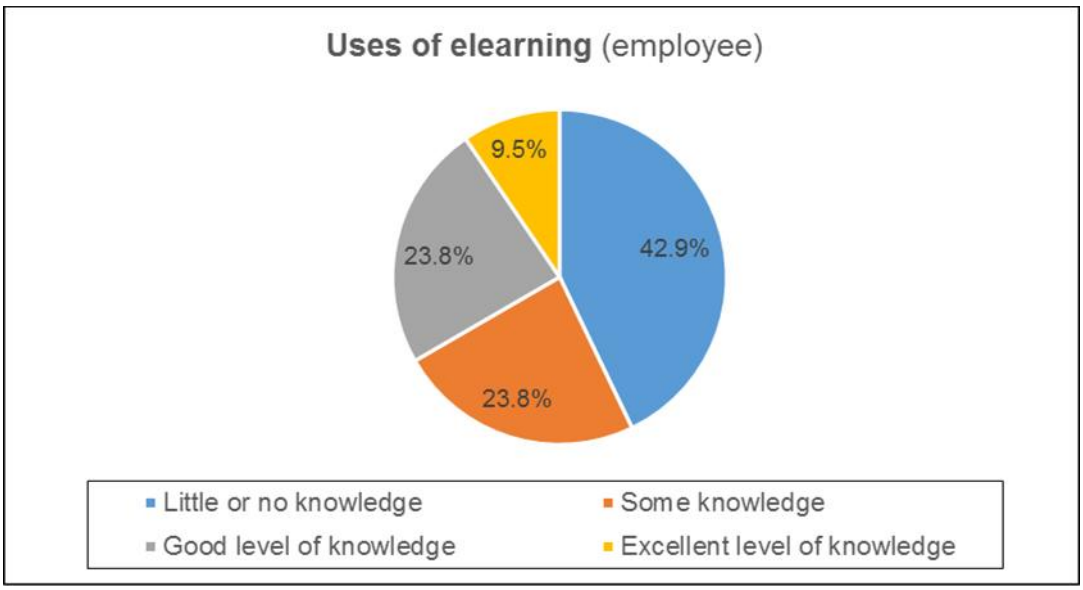
E-learning as a form of education in the private sector

Slovak companies increasingly reach for e-learning in various vocational training courses that save costs for travel, trainers or training rooms' rental. The ways in which companies educate their employees through e-learning today are based on the same principle. As said in the introductory part of this report and showed in the survey conducted within the Project (the "Survey"), in Slovakia, businesses mainly associate e-learning with online learning and basic precondition of its use is thus a computer with internet access. Therefore mainly companies with access to the computer, such as financial institutions, telecommunication companies and IT firms, are the major e-learning beneficiaries. As shown by the Survey, e-learning is not an unknown method nor in the SME sector. However, the Survey revealed that just over one quarter (28%) of Slovak SMEs (employers) have sufficient knowledge of e-learning. Almost three-quarters of SMEs (72%) consider their knowledge of e-learning as insufficient (answer

was “weak”, or “some knowledge”). Only one-fifth (20%) of SMEs (employers) participating in the survey has adequate knowledge of use of e-learning.







Source: SBA

Employees show a slightly more knowledge on e-learning (38,1 %) as well as knowledge on the use of e-learning (33,3 %) when compared to employers.

According to 42.9% of surveyed employees, e-learning education helps them to perform their job better. The contrary opinion declared only one in ten (9.5%) employees.

The greatest interest is still in the foreign languages, computer skills trainings, trainings required by law (work safety, fire protection, driving license trainings, etc.), communication skills and other soft skills.

As shown by the Survey, the most important benefit of e-learning mentioned by both employers and employees is flexibility of time and place. Plans for extending the use of e-learning in the company has 16% of SMEs (employers), the other nearly two thirds (64%) of SMEs admit the possibility that they will use e-learning more intensively.

The Research adds that the main advantages of e-learning are e.g. the availability of teaching materials, fast feedback, fast communication with the teacher, effective and quick work with tasks, better management of education of a larger group of students and better analyses of testing results of students. Among the perceived disadvantages and/or obstacles on the students' side that hinder the successful use of e-learning on the other hand are impersonal approach to the student, insufficient supply of e-learning courses on the education market, lack of information about the use of the system, lack of motivation and lack of computer literacy. E-learning users would for example welcome clear user manuals for portals, interactive

courseware manual within the e-learning portal, initial contact hour with teacher and user-friendly treatment.

3.2 "Case study" on the use and potential of e-learning in the private sector

Booming trend and potential of e-learning in the Slovak SME sector can be supported by examples of good practice one which is also the company Pribila & partner Ltd. (the "Company").

Company pribila & partner s. r. o. is a micro enterprise operating in the construction activities, drawing up design, construction plans and constructing eco-houses and its managing director was involved in the questionnaires and in-depth interviews on the use of e-learning as educational tool in enterprises in the project SMEELEARN. When asked what comes to his mind when speaking about e-learning, he replied that for him e-learning begins on the Internet, with the freely accessible information – adverts of companies providing on-line education. As particular forms of e-learning he also mentioned webinars and services of an online consultant/advisor in business. The need for training and education is, in his own words, continuous and tied to everyday problems that the company is facing. Thus, the company makes use of e-learning in different areas on weekly basis. The basic motivation, which led the manager to the use of e-learning was mainly time efficiency on two levels. The first is saving time and money spent on the transfer to traditional forms of training courses, not only for themselves, but also for the customers as it is in order to provide them with ever improved services that the company takes courses. Secondly, it is also the possibility to use time efficiently right until the moment of the beginning of e-learning course. Company hasn't experienced any problems in obtaining information about the e-learning courses because, according to the owner, through electronic ads they find their way to the consumer as soon as he begins to search for the solution of the problem via google or e-mail. Trainings can also be accessed through professional interest organisations on the internet such as The Slovak Chamber of Civil Engineers, Young Entrepreneurs Association of Slovakia or Building Designers Associations.

However, the access to technically specific trainings that are not advertised is sometimes difficult. Company thus draws 99% of information about the e-learning from internet. Besides the mentioned time, local and cost-effectiveness, company also highlights the possibility of filtering information that participant gets during the course as a major benefit. If a part of course is irrelevant the participant may simply skip it or leave the course at any time. The company plans to use e-learning courses also in the future.

The scope will depend on its current needs but it will certainly be in the field of construction and soft skills such as electronic and personal communication. According to the manager and given his personal experience, e-learning as an educational tool has prospect of wider use in the Slovak SME sector. He directly attributes increased success of the company to bigger time

investment in (electronic) education and believes that this approach will gradually be adopted also by other businesses that see the positive shift. However, it is necessary that e-learning courses and webinars are able to respond to the recent challenges and demands – e.g. the additional accessibility of webinars in case one cannot attend or the option to select courses before purchasing based on their professional level and positive evaluation by other graduates. Manager also thinks it is important to enhance the use of e-learning to a greater extent in universities. Especially for students who want to work or start a business while studying, this form provides an optimal education supplement.

4. Conclusion

Sufficient computerisation of Slovak SMEs as well as predominance of younger population in the Slovak business community is a good basis for increasing the use of e-learning as a form of education. Slovak SMEs recognize that in order to increase their competitiveness and achieve more growth the education is an indispensable precondition. They are also fully aware that in terms of time efficiency, cost savings and overall flexibility, e-learning is the ideal choice compared to full-time form of education. However, when comparing the three main types of education (traditional – presence based, combined, e-learning), combined form continues to gain the best score among employees. In addition to frequently stated fear of losing personal contact between trainers and participants of the course, the lack of motivation or lack of information on the use of the system are other perceived disadvantages of e-learning. It is specifically to help change the latter where pilot initiatives promoting the use of e-learning in the private sector such as the project SMEELARN can be very helpful.

In-depth Interviews – SMEs

Positive stories (Best practices):

Company *SOLEA* operates a restaurant in the central Slovakia and its manager took part in the survey and in-depth interviews on the use of e-learning as educational tool in enterprises realised within the project SMEELEARN. When asked what he understands under the term e-learning and what forms of education he connects it with, he replied: "Step by step interactive online courses or webinars." The main reasons that led to the use of e-learning in his facilities were the efficiency of know-how transfer in terms of geographical reach and possibility of multiple use of already generated content. Although he says having no problems to obtain the information about e-learning tools because of sufficient international resources, he admits that information on local – Slovak level is rather limited. As further advantages of e-learning as a form of employee education he considers the time flexibility and price advantage over other, traditional forms of education. The company plans to use e-learning to train its employees also in the future, especially in the area of soft skills. The company also believes that e-learning has the prospect of wider use in the SME sector in Slovakia.

Company *HolidayRaj* operates tourist facility in the north of Slovakia and its owner was involved in the survey and in-depth interviews on the use of e-Learning as an educational tool in enterprises in the project SMEELEARN. When asked what types of training she imagines the most often under the term e-learning, she replied as follows: "Learning using information technology that includes self-study, where the student can choose what information is needed and when he wants to acquire it." The main reasons, which led to the use of e-Learning has been especially the need of training and acquiring of new information and skills. The company hasn't experienced any problems in obtaining information about available e-learning tools. These were drawn mainly from bidding emails sent by e-learning providers. The main advantages of e-learning as a form of staff education are according to the owner price advantage over other forms and flexibility in time and place of education. Since some employees can not or do not want to travel for training, e-learning is an ideal choice, as they can spend on it as much time as they need and take the course at the places and in times that suit them best. The company plans to use e-learning in the future specifically in the areas of skills needed in the tourism sector, business skills in general and also presentation skills. The company believes that e-learning has the prospect of wider use in the Slovak SME sector.

Company *pribila & partner s. r. o.* operates in construction activities, drawing up design, construction plans and constructing eco-houses and its managing director was involved in the questionnaires and in-depth interviews on the use of e-learning as educational tool in enterprises in the project SMEELEARN. When asked what comes to his mind when speaking about e-learning, he replied that for him e-learning begins on the Internet, with the freely accessible information – adverts of companies providing on-line education. As particular forms of e-learning he also mentioned webinars and services of an online consultant/advisor in business. The need for training and education is in his own words continuous and tied to the everyday problems that the company is facing. Thus, the company makes use of e-learning in different areas on weekly basis. The basic motivation, which led the manager to the use of e-learning was mainly time efficiency on two levels. The first is saving time and money for the transfer of traditional forms of training courses, not only for themselves, but also for the customers as it is in order to provide the customer with ever improved services that the company takes courses. Secondly, it is also the possibility to use time efficiently right until the moment of the beginning of e-learning course. Company hasn't experienced any problems in obtaining information about the e-learning courses because, according to the owner, through electronic ads they find their way to the consumer as soon as he begins to search for the solution of the problem via google or e-mail.

Trainings can also be accessed through professional interest organisations on the Internet such as The Slovak Chamber of Civil Engineers, Young Entrepreneurs Association of Slovakia or Building Designers Associations. However, the access to technically specific trainings that are not advertised is sometimes difficult. Company thus draws 99% of information about the e-learning from internet. Besides the mentioned time, local and cost-effectiveness, company also highlights the possibility of filtering information that participant gets during the course as a major benefit. If a part of course is irrelevant the participant may simply skip it or leave the

course at any time. The company plans to use e-learning courses also in the future. The scope will depend on its current needs but it will certainly be in the field of construction and soft skills such as electronic and personal communication. According to the manager and steaming mainly from his own experience, e-learning as an educational tool has prospect of wider use in the Slovak SME sector. He directly attributes increased success of the company to bigger time investment in (electronic) education and believes that this approach will gradually be adopted also by other businesses that see the positive shift. However, it is necessary that e-learning courses and webinars are able to respond to the recent challenges and demands – e.g. the additional accessibility of webinars in case one cannot attend or the option to select courses before purchasing based on their professional level and positive evaluation by other graduates. Manager also thinks it is important to enhance the use of e-learning to a greater extent in universities. Especially for students who want to work or start a business while studying, this form provides an optimal education supplement.

“Negative stories“:

Company *Darvi&Partners* is engaged in a wholesale of construction materials, import of several brands of roofing materials for pitched and flat roofs and provides expert advice in this field. One of the expert advisors of this small family business was involved in the questionnaires and in-depth interviews on the use of e-learning as educational tool in enterprises in the SMEELEARN project. He answered the question what associations he usually does with the term e-learning and which forms of electronic education he knows as follows: "*Education through computer technology using the internet. For example mandatory courses ordered by law, online language courses, driving lessons tests, self-study materials for schools, checking the available information on the internet, reading online articles in various newspapers and on portals.*" Among the main reasons of not using the e-learning in the past company considers a greater efficiency of personal contact and personal meetings that are very important for small family businesses. In the future, however, the company does not exclude the possibility to use e-learning in such fields as the vocational presentations for new business partners or organisation of interactive courses for contractors interested in the services of the company.

Company assumes that information about the offer of e-learning courses and forms of online education in Slovakia is not sufficient though they have never dealt with the question of availability of this kind of education specifically. The major drawback of e-learning as a form of staff education is the loss of personal contact and ties. An expert advisor further stated that "*business requires personal contact, references and personal commitment. Lack of motivation, working occupancy and the need to allocate extra time put e-learning aside. Personal meetings and interactive trainings have greater added value because in addition to educational activities they deepen the interpersonal relationships and maintain the relevant contacts. Finally, a weak technical skill of some business partners is an important point that does not add to the popularity of e-learning among Slovak entrepreneurs.*" Company considers that the most helpful tools for making better use of e-learning are advertising, promotion and awareness of

various targeted courses, such as certificates or qualifications in a particular area. Moreover, availability and ease of search for electronic courses are important to.

JABLUM Slovakia acts as a distributor of a wide selection of coffee and coffee machines on the local market and its owner was involved in the survey and in-depth interviews on the use of e-learning as educational tool in enterprises within the SMEELEARN project. When asked what he understands under the term e-learning and forms of education connected with it, he replied: "*The lecturer speaking from the monitor while others are listening and making notes. Something as classes taught at school representing the relationship between teacher and student but without personal approach and contact.*" The reasons for non-use of e-learning steam from the particular scope of business of the company that requires practical training courses and interactive demonstrations as well as involvement of all the senses. The company further claims that it is not a problem to obtain information on this type of education via internet, but so far they hadn't the need to search for such information. Among the biggest disadvantages of e-Learning company considers the fact that "*people do not socialize and do perceive only images and not the energy.*" The company does not relate to the hiding of people behind the computer monitors, or to the decline of personal communications and claims that the area of education should remain in the traditional spirit or should be a combination of classical education and electronic one. Wider use of e-learning can be achieved by promotion of courses, specialised portals and relevant information.

In-depth Interviews – Providers

One of the companies that have participated in our research in the field of e-learning is *ELFI, Ltd.* from Prievidza. The company is providing teaching of languages but only through Skype because it considers this form of e-learning as the most effective way of learning. The company is offering the trial lesson in duration of 20 minutes for free. When the company was asked whether the participants of e-learning courses were considering this form of learning positively the representative of the company answered that they didn't offer any other form of learning. Each client who expresses an interest in their services has to be decided for that form of education. On the question of the attitude of SME towards e-learning he replied that this category does not belong to their main group of clients but in principle they encounter with the support of management to educate their employees. ELFI, Ltd. within its capabilities, is using communication of lecturer and student, internet listening, screen transmission and interactive work with text. For the promotion of their courses, company uses internet advertising and social networks. Company sees the hidden potential of e-learning as educational tool in the field of small and medium enterprises.

The company *Samuel.EdU, Ltd.* form Banská Bystrica doesn't provide e-learning education as its main form of education but it has already demonstrated its expertise and reliability in several educational projects since 1996. Its interest is customer satisfaction and win – win solution. The company prepares training projects in cooperation with the client and these can be also

financed from the European Union funds. According to its previous experiences the attitude of small and medium enterprises towards e-learning depends on the topic itself. The company experiences quite positive attitude towards the routine issues. The company considers educational videos as the most popular and most effective form of e-learning. The most demanded course has been the one on software tools. For the promotion of their e-learning courses the company uses YouTube and LinkedIn. According to them, e-learning as a tool of education has the prospect of wider use between small and medium enterprises.

The company *MVAkedémia* from Rovinka is managerial educational academy that helps businesses and individuals to develop their skills in the areas of marketing, IT, human resources consultancy, trade, finance, operations and soft skills through trainings, teambuildings and team trainings. The company works with the top instructors on the market who are happy to share their know-how with the training participants. Its goal is to bring to Slovak market new trends and original trainings. Presentation skills are trained in cooperation with the professional actors and acting teachers, management courses with the top managers of international companies.

As the only company in Slovakia, it also provides certified trainings (TWI-training within industry). Despite the wide range of educational courses e-learning does not belong to its main methods of education. Based on its earlier practice of e-learning, the Company has experience that small and medium enterprises don't have a big interest in this form of education. Smaller companies do not use e-learning because they do not find it very beneficial. Among the participants of e-learning courses who see this form of education positively prevail young people. The company considers e-classrooms as the most effective form of e-learning and videos as the most popular form of education. For the promotion of their e-learning courses, company uses social networks, internet, newsletters and leaflets. When asked whether e-learning as educational tool has a wider use in the field of small and medium enterprises, the company clearly answered: yes.

Another organisation that participated in the in-depth interviews is *Young Entrepreneurs Association of Slovakia (YEAS)*. YEAS was established in 2010 as an organisation associating Slovak entrepreneurs under 40 years. The main reason of their establishment was the lack of attention paid to the support of young generation of entrepreneurs that are the future of business in Slovakia. Young people are not lacking good ideas but mainly experiences, contacts and capital. YEAS has ambition to provide activities that help to improve this situation. Among other activities the association provides also education though e-learning is represented in less proportion. Based on their experience with small and medium enterprises, they stated that SMEs' attitude towards e-learning is careful and they have less trust to this form of education. They perceive e-learning positively only at 50%. Those entrepreneurs who have weaker self-discipline prefer personal trainer. They consider webinars as the most effective form of e-learning education and they are also the most popular form of e-learning along with interactive online courses. The most requested courses are business courses and the association is focused

on this type of courses. For the promotion of their e-learning courses, they use mainly internet – social networks and newsletters. They do consider e-learning as the perspective tool of education in the field of small and medium enterprises.

Company *MAPA Ltd.* from Košice provides continuous educational courses for teachers: mind maps, interactive communication in teaching and encouraging creativity. A lot of educational employers from kindergartens, primary schools, secondary technical schools, business academies and grammar schools who have used mind maps in their teaching confirm that mind maps helped them. Recently the company is using e-learning as well (50:50). The company based on their previous experience with the small and medium enterprises says that these are afraid that e-learning is distance learning where they have to read boring documents in .pdf or word format. Participants who have already tried this form of education appreciated interactivity, brevity with the acquisition of essential information, mentors attitude and objectivity of the testing of acquired skills. The company considers rapid e-learning form through LMS system with discuss forum and mentor as the most effective form of e-learning. For the soft skills the most effective form is blended form. The most requested courses are those that are focused on mind maps and presentation skills. For the promotion of their e-learning courses the Company uses mailing, personal presentations or articles on LinkedIn. From the perspective of wider use of e-learning as educational tool in the small and medium enterprises – the company sees potential in acquiring of knowledge and skills or as a form of "education" of potential clients on topic chosen by themselves and also as tools for presentation of their own products in several language mutations.

APPENDIX F – GREEK SITUATION REPORT

Overview of the e-learning situation in Greece

Anecdotal evidence suggests that e-learning market in Greece for the year 2015 corresponds to around 8-10% in relation to the total education programms offered in the country. E-learning in Greece is mostly provided by the Hellenic Open University (HOU) in Patras. The HOU´s mission is to provide distance education at both undergraduate and postgraduate level, and to achieve this it works to develop and implement appropriate learning materials and methods of teaching.

However most public Universities use e-learning platforms and offer e-learning lessons at both undergraduate and postgraduate level in order to support the learning procedure. In the secondary education level the Greek Schools' Network and the Pedagogical Institute are responsible for e-learning procedures.

The Greek Schools' Network is the educational intranet of the Ministry of Education and Religious Affairs, which interlinks all schools and provides basic and advanced services.

E-Yliko is the official educational portal of the Ministry of Education and Life Long Learning and is actually a place for members of the sector to meet and gain support, including useful links, educational software, articles, teaching proposals, support material and information about conferences and competitions. All of these services are offered on-line to support both classroom based teachers and distance learning teachers. Another critical role concerning the education and ICT implementation in education is held by the Pedagogical Institute - an independent public organisation founded in 1964 and the oldest research and consultant carrier concerning education matters - who contribute to the national education policy through the Ministry of Educational and Public affairs.

IDEKE - through its e-learning platform - now offers several e-learning programmes for adult training covering ICT, economics, the environment and tourism, and a vast number of various subjects, which are divided into five sub-units of 50 hours each.

Besides public Institutions e-learning opportunities are also provided during the last years from private educational centers called Lifelong learning centers focusing on self-employed, employees and unemployed.

Internet penetration in Greece

On the European level the results show Greece at the bottom of the list of member-states in the fundamental ICTs indicators such as technological infrastructure, Internet access and usage

in households and delivery of online public services, though it has made significant progress in the ICT field during the last years.

Specifically, according to the "Measurement of eEurope /i2010 (set by the European Commission) for Greece-2008 Finding" survey and Eurostat (Europe's Digital Competitiveness Report a. 2009):

- Greece occupies 23rd position among the EU27 member states in terms of broadband penetration.
- Greece ranks 25th in terms of household Internet access- 39,4%, compared with 60% for EU27 and 64% for EU15.
- Half the population (56%), has never used the Internet (30% for EU 27), ranking 26th in EU27.
- 34% of Greeks (26th ranking) are regular users - defined as those who use it at least once a week - (EU27:56% and EU15:60%) and 23% (again, 26th position) are frequent users - using the Internet every day or almost everyday - (EU27:43%).
- 18,2% of Greeks are information literate while the European average is 31%.
- The online availability of public services in the areas of government, health and education remains among the lowest in Europe. The online delivery of basic public services for citizens is 33% (21st ranking) compared with 66% for EU27.

Official statistics tend to portray a state of deprivation with Greece facing a developmental problem as far as technology is concerned. Indicative of this technological viewpoint is that such studies are generally reserved for computer specialists with no training in social sciences. In this respect the research has focused on providing biannual reports on broadband penetration and, more importantly, the significant improvement of information infrastructure in terms of broadband connections, is very often used when explaining the observed growth of Internet use penetration over recent years. From this standpoint the reports also claim that Greece is catching up and narrowing the gap because of the progress of broadband connections delivery (Observatory for the Greek Information Society b.).

The image presented by businesses which employ more than 10 workers is comparable to that of corresponding companies in the rest of Europe, at a basic level of use of information and communication technologies. In 2007 it was discovered that 94.2% of businesses have access to the internet, and 27.7% of employees use it daily. Of the businesses with access to the internet, 67.8% of these have a broadband connection. Although around 10% of businesses use the internet to buy and sell their products, electronic trade only contributes 0.8% of total turnover.
A large difference continues to be seen in smaller businesses (with 1-9 employees) concerning their adoption of modern technologies. Over the last three years however, the volume of computer use has risen (57% in 2007 compared to 51% in 2005), and there has been an increase in the number of computers. There has also been a significant rise in the trend for broadband connections (63% in 2007 compared to 12% in 2005).

The percentage of essential services available online for citizens and businesses is 47%, but only 11% of the population use the internet to do business with the state (up from 8% in the previous two-year period).

State of VET and e-learning

The table below illustrates that Greece has relatively low figures on many indicators in this group compared with the EU average. The share of upper secondary students enrolled in IVET is low (33.1% compared to 50.4% for the EU). Female enrolment figures differ even more: 26.1% of females in upper secondary education are enrolled in IVET compared to 45.0% in the EU in 2012. The percentage of adults involved in lifelong learning in 2013 (2.9%) is also lower than the EU average (10.5%), and far below the average target (15%) set by the strategic framework education and training 2020. Participation in lifelong learning by adults with low-level education (0.4%), unemployed adults (2.7%) and older adults (0.8%) is also lower in Greece than the EU.

Based on 2010 CVTS data, employee participation in CVT courses and on-the-job training suggest that employer-sponsored training is less frequent than in the EU generally. The percentage of young VET graduates participating in further education and training is lower than the EU average (16.6% in Greece and 30.7% for the EU in 2009). The proportion of individuals who wanted to train but did not (17.3%) is higher than the EU average (9.5%) (based on 2011 data).

Score on VET indicators in Greece and in the EU, 2006, 2010 and 2011/12/13 updates (where available)

Indicator label	2006		2010		Last available year			Change 2010-last available year	
	EL	EU	EL	EU	EL	EU		EL	EU
Access, attractiveness and flexibility									
IVET-students as % of all upper secondary students	33.9	51.9	30.7	50.1	33.1	50.4	(2)	2.4	0.3
IVET work-based students as % of upper secondary IVET		27.2		27.4		26.5	(2)		-0.9
Employees participating in CVT courses (%)	14	33	16	38					
Employees participating in on-the-job training (%)	4	16	6	20					
Adults in lifelong learning (%)	1.9		3.0		2.9	10.5[b]	(3)	-0.1	
Enterprises providing training (%)	21	60	28	66					
Female IVET students as % of all female upper secondary students	26.1	46.5	22.7	44.4	26.1	45.0	(2)	3.4	0.6
Young VET graduates in further education and training (%)			16.6	30.7					
Older adults in lifelong learning (%)			0.8[b]		0.8	6.6[b]	(3)	0.0	
Low-educated adults in lifelong learning (%)	0.3		0.5		0.4	4.4[b]	(3)	-0.1	
Unemployed adults in lifelong learning (%)	2.2		3.4		2.7	10.0[b]	(3)	-0.7	
Individuals who wanted to participate in training but did not (%)	17.3	14.2	17.3	9.5					
Job-related non-formal education and training (%)			71.2	80.2					
Skill development and labour market relevance									
IVET public expenditure (% of GDP)		0.67		0.71		0.68	(1)		-0.03
IVET public expenditure (EUR per student)		7 033		8 558		8 586	(1)		28
Enterprise expenditure on CVT courses as % of total labour cost	0.3	0.9	0.5	0.8					
Average number of foreign languages learned in IVET	0.8		0.7	1.2[d]	0.7	1.2	(2)	0.0	0.0
STEM graduates from upper secondary IVET (% of total)		32.0		28.7		29.2	(2)		0.5
30-34 year-olds with tertiary VET attainment (%)	7.8	7.3	8.9	7.4	12.9	8.7	(3)	4.0	1.3
Innovative enterprises with supportive training practices (%)		43.1		41.6					
Employment rate for IVET graduates (20-34 year-olds)			78.7	79.1					
Employment premium for IVET graduates (over general stream)			4.6	5.6					
Employment premium for IVET graduates (over low-educated)			5.9	17.4					
Workers helped to improve their work by training (%)				89.8					
Workers with skills matched to their duties (%)			44.6	55.2					
Overall transitions and labour market trends									
Early leavers from education and training (%)	15.5	15.4	13.7	13.9	10.1	11.9	(3)	-3.6	-2.0
30-34 year-olds with tertiary attainment (%)	26.7	28.8	28.4	33.4	34.6	36.8	(3)	6.2	3.4
NEET rate for 18-24 year-olds (%)	16.1	15.1	20.6	16.6	28.6	17.0	(3)	8.0	0.4
Unemployment rate for 20-34 year-olds (%)	14.2	10.6	19.4	13.1	39.6	15.1	(3)	20.2	2.0
Employment rate of recent graduates (age group 20-34) (%)	66.6	79.0	58.5	77.4	39.8	75.4	(3)	-18.7	-2.0
Adults with lower level of educational attainment (%)	41.0	30.0	37.5	27.3	32.8	24.8	(3)	-4.7	-2.5
Employment rate for 20-64 year-olds (%)	65.7	68.9	64.0	68.5	53.2	68.3	(3)	-10.8	-0.2
Medium/high-qualified employment in 2020 (% of total)					75.1	82.3			

Source: Cedefop 2015

In the context of the HELIOS project, the uptake of e-Learning and the related developments and changes in the education and training systems were also systematically assessed for a number of countries including Greece, against a broader context, comprised from:

- the availability of ICT infrastructure (access) as well as the ICT (PC, Internet & other platforms, e.g. the consumer electronics ones) usage profile (preferences, average usage) at home and in the work-place; as well as by
- the status and functional structure of the education and training system in the country (education statistics, running policies, etc.).

In the table below a classification of the development of the HELIOS territories across EU countries – as emerging from the comparative analysis exercise - is provided, in the scale from:

• (low level of development);
•• (medium level of development);
••• (high level of development).

Territory / Country	ICT-for-learning purposes within schools	ICT-for-learning purposes within Tertiary Education	ICT-for-learning purposes in initial & continuous Vocational Training	e-Learning at the workplace	ICT for virtual mobility of learners	Evolved distance education	Training of teachers-trainers on/through e-Learning	Individual development through e-Learning	Virtual Professional networks	Inter-organisational development through e-Learning	Non professional learning communities (generating e-Learning)
Belgium	••	•••	••	••	••	••	••	••	••	••	••
Cyprus	••	••	••	••	•	••	••	•	•	••	•
Czech Rep	••	••	••	••	•	••	••	•	•	•	•
Denmark	•••	•••	•••	•••	••	••	•••	••	•••	•••	••
Estonia	••	•	••	••	•	••	••	•	••	•	•
Finland	•••	•••	•••	•••	••	•••	•••	•••	••	•••	•••
France	•••	•••	••	•••	•	•••	••	••	•••	••	••
Germany	••	•••	•••	•••	••	•••	••	•••	••	••	•••
Greece	••	••	••	•	•	••	••	••	•	•	•
Hungary	••	••	••	••	•	••	••	••	••	•	•
Iceland	•••	•••	•••	•••	•••	•••	•••	••	••	••	•••
Italy	••	•••	••	••	•	••	••	••	•	•	••

The table above suggests that Greece has among all other countries the more weakest territories (including e-learning adoption and use) in terms of development at EU level.

Case study relating to the use of e-learning

In 2009 the Laboratory of Applied Economic and Social Policy (LAESP) was officially established as part of the Department of Economics by faculty members of the University of Ioannina.

LAESP is self-funded and initiated in order to carry out research and development activity in all diverse aspects of applied economics and social policy issues.

The aims of LAESP:

- conducting applied research
- supporting research and teaching activities
- acting as an observatory on labor market and social welfare
- assessing public policies and providing policy advice on social and labor market issues
- consulting / supporting the local entrepreneurship ecosystem

Since 2010 LAESP has been offering a series of nearly 100 courses to public under an asynchronous e-learning platform. Depending on the market needs LAESP aims to provide equal opportunities to everyone. The laboratories' clientele is primarily focused on SMEs providing the opportunity for further training of their executives and employees. The courses are privately paid by the employers or the trainees. The vast majority of the trainees participating in the e-learning courses offered by LAESP are employed or self-employed (80%) while a substantial number of trainees are unemployed (20%) looking to expand their skills in their current professions or looking to take the first step towards new careers. Approximately the same number of men and women are educated each year in LAESP.

Integrated Learning is an effective learning solution because it allows individual learners and training managers to tie learning solutions to business objectives and it has the ability to assess the skills of individuals, track progress, increase retention, and manage training across the entire company, thereby offering a better return on the investment of time and money.

LAESP Integrated Learning consists of five components:

1. ASSESS. It initiates the learning process by helping students and companies to identify their objectives, determine what type of training is required to meet those goals, and choose the right solutions to maximize their training investment.
2. LEARN. It offers solutions that combine both classroom learning and e-learning, e.g. Online Live Learning, Online ANYTIME Learning, etc.
3. REINFORCE. It provides reinforcement tools to increase retention of the course material and advance the learning process, e.g. learning guides, e-courseware, learning kits, online reference books, exam preparation, virtual and learning labs.
4. SUPPORT. It provides support services that are designed in such a way so as to give personal attention to every customer, e.g. ongoing account executive consultation, technical help desk support and training administration.
5. VALIDATE. It offers the trainees the opportunity to monitor their progress in the process of achieving their desired goals, e.g. course evaluations, assessments, post-class surveys, certification exam testing and learning transcripts.

Conclusions

Based on the aforementioned statistical data one should conclude that the e-learning market in Greece is rather underdeveloped. The deep economic crisis and the current situation in Greece could partly justify this fact. Despite this however, a set of actions need also to be undertaken. This set of actions should correspond to increased sophistication and adopt an inter-governance perspective, in order to build and effectively implement highly demanding education and training policy reforms, and to deliver both on a short-term and a long-term basis. Such an approach will allow these reforms to bring results, as it regards the learning outputs, in the next three-year period, with measurable up-skilling of human resources, through focused and advanced actions. An example of actions in line with this proposals include the development of various models for the design of web-based electronic train systems (ETS) for Greek SMEs.

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