

# The Use of e-Learning in Adult Learning: A Comparative Study Between Six European Countries

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**Abstract:** e-Learning is nowadays a very common term not only among academics and students but among people of all disciplines. E-learning has been witnessing an unprecedented expansion in higher and tertiary education. In addition, life-long learning is a key factor for professional, personal and social success of adults in tomorrow's society. The aim of the present study is to examine the use of e-Learning among six European countries; Belgium, Cyprus, Germany, Italy, Poland and Spain. Participants from various universities of the six countries were asked to complete an online questionnaire that would reflect their choices and opinion regarding the e-Learning environment they use. A comparison between the responses of the six countries is included. Results suggested there are cross-country differences in choices and opinion on the use of the e-Learning environment. Specifically, Belgium and Poland seem to have the same views on the topic of e-Learning, whereas Cyprus, Germany, Italy and Spain seem to differ in their responses across the various topics examined. Recommendations for future actions include stimulation of students and instructors to use an e-Learning environment as a communication tool and as a didactical tool for teaching purposes; stimulation to use modern ICT methods not only to communicate but also to acquire and exchange knowledge.

**Keywords:** e-Learning tools, ICT, adult education, life-long learning

## 1. Introduction

Electronic learning (e-Learning) is an experiential teaching method that focuses on using mainly computer-based applications and the internet. In the last decades much emphasis has been given to the concept of e-Learning as a tool for universities to offer learning online where students are not required to meet face-to-face ever. One of the main purposes of the e-Learning technology is that it is capable of reaching learners at a distance, where conditions might prevent them from accessing full-time education. The following sections describe the current status of the use of e-Learning in education, the emphasis given on e-Learning through the European Union, the methodology and collection of data regarding the use of e-Learning in six European countries as also the presentation and discussion of results for the similarities and differences in the use of e-Learning among learners in these six European countries; Belgium, Cyprus, Germany, Italy, Poland and Spain.

## 2. e-Learning in Education

According to Lionarakis (2008) the term 'distance education' was first used in the nineteen seventies. It was officially chosen in 1982 when the International Council for Correspondence Education changed its name to the International Council for Distance Education. The Council is currently called the International Council for Open and Distance Education.

Issues raised internationally in recent years as to the nature of distance education lead us to ask what constitutes a distance education system. Such a system consists of more than a pedagogical framework: there is also an integrated fragile subsystem that supplies the applications of distance education institutionally, organizationally and functionally.

At the same time, distance education applications have featured a large number of models, proving thereby that there is no one way in which distance education functions and can be applied, nor one way in which it can be implemented. This statement stems from certain theoreticians' approach to what distance education is, and from the various definitions and interpretations of distance education.

Distance education stands out in that, while it borrows from the theory of other forms and experiences of education and their application, it is different from them. On the one hand, unlike primary or secondary education, it is not itself a complete formal system or educational level, and while it is not an educational policy or strategy in the manner of lifelong learning or continuing education, nor does it belong to the sphere of adult education, which is aimed at particular population or age groups and is generally linked to lifelong learning and continuing training. Moreover, like other educational academic fields, it does not comprise a whole with guidelines along the lines of "practical application guidelines" or "the A-Z of the good distance teacher".

On the other, it is neither defined as training requiring specialized capabilities for recipients and those involved, nor is it an educational technology in accordance with which specific techniques and technological teaching and learning applications are—at best—employed.

As a flexible educational application, distance education is linked to absolute freedom of choice when it comes to the means employed in communicating and conveying information. Moreover, in its management of these means and points at which teaching and learning processes are involved, distance education follows an independent route with choices that make it an autonomous scientific and research field within the educational sciences. That it also includes economic and psychosocial elements as well as involving educational strategy and policy only serves to highlight this autonomy. Defining distance education as education in which there is a physical distance between a source and recipients is at best simplistic, and leads to oversimplified misinterpretations of the sort common in the past.

E-learning technology according to Dalsgaard (2008) offers a wide range of new opportunities for development of education, and the advantages of the use of e-learning are numerous. The advantages cover administrative, financial, societal as well as pedagogical areas. The major advantages of and arguments for using e-learning technology are:

- Independence of time and space
  - students can follow a course from any place in the world and at any given time
  - courses can be offered to a world-wide audience
- Individuality
  - courses can be adapted to the individual student
  - course materials can be reused and rearranged

These advantages are often mentioned in connection with e-learning and more specifically in connection with the use of virtual learning environments (VLE) and learning objects. The advantages can be summed up in the word *flexibility* which is made possible by VLE and learning objects. VLE offer opportunities for teachers to give online lectures and for students to follow courses and collaborate online. Learning objects provide the opportunity for teachers and students to (re)use and (re)arrange learning materials in different orders - thereby creating different courses or course units.

A variety of media is used to help with learning and to provide communication between learners and tutors. These include:

- traditional written materials, such as books and manuals
- television and radio broadcasts
- audio tapes and CD-ROMs
- online information
- online groups
- video conferencing
- email support

Your tutor can provide support by phone, email, online or by post. You might be able to communicate with other learners by email or website discussion groups. This helps you learn from the rest of the group and comment on each other's work. There is usually a good range of support available to help you organise your time and manage your learning. (DirectGOV <http://www.direct.gov.uk>)

According to Theodorou, M., Soteriades, E., Kaitelidou D., and Pavlakis A. (2008) the overall philosophy of open distance learning is to provide additional and student-oriented opportunities that will enable individuals, who might have missed earlier life opportunities for academic achievement, to select a personal pace of learning irrespective of place and time (Monk D. 2005). As Cyprus struggles to face the new challenges of its recent accession into the European Union, it is important to invest on new and innovative pathways of higher education, that will serve as power engines to move the country forward in the competitive European economic and socio-cultural environment (EU Commission 1991).

### **3. e-Learning in the European Union**

Much emphasis has been given through the European Union on the issue of e-Learning and its use across Europe. In an attempt to offer Life Long Learning and an equal chance to all Europeans to be educated, the European Commission opened several calls through which projects related to the development of ICT tools in education, the proposal of new e-Learning methodologies and enhancements and many other topics related to education are funded. The Life Long Learning program (LLL) developed by the European Commission is the most important program in the area of learning at the moment and it offers a wide variety of opportunities in enhancing learning across all levels of education. The actions offered by LLL include Comenius which focuses on the first phase of education, from pre-school and primary to secondary schools. It is relevant for all members of the education community: pupils, teachers, local authorities, parents' associations, non-government organisations, teacher training institutes, universities and all other educational staff. Part of the Lifelong Learning Programme, Comenius seeks to develop knowledge and understanding among young people and educational staff of the diversity of European cultures, languages and values. It helps young people acquire the basic life skills and competences necessary for their personal development, for future employment and for active citizenship.

Erasmus is the EU's flagship education and training programme, enabling two hundred thousand students to study and work abroad each year, as well as supporting co-operation actions between higher education institutions across Europe. It caters not only for students, but also for professors

and business staff who want to teach abroad and for university staff who want to be trained abroad.

The Grundtvig programme focuses on the teaching and study needs of those in adult education and alternative education streams, as well as the institutions and organisations delivering these services. Supporting lifelong learning and mobility in this way also tackles Europe's ageing population problem.

Launched in 2000 and now part of the overarching Lifelong Learning Programme, Grundtvig aims to provide adults with ways to improve their knowledge and skills, keeping them mentally fit and potentially more employable. It not only covers learners in adult education, but also the teachers, trainers, education staff and facilities that provide these services. These include relevant associations, counselling organisations, information services, policy-making bodies and others involved in lifelong learning and adult education at local, regional and national levels, such as NGOs, enterprises, voluntary groups and research centres.

There are also actions supporting adult learner mobility, such as exchanges and, now in the 2007-2013 programme, so-called 'European Assistantships'.

The transversal programme has four key activities:

1. Policy co-operation - Innovating and sharing good policy practices
2. Languages - Breaking the language barriers
3. Information and communication technologies - Innovative learning
4. Dissemination and exploitation of project results - Spreading and implementing the results

([ec.europa.eu/education/lifelong-learning-programme](http://ec.europa.eu/education/lifelong-learning-programme))

#### **4. The Stimulation of e-Learning for Life Long Learning for Adults (steLLLa)**

The steLLLa project is a partnership of six European countries (Belgium, Cyprus, Germany, Italy, Poland and Spain) that has been funded for three years from the European Commission. The aim of steLLLa is to develop a generic approach for autonomous learning for adults that can be implemented in the training courses of various professions. The project at first is a sharing of information and experience. The expertise of each partner combined with the well balanced constitution of the group guarantees a synergetic cooperation and a cultural enrichment. Starting from concrete eLearning tasks; trainers, learners and the partner institutions will create new good practice examples for several domains. Adult learners will be involved in the test settings. The project promotes these new e-Learning techniques to enhance the Life Long Learning opportunities for adults. In addition, the steLLLa project tries to stimulate trainers and learners to use an e-Learning environment as a communication tool and for didactical purposes; to use modern ICT methods not only to communicate but also to acquire and exchange knowledge. The partner organizations of this project are the following:

*1. Belgium: Centre of adult education Hoger Instituut der Kempen CVOHIKempen – GPB (teacher training department of the school for adult education)*

- offers high quality education and certificates for adults who want to retrain, learn another profession

- teaches the newest pedagogical and didactical competences that are required to become a teacher
- uses e-Learning tasks, blended learning and distance learning in the training of the future adult teachers.
- uses a learning environment to communicate, to offer knowledge, to practice, to optimize the competences
- presents a new modular structure to enable the adult learners to individualize their training course

## 2. Cyprus: Cyprus University of Technology and Cyprus Neuroscience and Technology Institute

- The Cyprus University of Technology is a newly founded University which aims in promoting e-learning in all its courses. Specifically, the language instructors at the University of Technology are using Computer Assisted Language Learning and they use the most recent networked techniques in teaching. The University also uses Moodle.
- The Cyprus Neuroscience and Technology Institute is composed of several units specialized in diverse activities which however also collaborate. They have developed in 1992-1996 a 6-year long IT curriculum for a chain of computer learning centers (<http://www.cyber-kids.com/>) and many eLearning packages currently used in schools. More recently the interest has focused on e- and mobile- learning solutions especially for people at need (e.g., adult dyslexics, adult continuing education at college level, working with third world nations towards bridging the divide using mobile-based education etc.). Besides a strong research focus, the Department of Civil Society and Future Affairs has been organizing Trainings in Communication, negotiation and leadership skills for Adults since 1994 using a strong IT component. Many workshops were held using virtual platforms connecting in real-time people who are in different locations. Our organization is also the founder of the largest peace portal in the Middle-East (with over 5,000 web pages, enjoying over 40,000 hits per month), which is a vehicle for many eLearning activities in this field.

## 3. Germany: ANOVA Multimedia Studios GmbH

- ANOVA provides services for companies and educational organizations who want to educate with the help of computers. Beside the main business as content developer and developer of tools for eLearning ANOVA is often involved in educational activities where we work as trainers and coaches.

## 4. Italy: A.N.F.E. Associazione Nazionale Famiglie Emigrati - Delegazione Regionale Sicilia

- (National Emigrants' Families Association - Regional Delegation of Sicily) The ANFE Delegazione Regionale Sicilia provides programs and services that are designed to meet the lifelong learning needs of the adult learners. The mission of ANFE is to empower adult learners to advance in their careers, learn new skills, or gain personal satisfaction. The school strives to fulfill this mission by providing several kind of courses, varying from art & design to information and communication technology, and a wide array of flexible services aimed at the needs of the adult learners.

5. *Poland: (School of Electronics and Telecommunication in Olsztyn, Continuing Education Centre*

- An e-Learning environment is used in the Cisco Networking Academy Program a comprehensive e-Learning program, which provides students with the Internet technology skills essential in a global economy; teaches the newest pedagogical and didactical competences that are required to become a teacher. The newest technologies are introduced in communicating with students and in the learning process of trainers and learners and improve the ability of teachers to make pedagogical use of ICT. They are currently we are working on eLearning platform based on Moodle software in order to give an eLearning format to our future training courses and provide a variety of eLearning opportunities.

6. *Spain: Autonomous Learning Language Centre of Navarre*

- CNAI develops tools, methodologies for language learning and uses activities outside the room. They are also using an e-learning platform, Illuminator for the teaching of languages.

The aim of this paper is to compare and discuss the use of e-Learning in adult education among six European countries; Belgium, Cyprus, Germany Italy, Poland and Spain. Specifically, this study examines why participants chose to study through an e-Learning course and how they found out about it. Moreover, it examines the opinion of participants regarding the e-Learning environment they use. A total of 284 university students (129 males, 155 females) participated in this study. The sample was composed of 122 participants from Belgium, 24 from Cyprus, 4 from Germany, 74 from Italy, 32 from Poland and 28 from Spain.

## **5. Administration**

For the purposes of this study an online questionnaire was prepared and administered to students from several universities across the six European countries. The questionnaire consisted of demographic information such as gender, age and educational background as also of statements assessing the frequency of use of several programs, internet, online services etc. The statements were formed in a 6-point scale where the user had to choose the degree to which he/she uses a certain program/online service or feels confident enough in using it. In addition, some questions such as "Why did you choose to study through e-Learning" allowed for multiple responses.

The questionnaire was available through the stelLLa website. Adult students were informed about the online questionnaire through their university and were asked to go to the website and complete it. All participants were ensured about the confidentiality and anonymity of their results and were given the necessary information to contact should they wished to know more about the results of the study. In addition, the participants were fully briefed of their right to withdraw from the study at any point without being penalized for doing so also of their right not to answer any question should they chose not to.

## **6. Results**

The results were collected and analyzed using the Statistical Package for Social Sciences (SPSS). Crosstabulations were conducted to show responses by participants per country and the percentage of the responses within the country. In examining why participants chose to study through e-Learning, the crosstabulation shows that among students of all six countries most decided to take the course because a teacher suggested it to them (table 1). Within country

results show that for Belgium (60.1%) and Poland (32%) most students chose to study through e-Learning because a teacher suggested it. In Cyprus (33.3%), Germany (50%), Italy (45%) and Spain (44.1%) most students chose to study through e-Learning because they felt it offers more flexibility than traditional school courses.

**Table 1:** Crosstabulation between country and the reason why participants chose to study through e-Learning.

**Country\*Why did you choose to study through e-Learning Crosstabulation**

		Why did you choose to study through e-Learning							Total
		Told by Teacher	Course Not Available	More Flexibility	Faster Degree	Cheaper Degree	Fashionable	No School Close	
Country Belgium	Count	83	11	29	7	4	4	0	138
	% within Country	60.1%	8.0%	21.0%	5.1%	2.9%	2.9%	.0%	
Cyprus	Count	3	2	7	2	2	3	2	21
	% within Country	14.3%	9.5%	33.3%	9.5%	9.5%	14.3%	9.5%	
Germany	Count	0	1	3	1	0	0	1	6
	% within Country	.0%	16.7%	50.0%	16.7%	.0%	.0%	16.7%	
Italy	Count	1	3	27	16	12	1	0	60
	% within Country	1.7%	5.0%	45.0%	26.7%	20.0%	1.7%	.0%	
Poland	Count	8	0	5	5	2	3	2	25
	% within Country	32.0%	.0%	20.0%	20.0%	8.0%	12.0%	8.0%	
Spain	Count	11	4	15	1	0	2	1	34
	% within Country	32.4%	11.8%	44.1%	2.9%	.0%	5.9%	2.9%	
Total	Count	106	21	86	32	20	13	6	284

Furthermore, in examining how participants have found out about the specific e-Learning course they decided to attend, most students across all six European countries reported that they found out through their school (Table 2). Within country results show that Belgium (65.6%) and Poland (33.3%) students responded they have found out about the e-Learning course through their

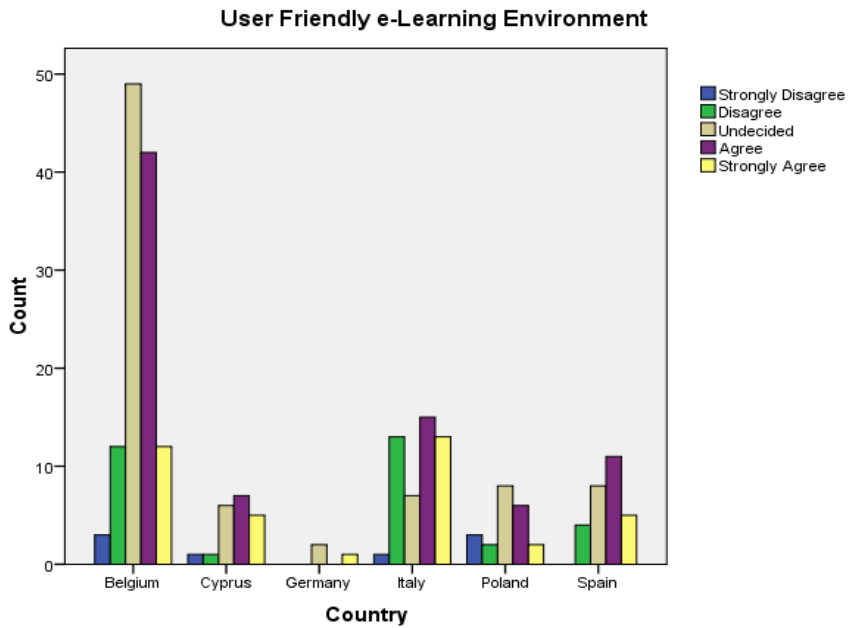
school, whereas Cyprus (32.3%) said they have found out mostly through the Internet. Italy (36.5%) and Spain (42.4%) said they have found out about it through some other option that was not mentioned and Germany equally rated friends, the internet and some other not mentioned reasons as the ways they have found out about the e-Learning course.

**Table 2:** Crosstabulation between country and the way participants have found out about the e-Learning course they are attending.

**Country\*How Did You Find Your Course Crosstabulation**

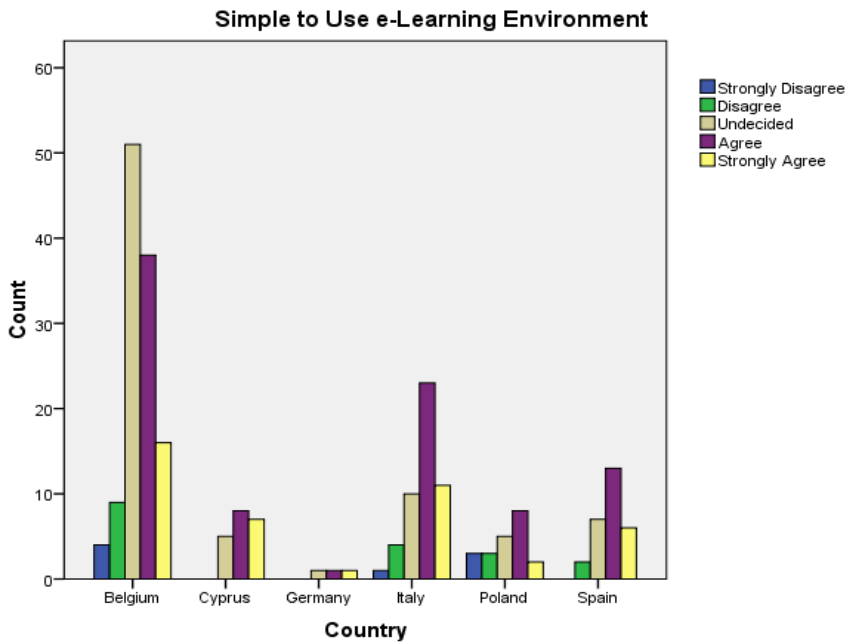
			How Did You Find Your Course					Total	
			School	TV	Newspaper	Friends	Internet		Other
Country	Belgium	Count	86	0	2	11	11	21	131
		% within Country	65.6%	.0%	1.5%	8.4%	8.4%	16.0%	
	Cyprus	Count	7	2	2	3	10	7	31
		% within Country	22.6%	6.5%	6.5%	9.7%	32.3%	22.6%	
	Germany	Count	0	0	0	2	2	2	6
		% within Country	.0%	.0%	.0%	33.3%	33.3%	33.3%	
	Italy	Count	23	6	4	7	7	27	74
		% within Country	31.1%	8.1%	5.4%	9.5%	9.5%	36.5%	
	Poland	Count	12	1	2	4	8	9	36
		% within Country	33.3%	2.8%	5.6%	11.1%	22.2%	25.0%	
	Spain	Count	8	0	1	4	6	14	33
		% within Country	24.2%	.0%	3.0%	12.1%	18.2%	42.4%	
Total	Count	136	9	11	31	44	80	311	

Participants were also asked for their opinion regarding the use of the e-Learning environment. Respondents were asked to rate the degree to which they agree or disagree on a 5-point Likert-type scale in four statements relevant to the e-Learning environment they use. The following figures present their responses country wise. The first statement was: “the e-Learning environment is user-friendly” (Figure 1). As it can be seen, most countries agree on that the e-Learning environment is user friendly, even though a great proportion of responses were falling to the undecided response.



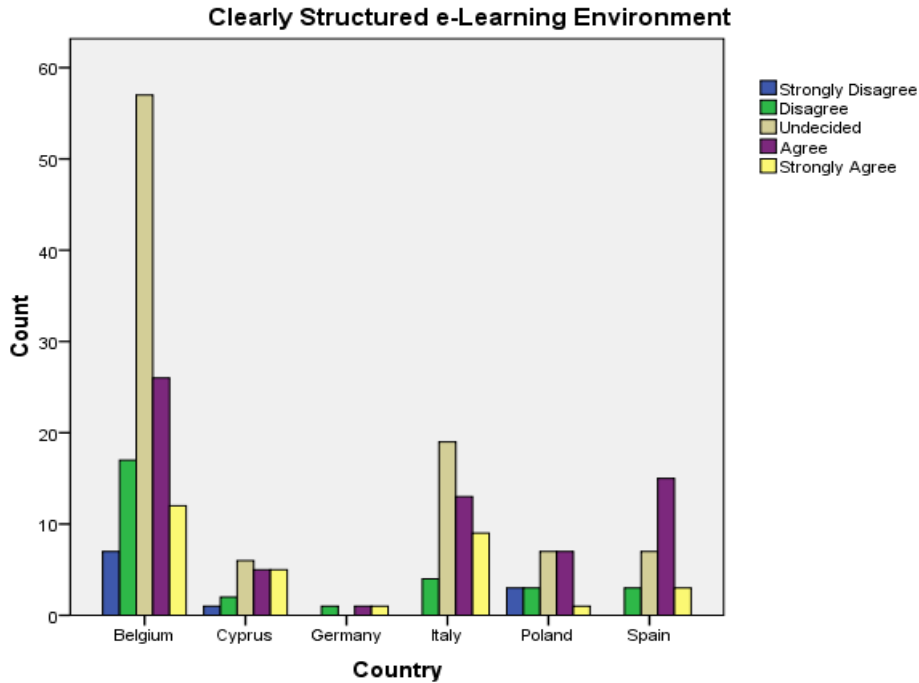
**Figure 1:** Participants' Opinion per Country on Whether the e-Learning Environment is User Friendly.

The second statement was that “the e-Learning Environment is Simple to Use” (Figure 2). Again here, most respondents across the six countries seem to feel that it is simple to use even though again it seems that a large proportion of the sample are undecided on this issue.



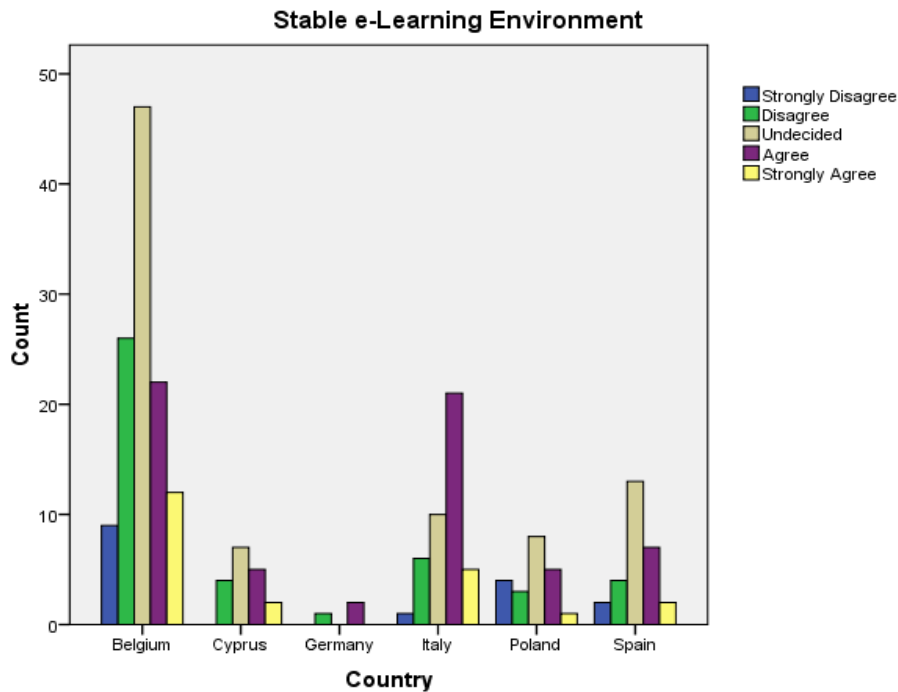
**Figure 2:** Participants' Opinion per Country on Whether the e-Learning Environment is Simple to Use.

The third statement attempted to assess whether the “e-Learning Environment is Clearly Structured” (Figure 3). Students seemed to be mainly undecided regarding the structure of the environment except Spain where most students think that their e-Learning environment is clearly structured.



**Figure 3:** Participants’ Opinion per Country on Whether the e-Learning Environment They Use is Clearly Structured.

The last statement assessed whether the degree to which participants agree or disagree that “the e-Learning Environment is Stable” (Figure 4). As it can be seen from the figure responses from all countries except Italy, leaned towards undecided whereas in Italy students feel that the e-Learning Environment they use is stable.



**Figure 4:** Participants' Opinion per Country on Whether the e-Learning Environment They use is Stable.

It is important to be noted that caution is necessary in the interpretation of results as the sample taken is not equally distributed among countries. This results in an over-representation of one country and an under-representation of the others. Findings here are used only for indicative purposes in order to compare the situation among the six European countries.

## 7. Discussion

The purpose of this paper was to examine the use of e-Learning in six European countries. In the first assessment on why did students choose to study through e-Learning, the responses were mostly because a teacher instructed them to do so. In Belgium and Poland, students seem to have chosen the e-Learning course based on what their teachers told them as also because e-Learning seems to offer more flexibility than the traditional way of studying. Interestingly, the flexibility e-Learning is offering influenced the decision that most students from Cyprus, Germany, Italy and Spain have taken. Indeed, e-Learning is more flexible in that the students can study at their own time, there are no regular classes and are aware in advance of everything that will be asked of them in the duration of the course. One reason that Belgium and Poland might seem to show the same results is because geographically they are very close to each other as countries, so influences among the two can be made. The same should also be applied for Germany, but in this paper it is not possible to draw any conclusions regarding Germany since it only had 4 participants which very under-representative of its current situation.

In the question on how they found out the course they took, most students responded that they found out through their school. However, this is the case for Belgium and Poland whereas in Cyprus most students have found it through the Internet. Spain and Italy seem to have found it through some other source which was not mentioned, but it could be worthwhile in future

research to find out these other sources. In an attempt to explain the differences between the countries it might help to mention that in Cyprus the educational system is on the rise just the past few years and there aren't yet any wide options regarding e-Learning. Thus, unavoidably most students who are interested in taking an e-Learning course have to search through the Internet to find the available options other countries offer.

Since e-Learning is a new tool for students and instructors, it is expected that it would show some weaknesses. When students were asked to express their opinion on whether the e-Learning environment they use is user-friendly, simple to use, clearly structured and stable, most students did not have a clear opinion. They appeared to be undecided and this might be explained from the fact that they didn't have experience with many e-Learning environments in order to be able to clearly shape their opinion on the one they use now.

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