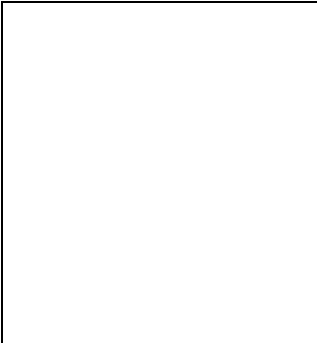


TOWARDS USER ORIENTATION AND SOCIAL INCLUSION IN THE PROVISION OF E-LEARNING SERVICES



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ABSTRACT

There is a broad consensus today that increasing practice and intensity of lifelong learning has become a key requirement for Europe if it wants to remain economically competitive as well as socially inclusive. In this context much attention has focused on the ability of ICTs to improve the process of learning and training, by giving easier access to more adequate learning content and more efficient ways to learn "anything, anytime, anywhere". However, until now it has remained unclear to what extent, and under what conditions, the positive potential of ICTs for supporting "lifelong learning by all" can be turned into reality. Factors that have to be taken into account include not only access to ICTs and eLearning services, but – more significantly – also attitudes towards technology, and towards learning activities in general. There is a danger that eLearning will benefit only those segments of the population who are already very likely to practise lifelong learning, while not reaching the rest of the population. This would imply the risk that eLearning will not contribute towards (or even endanger) social inclusion. The paper reports from work in progress in the eUSER project, namely a 10-country population survey carried out in 2005 on aspects of online public services and user orientation.

1. INTRODUCTION

There is a broad consensus today that increasing practice and intensity of lifelong learning has become a key requirement for Europe if it wants to remain economically competitive as well as socially inclusive. In this context, much attention has focused on the ability of ICTs to improve the process of learning and training, by giving easier access to more adequate learning content and more efficient ways to learn “anything, anytime, anywhere”. A recent report by a group of social policy experts enlisted by the European Commission claims that “e-Learning can make a major impact for social inclusion. It provides access to education and training opportunities for all, in particular for those who have access problems for social, economic, geographic or other reasons” (CEC 2001).

Until now, however, there is very limited knowledge about the conditions under which the positive potential of ICTs for supporting “lifelong learning by all” can be turned into reality. It appears certain that factors to be taken into account include not only access to ICTs and eLearning services, but – more importantly – also attitudes towards technology and learning in general, and the endowment with the skills required to use eLearning offers. There is a danger that eLearning will benefit only those segments of the population who are already very likely to practise lifelong learning, while not reaching the rest of the population. This would imply the risk that eLearning will not contribute towards (or even endanger) social inclusion.

This paper tries to shed light on the issues involved by critically reviewing attitudes of the population towards lifelong learning on the one hand, and ICT-based methods to learn on the other hand. The latter include, but are not limited to, eLearning courses fully delivered over the Internet.

The results presented are based on the data from the EU population survey undertaken early 2005 as part of a major European research effort, namely the eUSER project. eUSER is an European Commission funded research project looking into user orientation of online public services and how well current supply meets the needs and preferences of the European population.

Through the eUSER survey, data from a representative sample (n = 9,800) of the population aged 18 and older has been gathered in 10 EU member states which together account for three out of four EU citizens: the Czech Republic, Denmark, France, Germany, Hungary, Ireland, Italy, Poland, Slovenia and the UK. The survey instrument included an extensive list of variables which together give insight into the determinants and motivations for individuals to take up lifelong learning in general, and eLearning in particular.

Note: The data included in this paper are weighted in order to reflect the real distribution according to gender, household type, region and age in the universe of the countries surveyed. Results for the four New Member States are not available yet at the time of writing. Averages given are means for the total sample comprising the country data from Denmark, France, Germany, Ireland, Italy, and the UK (n = 5,800).

2. CURRENT UPTAKE OF E-LEARNING

Tables 1 and 2 give a picture of the extent to which the European adult population (see note above) make use of the Internet as part of purposeful learning activities.

Table 1: Uptake of eLearning in Europe

	share of total population 18+	share of all persons engaged in learning
(a) Look for info on training offers	17.9	39.6
(b) Do research as part of course	16.7	37.1
(c) E-mail with co-learners	10.5	23.4
(d) Download learning content	15.3	34.0
(e) Did online eLearning course	3.3	7.3
Any eLearning (b-e)	24.0	53.3

Weighted data. Source: eUSER General Population Survey 2005

18% use the Internet for looking up information about learning offers that are available. 24% are users of what might be termed eLearning in a wide definition,

comprising looking for online information as part of a training course, exchanging e-mails with co-learners, downloading learning content which has been put online for that purpose, or doing an online learning course. When applying a narrow definition of eLearners, only including those who have done an online eLearning course (defined as follows: “This means that a significant part of the learning content is being received via the Internet”), the share of eLearners is much lower (3% of adult population).

As Table 2 shows, among the six countries surveyed Ireland, the U.K. and Denmark have the highest share of eLearning users according to the narrow definition. A person is three times as likely to do an online eLearning course in the U.K. and Ireland as in Germany. Differences are much less pronounced when applying the wide definition of eLearning.

Table 2: Uptake of eLearning in Europe (in % of all persons engaged in learning in last 12 months)

	DE	FR	IT	DK	UK	IE
(a) Look for info on training offers	38.0	29.2	28.2	45.8	40.5	50.1
(b) Do research as part of course	36.2	31.6	43.0	26.3	43.5	41.9
(c) E-mail with co-learners	23.6	13.3	23.8	33.8	17.7	24.2
(d) Download learning content	37.8	23.9	22.7	40.6	34.2	39.7
(e) Did online eLearning course	3.3	6.0	4.7	7.5	10.7	10.0
Any eLearning (b-e)	53.0	43.1	53.5	53.0	55.1	59.0

Weighted data. Source: eUSER General Population Survey 2005

While these figures show a significant share of learners already using the Internet in the course of purposeful learning activities, this fact alone should not make us assume that eLearning will easily fulfil its promise in the coming years all by itself. A more in-depth look into the determinants of eLearning uptake is needed to establish, in particular, whether eLearning can make any contribution to social inclusion, i.e. to the task of widening the reach of learning offers and to involve more people, more extensively, in lifelong learning. For that purpose, we need to take account of the more fundamental barriers to and facilitators of, on the one hand, participation in lifelong learning and, on the other hand, uptake of the Internet.

3. ACCESS, COMPETENCE AND MOTIVATION AS DETERMINANTS OF INTEREST AND UPTAKE

Apart from the more widely acknowledged factors of access (e.g. home connection to the Internet) and skills/competence (e.g. computer skills), a most important determinant of citizens’ decision to take-up online services or not is the extent to which they are motivated to do so. For the issue of motivation the analysis carried out by Viherä (1999) is of special value.

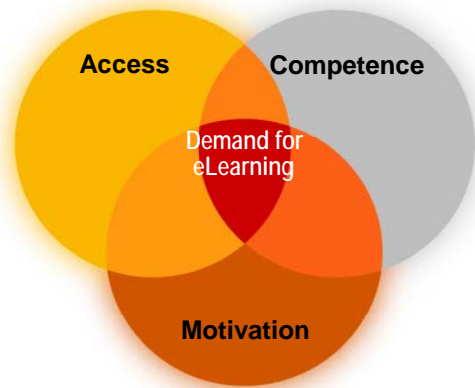


Figure 1: Expected Key Determinants of Demand for eLearning

Viherä has introduced the concept of communication capabilities, which comprises access to ICTs, competence in using them, and motivation for using them for certain purposes. In her work, Viherä applies the concept of communication capabilities to citizen’s participation in civic life. It is of equal, or even bigger relevance for the issue of lifelong learning, as stressed by the OECD in a recent report: Motivation to learn is regarded “an essential foundation for learning that continues throughout life. It requires attention to developing the capacity for ‘learning to learn’ through self-paced and self-directed learning” (OECD 2004: 2).

In order to apply the concept of communication capabilities to usage of eLearning services, we need to understand what access, competence and motivation mean in the context of online applications for lifelong learning. We have to distinguish carefully here between online activity in general, participation in learning activities in general, and the combination of both which is the uptake of eLearning. Table 3

below shows the possible (non)user-types in this respect.

Table 3: Types of (non)participants in adult learning and education, and eLearners

	online (Internet user)	offline (Internet non-user)
participating in education/learning	(A) eLearning user	(D) Learner, offline
	(B) eLearning non-user, learner, online	
not participating	(C) Non-learner, online	(E) Non-learner, offline

For each of the axes, the user’s situation regarding access, competence and motivation is a critical factor: Persons moving from being offline to being online (horizontal axis) face challenges with regard to access (getting connection to the Internet), competence (knowing how to use a computer, and how to navigate the Internet) and motivation (willingness/interest to deal with computers and the Internet).

Persons moving from not participating in adult education to becoming engaged in lifelong learning, and then to becoming an eLearning user, also face challenges of access (travelling to the location of the presence training course or accessing the eLearning service online, respectively), competence (learning capabilities) and motivation (interest in learning and adult education, or using the online facility for this purpose, respectively).

A lack of motivation for learning often originates from individuals’ experiences with initial education: “There is a broad array of potential learners who, apart from time or the availability of financial resources, require motivation to return to learning: those who did not have success in their schooling experiences, or who do not see the real, positive difference it can make in their lives” (OECD 2003: 65).

For work-related learning provided by companies, the situation usually is different in so far as training courses are often compulsory for employees. Nevertheless, participation in online courses is in general less “visible” than classroom instruction, which means that learners may consider it to be less important. The result can be low motivation – as the US company GE Capital found when it introduced an

online orientation course for new recruits. “Even though the course was supposed to be a requirement, only about half the participants actually finished it” (Frankola 2001: 1).

What evidence can be found in the results from the primary data collection in eUSER about the extent to which access, competence and motivation for participation in lifelong learning and making use of eLearning exist in today’s Europe?

3.1 Access to Training and eLearning

The access dimension in eLearning has two major components: firstly access to the technological infrastructure through which eLearning is provided, and secondly access to training and learning offers which are transmitted via online channels. As Table 3 shows, there are different paths through which full access to eLearning can be obtained. Only in the rarest of cases will persons who are not using the Internet, and who are usually not participating in training and adult education (bottom right corner) turn into online learners (upper left corner) at once. Because of the strong persistence of attitudes to learning (which often haven been created during school years), and also because of the need for a minimum amount of skills and self-confidence in using ICTs (such as a personal computer and Internet access), it is more likely that persons progress step-by-step towards taking up eLearning. Much evidence shows (and industry insiders agree) that eLearning is not a “killer application” which drives people online.

Internet access will be far from ubiquitous in the foreseeable future, as all available data indicate. In particular, persons who are not in employment show rates of Internet uptake that are much below their working equivalents. The same applies for persons with low educational attainment. Another group that is strongly underrepresented among Internet users is, of course, older Europeans.

Even more pronounced disparities with regard to access to and use of the Internet can be found between other groups of the population, e.g. when using household income as a break-down variable. The digital divide (see Hüsing 2003) seems to mirror to a large extent more general social divides which exist in Member States, which means that the likelihood to be excluded from the fruits of economic wealth is highly correlated with the likelihood to be

excluded from participation in what is commonly referred to as the Information Society (Kubicek 2003).

Home access to the Internet – which may not be essential for using eLearning services but certainly makes it much easier for people to take up lifelong learning via the Internet in their spare time – remains costly, in spite of the downward trend in prices in recent years. As a consequence, low-income households are less likely to be equipped with home access to the Internet, which might have a negative impact on their ability and willingness to engage in lifelong learning.

In order to allow a statement about the likelihood that eLearning will have a real impact on levels of participation in lifelong learning, it is necessary to take a look at the barriers to engagement in adult education activities (see Table 4). This question was only asked of respondents who showed any interest at all in participating in education and learning (roughly one third of the total adult population show no interest at all in participating in education and learning, see Table 7 below. Even among people in employment, one person in four is neither engaged nor would like to be engaged in learning activities). Learners (and would-be learners) point out a number of barriers as factors that make it difficult for them to participate in training. Time constraints stemming from work or family pressures are a common issue, as emphasised also by the OECD (2003). Two in five persons who are in employment are affected by a lack of training provided by their company.

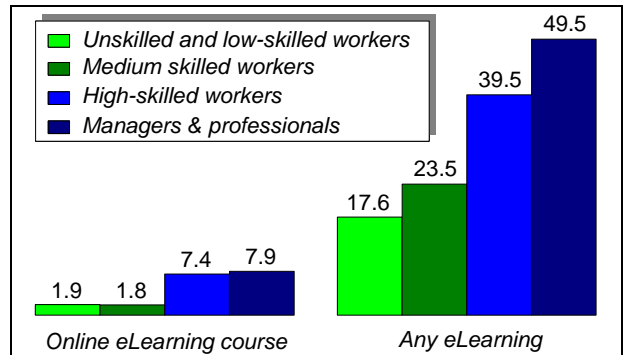
Table 4: Barriers to lifelong learning (I)

	share of all learners and would-be learners (in %)
Prefer to spend free time for other things	40.4
Too much time taken up by family or work	60.4
Times of courses are inconvenient	44.3
Employer does not offer training	40.4

Weighted data. Source: eUSER General Population Survey 2005

Workers with low qualification from initial education are much less likely to participate in employer-

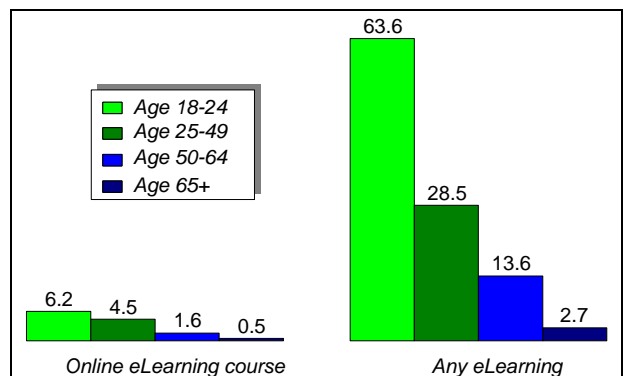
provided training than the high qualified. This is also reflected in the different participation rates in eLearning (see Figure 2).



Weighted data. Source: eUSER General Population Survey 2005

Figure 2: Uptake of eLearning in % of persons in paid work, according to social status at work

Contrary to common perception, the eUSER data do not support the view that employees of larger organisations are benefiting from better access to employer-provided training: The share of respondents complaining about their employer not offering training is roughly the same in all company size categories (<10, 10-49, 50-249, 250 and more). This may, however, be due to different perceptions with regard to the responsibility for the provision of training, rather than due to the fact that small companies provide as much training as larger ones.



Weighted data. Source: eUSER General Population Survey 2005

Figure 3: Uptake of eLearning in percentage of total population in age cohort

It is well known that access to company-provided training, but also engagement in non-work related learning is lower among the older age cohorts. When

looking into the uptake of eLearning according to age group, this effect is made even more pronounced by the fact that usage of the Internet decreases sharply with age. Together, both elements can explain the dramatic effect of age on the likelihood of a person to use eLearning (see Figure 3).

Of special interest for the discussion about eLearning is the fact that almost half of all persons with a general interest in adult education complain that times of training courses offered on the market tend to be inconvenient for them (see Table 4). Moreover, half of all persons who have looked for a training course in the 12 months prior to the survey report about a lack of suitable offers available in their proximity (see Table 5). These observations indicate a potential interest in Internet-provided training, since eLearning services can offer as main advantages over traditional ways of taking a training course with regard to time flexibility and access to diverse and high-quality learning content regardless of location. This supports the general view that eLearning services have a huge potential of delivering learning and training to parts of the population who until now have found it difficult to participate in adult education, often for reasons of lack of access to offers at a reasonable time and place.

Table 5: Barriers to lifelong learning (II)

	share of all persons who looked for training course (in %)
Lack of good training offers locally	43.2
Lack of information about available courses	36.4
Having to pay the fees charged for courses	45.9

Weighted data. Source: eUSER General Population Survey 2005

3.2 Competence: Preferred Ways of Learning

The ability and, in particular, willingness to use eLearning services depends to a certain extent on endowment with technical skills required for using a computer, an online connection and certain software tools. As previous evidence has shown (SIBIS 2003), there is a considerable gap in eSkills between different social groups of society, with the better educated and more wealthy benefiting from having made first contact with ICTs and the Internet earlier

as a result of the usual diffusion patterns of socio-technological innovations.

The ability to learn plays a vital role as well. It is distributed very unevenly across the working and the overall population. The eUSER survey provides data about the perceived best ways for the respondents to learn, hereby distinguishing about seven modes of learning (see Table 6). Some of these are closer to traditional teacher-classroom type training provision, while others are more likely to correspond positively with Internet-mediated education and learning.

Table 6: Self-perceived best ways to learn (on five-point scale, in % of total population 18+)

How well can you learn...	very bad					very well	Ø
	1	2	3	4	5		
in group with other learners	6.1	5.5	23.8	27.6	35.1	3.82	
with personal advice by instructor	3.5	3.0	13.9	26.2	50.5	4.20	
by teaching yourself	9.7	11.8	29.4	24.4	23.4	3.41	
by learning by doing	3.1	3.2	17.5	26.4	47.9	4.15	
by watching or listening and then reflecting	2.8	5.2	24.9	31.9	33.5	3.90	
in traditional classroom situation	6.3	7.7	29.0	29.1	24.8	3.60	
with self-study course	9.7	13.8	27.4	22.5	22.1	3.35	

Weighted data. Source: eUSER General Population Survey 2005

The results suggest that modes of learning which have strong direct interaction of the learner with the teacher/instructor and the learning subject are perceived to work best for the biggest share of the population. Closer analysis reveals that the population can be divided in types of learners according to their preferred ways to learn. It becomes clear that teaching oneself without the help of a guide or instructor, as well as self-study courses, are regarded by many (nearly 60%) as the worst ways to learn, for example because they have experienced them as ineffective or not motivating. What is more, persons which require participation in lifelong learning the most, i.e. those with below average educational attainment and a

weak position on the labour market, seem to prefer types of learning which involve strong interaction with instructors and a strong element of “learning by doing”.

These results support the view that if eLearning services are to reach wider parts of the population and provide an effective and efficient alternative to traditional modes of training provision, they need to fully integrate personal interaction with a guide or instructor, and also enable exchanges with other learners. Moreover, supplementing Internet-provided training with traditional classroom-type sessions (“blended eLearning”) can be an effective way of avoiding the possible negative effects of training “at arm’s length”.

3.3 Motivation for Learning and Attitudes Towards ICTs

Not all people are convinced and sufficiently motivated that continuous, lifelong learning would be of any benefit to them. As the OECD (2003) has shown in a recent report using a comprehensive stock of evidence, it is those who would benefit most from adult education who are least interested in engaging in training activities, and who also feel the least need to do so.

Table 7: Participation in and unfilled demand for adult training and learning in Europe (2005)

	DE	FR	IT	DK	UK	IE
participated	42.6	32.0	39.4	51.6	49.3	58.1
<i>... would have liked to do more</i>	4.4	2.5	3.6	9.8	15.0	17.9
<i>... was enough</i>	28.9	17.9	20.8	30.1	23.2	25.5
<i>... as part of full-time education</i>	9.3	11.6	15.0	11.6	11.0	14.7
did not participate	57.4	68.0	60.6	48.4	50.7	41.9
<i>... would have liked to do so</i>	17.4	21.2	29.9	17.8	19.1	18.4
<i>... would not have liked to</i>	40.0	46.8	30.7	30.6	31.6	23.5
Total	100	100	100	100	100	100

Weighted data. Source: eUSER General Population Survey 2005

According to the eUSER survey data (see Table 7), the adult EU population can be divided in three groups of roughly comparable size: One adult person in three would like to engage more in lifelong

learning, either because they are not doing so at all currently, or because they are not investing as much time in learning as they would like to. The second group is persons who are participating in adult education (at least once per year), and do not have any demand for spending even more time on it. The third group, again about one in three EU adults, is not participating in lifelong learning at all, and would also not have like to participate. For obvious reasons, this latter group is of special relevance for EU policies towards boosting lifelong learning across all age groups and segments of the population.

The eUSER data indicate that rates of participation are differing considerably between EU countries, with about one in two adult persons in the UK participating in lifelong learning versus only one in four in France. Moreover, the extent of unfilled demand differs widely across Europe: While in Ireland and the UK about one in three persons who were involved in adult education in the 12 months prior to the survey would have liked to spend more time on training, the respective share in Germany and France is only one person in eight. Closer analysis shows that this is not due to a lesser intensity of training in the latter countries. The distribution of learners across the intensity categories is roughly the same across all countries included in the survey with the exception of Denmark and Italy, both of which have a higher average duration of training schemes.

Interest in training among non-participants is extraordinarily strong in Italy – which is also among those countries with the lowest relative number of participants. This suggests that national adult education systems in the EU differ considerably with regard to the extent to which they are able to meet the population’s demand for lifelong learning.

4. CONCLUDING REMARKS

The data from the eUSER survey offer manifold possibilities for analysing the reasons why persons are, or are not, motivated to engage in adult education, and how this relates to attitudes and patterns of usage of ICTs. Using the grouping of the adult population according to participation in lifelong learning and Internet use (see above, Table 3), it will be of special interest to investigate the different situations of learners who are non-Internet users on the one hand, and non-learners who are Internet users on the other hand, because radically different strategies might be needed for making eLearning attractive to them. Table 8 shows the relative shares of each of these types of users and non-users in early 2005.

Table 8: Types of participants and non-participants in lifelong learning and eLearning in Europe

	Internet user		total
	yes	no	
participating in lifelong learning	33.3	11.8	45.1
<i>of which</i> ¹ : <i>eLearner (wide def.)</i>	24.0	-	24.0
<i>eLearner (narrow def.)</i>	3.3	-	3.3
not participating in lifelong learning	22.5	32.4	54.9
total	55.8	44.2	100.0

Other typologies will also be of use in this regard. Table 9 shows how the adult population can be segmented according to their propinquity to becoming an eLearning user, using the three dimensions access, competence and motivation outlined earlier in this paper. The table outlines the policy approaches that will be necessary to address these specific groups.

Further analysis of these research issues will be carried out in the coming weeks. In particular, eUSER will look into defining characteristics of each of the types of users and non-users: The project will also try to identify factors which explain why certain people who, in spite of a socio-demographic and attitudinal background which makes them unlikely to make use of eLearning, are doing so nevertheless. This is expected to point us towards facilitators which

may need to be exploited/provided in order to increase participation by those in danger of being socially excluded.

Table 9: Segmentation of adult population in terms of combinations of determinants for eLearning uptake

Type	Description
A	Has all three factors – access, motivation and competence
B	Lacks motivation but has access and competence; if eLearning services are contextually or circumstantially relevant then efforts to increase motivation may be beneficial
C	Has access and motivation, but lacks competence; training in necessary skills is likely to be very beneficial
D	Only has access, but not competence nor motivation; both motivational and training interventions will be needed
E	Only access is missing; depending on the circumstances different interventions may be needed, such as financial supports, public access points or assistive technology
F	Only has competence, most likely from basic education; motivation is likely to be the key factor here although practical access barriers may also be important
G	Only has motivation; will require both infrastructural and training interventions
H	None of the three conditions exist; multi-dimensional interventions will be needed

Results will be published on the project website www.euser-eu.org and at a number of European Commission supported events to take place from autumn 2005 onwards.

¹ Percentage points

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He was responsible for a number of large-scale multinational surveys in European research projects including ECaTT, SIBIS and EC-KMU. He was project coordinator of BISER, an EU research project on developing and piloting the statistical basis for Information Society policy formulation at regional level. Other recent activities in this field have included the provision of expertise to Eurostat and DG Enterprise's eSkills Forum concerning the definition of a conceptual framework and the design of survey instrument modules for gathering data on eSkills and eLearning.

Currently he is responsible for conceptual work on eLearning and lifelong learning in the eUSER project, a Special Support Action in FP6. This work also includes the formulation of appropriate indicators for inclusion in the eUSER population survey, and the subsequent analysis of the data as well as development of policy recommendations based on the results.