A Map of eLearning Acceptance (MeLA) and a Corporate eLearning Readiness Index (CeLeRI)

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Abstract—**This research aims at describing the conditions of eLearning acceptance, understanding the role of context and communication factors and providing a set of parameters to be considered when an eLearning activity is planned and proposed to eLearners.**

A blend of qualitative and quantitative methods has been chosen to achieve the research goals and build an eLearning Readiness Index. A first list of key factors has been identified through a comprehensive analysis of the literature on the acceptance issue; theories and models are presented focusing on phases, components and variables of the acceptance process and highlighting the importance of contextual factors. A general framework of analysis for the implementation of eLearning activities in organisations is built and presented in the Map of eLearning Acceptance (MeLA).

The second part of the research zooms on MeLA considering only organizational context variables that affect the preparation phase of the eLearning acceptance process. The list of variables obtained in the literature review has been refined, assessed and organized through nine case studies and two surveys in order to define a Corporate eLearning Readiness Index.

The main research output is a step forward in the comprehension and solution of the problem of eLearning acceptance and dropout. In particular, the Map of eLearning Acceptance and the Corporate eLearning Readiness Index (CeLeRI) offer two original tools to be further researched by eLearning researchers and to enter the eLearning practitioners' toolbox.

Index Terms—**Educational technology**

I. INTRODUCTION

ELearning[1] is considered by organizations as a new training possibility and as an opportunity to save time and money [5]. Nevertheless, quite often, poor quality learning experiences [10] and a high percentage of losses are observed [46]. According to statistics, often employees don't start eLearning activities (even if compulsory) and

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[1] In this article, 'eLearning' is understood according to the following definition: "the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration" [12], hence encompassing also so-called "blended" learning experiences; for a discussion of it, see [11; 9].

high dropout rates are registered [28]. Martinez [32] defines dropout as the "Achilles heel" of eLearning while Frankola [22] defines high dropout rates as eLearning's embarrassing secret and "taboo".

Dropouts have economic and educational implications. A need for research to determine predictors of attrition in online education is of particular importance because governmental funding to institutions is often based on attendance [37]. Also in the private sector, training budgets and investments are often allocated in accordance with course completion. Secondly, high dropout rates have a negative impact onto online education, reducing its effectiveness when compared to face-to-face education.

Organisations' dropout rates range from 20 to 50 percent for online learners. In general, administrators of eLearning courses agree that dropouts rates are at least 10 to 20 percentage points higher than in their face-to-face counterparts [22]. Again Lynch [31] reports an experience with eLearning courses in a small university where learners' dropout rates were as high as 35% to 50%, compared to 14% for the same curricula in face-to-face classrooms.

Being a learner in an online course is really different from being a learner in a face-to-face course. Due to the fact that learners have been part of a classroom setting for years, they expect the same type of learning experiences and patterns [27]. They are not equipped to bear full responsibility for their own learning because their previous educational experiences have not prepared them for this setting [32]. Several factors influence the persistence in an eLearning course and there is a relative lack of sound, rigorous models specifically focused on learners' acceptance and satisfaction with eLearning.

To address this problem the Masie Center and ASTD launched the "Learning Technology Acceptance Study" [2]. Its goal was to better understand the key barriers and enablers to learning technology acceptance and use, and to understand the importance of the context surrounding eLearning experiences rather than considering merely the technology itself. Only start rates in eLearning courses were considered in this study, because completion rates (non dropout rates) are so much low and give little information about learners' acceptance motivation. The study revealed that organizations could influence learner acceptance as well as satisfaction by addressing aspects of the eLearning context since its very beginning. Thus, in order to have a better comprehension of the dropout issue, it is necessary to focus on the whole acceptance process.

The main issues addressed by this article are:

1. How is the eLearning acceptance process structured?
2. Which are the main enabling context factors affecting the acceptance of an eLearning experience in an organisation?
3. Which are the main actions/steps organizations can do in order to foster eLearning acceptance?

The following paragraphs deal with those issues as follows: paragraph 2 offers a literature review, which presents factors influencing the acceptance of an eLearning experience, the following paragraph (3) outlines a general map of eLearning Acceptance (MeLA), while paragraph 4 focuses onto organisation/context variables, proposing a tentative Corporate eLearning Readiness Index (CeLeRI).

II. LITERATURE REVIEW

The issue investigated can be referred to as the eLearning acceptance problem [2; 33]. So far, three main approaches to eLearning acceptance are found in the literature.

a) Innovation acceptance theories applied to every type of innovation, and also to eLearning.

b) Technology acceptance research carried out originally to predict technology user acceptance and extended to eLearning.

c) Learner acceptance studies developed to understand learners' choices in higher and distance education as well as in eLearning.

In figure 1 these approaches are graphically represented.
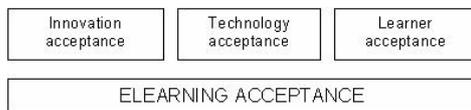
Figure 1. Different approaches to the eLearning acceptance issue

A. Innovation Acceptance

Innovation Diffusion Theory (IDT) explores and helps to explain the adoption or rejection of an innovation; in particular, Everett Rogers [41] defines steps and outlines variables of the innovation's adoption process.

Surry and Farquhar [48] have applied IDT to eLearning with a strong emphasis on contextual factors affecting the process. Many studies describing the adoption process in educational contexts can highlight the eLearning acceptance process [30], and some of them are considered in this article.

An 'innovation' is an idea, practice, or object that is perceived as new by an individual or other unit of adoption [41]. The perceived newness of the idea for the individual influences his/her reaction to it and thus its diffusion. Rogers [41] defines diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social system. The Innovation Decision Process theory defines it as the process through which an individual moves from 1) first knowledge of an innovation, to 2) forming an attitude toward the innovation, to 3) a decision to adopt or reject, to 4) implementation of the new idea, up to 5) confirmation of this decision. The process is influenced by prior conditions, individual characteristics and innovation

perceived attributes, such as relative advantage, compatibility, complexity, trialability and observability.

The study of IDT has been considered potentially valuable to the field of instructional technology for three reasons [48; 23]. First, most instructional technologists do not understand why their products are, or are not, adopted. Second, instructional technology is inherently an innovation-based discipline. Third, the study of diffusion theory could lead to the development of a systematic model of adoption and diffusion.

Considering "instructional technology diffusion theories" in their complexity [49], which show diffusion goals and philosophical views, this research fits into the "adopter approach" area, aiming to study, at a micro level, eLearning acceptance conditions. According to Surry and Farquhar [49] it can be described as a research area "focused on the needs and opinions of potential adopters and characteristics of the adoption context". Strong emphasis is given to context factors that have to be included in the instructional technology acceptance analysis [8; 47; 19].

Concerning the process, Levine [30] reviewed several significant researches in the areas of acceptance, adoption, and use of innovations in order to identify levels/stages of acceptance applicable to eLearning implementation. Six models, including the one by Rogers described above, were investigated: Stages of Concern [26]; Stages of Change [21]; Teacher's Stages of Instructional Evolution Using Technology [17]; Stages of Learning/Adoption of the Internet and WWW [45]; Stages for Learning to Use Technology [43].

Technology is a particular category of innovation, which shares several characteristics with it; its peculiar features have been examined, among others, by the Technology Acceptance Model.

B. Technology Acceptance

The Technology Acceptance Model (TAM) is an information systems theory developed to predict the acceptance of a technology. Its development in the last decades shows a methodical reflection on the acceptance process, and its application to the eLearning field presents relevant variables, which are to be taken into consideration.

The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. It is based on the same theoretical beliefs-attitude-intention-behaviour causal relationship initially established by TRA [20]. However, TAM states that two very specific beliefs, perceived ease of use (EOU) and perceived usefulness (U) directly influence a person's attitudes about the use of the technology system [15]. Much of the subsequent research has tested, revised and extended [51; 53] the TAM, and, whereas some research has been done to model the determinants of perceived EOU [54], the determinants of perceived U have been relatively overlooked.

In an effort to combine competing theories into a single unified theory, Venkatesh et al. [55] proposed a composite model based on eight of the most used models and combinations of those models. The resulting product, the Unified Theory of Acceptance and Use of Technology (UTAUT), theorizes that four constructs are direct determinants of user acceptance and usage behaviour [16]:

1) performance expectancy, 2) effort expectancy, 3) social influence and 4) facilitating conditions.

Venkatesh et al. [55] suggest future research should attempt to: "test additional boundary conditions of the model in an attempt to provide an even richer understanding of technology adoption and usage behaviour".

There are applications and extensions of TAM to eLearning experiences [24; 56]. Most of them propose an integration of the model introducing external variables as antecedents of perceived U and perceived EOU. Authors notice the rapid diffusion of eLearning systems both in educational institutions and companies and recognise the need for further investigations on their acceptance and use. Originally, eLearning problems were related to technology, and issues such as access, connection, internet familiarity and lack of independent learning were included. As technology advanced, the problems shifted towards the learner's side and her/his acceptance and satisfaction [44; 57].

Investigating eLearning only as an innovative technological asset fails to consider all the factors which come into play and cannot fully explain its results. Issues such as eLearning acceptance and retention need to be further investigated and supported by more comprehensive models [29; 7].

C. Learner Acceptance

Helpful support comes from the higher and distance education research tradition, which has been studying variables affecting education acceptance and persistence. In particular, Vincent Tinto's model [52] and its application to eLearning are relevant to this research.

Acceptance and persistence are strongly connected, since it has been demonstrated that the reasons for student dropouts are mainly grounded in the acceptance phase. There is an extensive literature on educational programs persistence, usually referred as the "non-dropout issue", gathered in the last fifty years of experiences in distance education and in the higher education sector. It has been claimed that no area of research in distance education has received more attention than learner persistence [25]. The decision to persist or not to persist in distance education is a complex process involving a number of interrelated factors and variables peculiar to the individual's context [35].

Even if widely criticised, Tinto's Student Integration Model (SIM) [52] remains the most influential model of dropout for tertiary education [34]. It explains persistence and attrition through student-institution "fit" by looking at student, institutional, and environmental variables and specific areas such as the social integration of students into campus life. The theory explains the persistence/withdrawal process, which depends on learner's commitment: how well s/he becomes involved in the social and academic processes of the institution. The individual may be committed to the goal of achieving a degree and/or doing so at that institution, described as 'goal commitment' and 'institutional commitment' respectively. A lack of goal commitment would lead to discontinuation of studies whilst a lack of institutional commitment would lead to a withdrawal from that institution. The model has been applied in research on attrition in full time education, but it has also been largely applied to and/or extended in studies on professional training, distance education and eLearning [42; 50; 39].

Many authors, especially those involved in the eLearning dropout research discussion, tried to identify the main variables affecting eLearning acceptance within organisations. Those variables are focused on a variety of different aspects concerning eLearner characteristics and experiences, contents, technology assets and organisational environment.

III. MAP OF eLEARNING ACCEPTANCE

Moving from this overview of authors with such different backgrounds and approaches, an integrated and comprehensive definition of acceptance can be proposed. It emerges in the literature that acceptance has not a unique definition and that people could refer to the "acceptance" concept with different terms such as use [14], adoption [41], or persistence [52]. TAM describes technology acceptance as "users' decision about how and when they will use technology" [14], while IDT definition of adoption is "a decision to make full use of an innovation as the best course of action available" [41]. However, we understand that for eLearning, as a learning experience and not only as a technological innovation, a more complete and wider definition has to be found. Something relevant, in fact, is added by the definition of "learning acceptance" referred to as persistence: "the act of continuing toward an educational goal" [32]. It implies the temporal dimension typical of a process and the presence of a goal to be achieved, which goes beyond the mere idea of use or adoption commonly implied by innovation and technology.

A common definition of acceptance is "the positive answer to an offer". One can, for instance, "accept a contract", or one can "accept a marriage proposal". In both cases one needs to know well the person s/he is interacting with and the object or the situation s/he is facing. To make the "acceptance" effective, an explicit action is required as a signature or – in the case of marriage – the utterance of "yes". These actions belong to a particular set of verbal acts called commissive [3], which imply a commitment by "who accepts" and presuppose a commitment by "who offers".

In fact, while action/start is what makes acceptance effective, and takes place in a point in time, the components of knowledge and commitment run in parallel, and grow together up to the decision (during the preparation phase), supporting it also after the decision/start moment (persistence phase). In many cases – that of eLearning not excluded – knowledge and commitment grow also afterwards, offering a deeper understanding of eLearning through a direct experience of it, and ensuring a continuous commitment until the learning goal is reached.

According to the literature and to this linguistic analysis [40] of the term "acceptance", the main phases of the process, the categories of variables affecting it and two important components can be identified and outlined as in Figure 2.
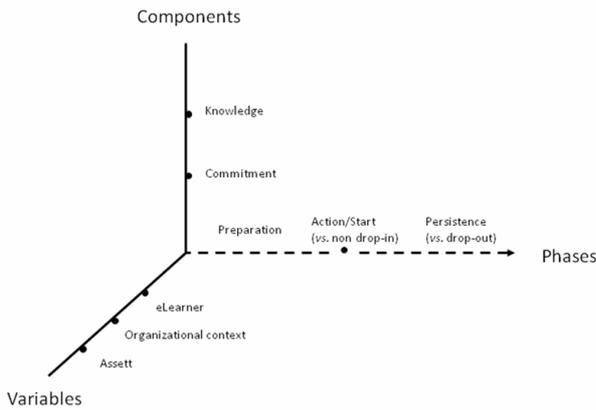
Figure 2. The Map of eLearning Acceptance (MeLa)

Let us now present each of them.

A. Three phases

Process' stages and steps found in the literature can be gathered in three macro-phases:

- Preparation: potential eLearners get information about the eLearning activity; they are invited or requested to participate; they learn what eLearning means or remember some previous experiences; they shape their expectations about contents and instructions; they speak about this with colleagues etc.
- Start: eLearners physically enter the online course (in the case of a blended course this could follow a starting presence session). Here they face all the main technical problems that can occur; they can ask for help (technical support), experience the new environment, adapt previous expectations etc.
- Persistence: the eLearners' persistence in the course depends mainly on how they judge the experience they are having. It is a continuous cost/benefit decision based on many factors. A healthy commitment, grounded in the preparation phase, will lead the eLearners to the end of the course.

B. Three types of variables

A set of variables and key determinants are usually listed by authors who have studied innovation, technology and learning acceptance. It is possible to organize them in three general macro-areas of families:

- eLearner: this category includes all eLearner characteristics, from age up to learning style. Several studies have been conducted to identify aptitudes, attitudes and skills of a good eLearner.
- Organizational context: the context around the eLearning experience can strongly influence the acceptance process. The type of support provided to eLearners, the relevance of the activity for the job, physical conditions, internal sponsoring, involvement and motivation, have been mainly considered.
- Asset: instructional design studies focus on the quality of content, on the method or on the proper mix of different methods (blended learning). Moreover, technological tools need to comply with some criteria, such as usability, velocity, reliability and so on, which can affect the acceptance process.

C. Two main components

Moreover there are two important components that constantly interact in the process:

- Knowledge: it starts forming at the very beginning of the acceptance process where information and communication flows allow learners to build opinions and expectations about eLearning activities, and grow on the basis of direct experience.
- Commitment: motivation and involvement of eLearners start when they have received enough information to express a judgment about activities. It can grow/diminish all over the process being substantial in the decision of persisting or dropping out of an eLearning experience.

IV. Towards an eLearning Readiness Index

From this point on, the research focuses on the preparation phase and the organizational context variable, dealing with both knowledge and commitment components, as highlighted in Figure 3.
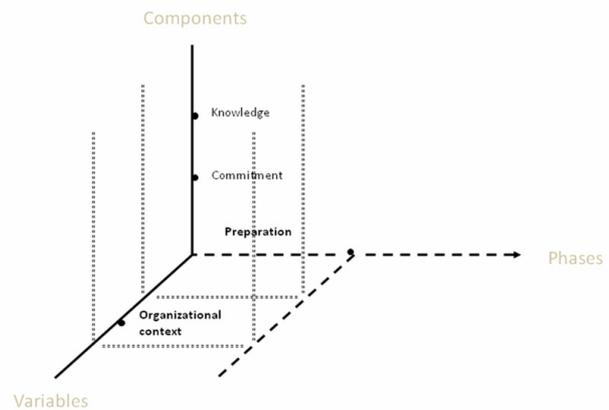

Figure 3. The scope area of the research in order to build an eLearning Readiness index.

This focus can yield to a corporate eLearning Readiness Index and is of particular interest if one takes the viewpoint of a company, thus trying to identify how eLearning acceptance can be fostered trough a suitable organization of the context. In fact, from a CLO (chief learning officer) viewpoint, individual variables can be addressed only in the selection of target groups, while assets are managed mainly by instructional designers [6; 18].

Some case studies and two surveys have been conducted in order to define the Corporate eLearning Readiness Index (CeLeRI).

The design of the research has been articulated in five phases and six steps have been followed to build the index (Figure 4):

- selection: important factors have been selected from the literature on the base of researcher reflections' and on their observations during explorative case studies;
- refining: through an ex-post rationalization, variables selected in the literature review have been compared with important factors emerged in the case studies in order to verify the completeness of the list;

- operationalization: all the variables have been described based on the interviews conducted with learning officers in the case studies;
- clustering: critical areas and communication's purposes have been identified and verified discussing with eLearning managers;
- assessment: a survey has been built in order to assess the presence of the variables and to verify if the list assembled by case studies was complete;

ranking: a second survey has been delivered to a different sample to assign a value to each variable; moreover, the communication issue has been further investigated.
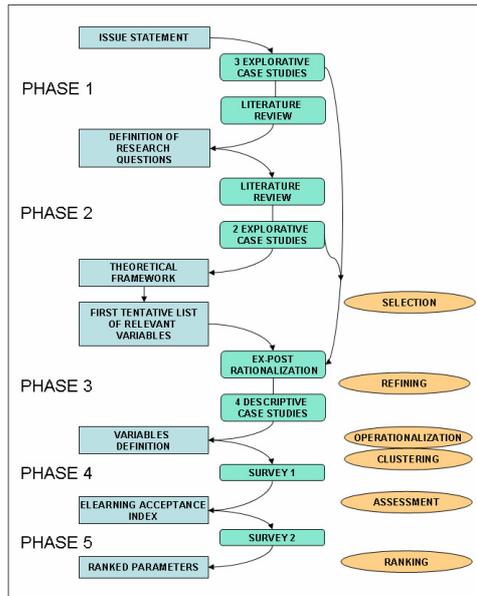

Figure 4. Main phases and steps followed during the research to build the eLearning Readiness Index

A. Case studies

Nine explorative and descriptive case studies have been conducted in different companies (Table 1).

TABLE I.
CASE STUDIES AND SOURCES OF EVIDENCE

Company	Period	Esplor./ Descrip.	Project Investigated
Alcoa (AU)	June 2005	E	Launch of a global platform
Alenia (IT)	September 2003	E	Two online courses: Global English and Best
Banca Intesa (IT)	December 2003	E	Migration learning for front-desk employees: "Lo Sportello"
Ernst & Young (IT)	July 2005	D	Launch of a global platform: E&Y Learning Connection
Esprinet (IT)	September 2003	E	English online corse
Fiat (Isvor) (IT)	September 2005	D	Training for vendors on a new car: Grande Punto
Homedepot (USA)	January 2006	D	Learning curriculum for shopping assistants
jetBlue (USA)	February 2006	D	Portal for online learning: E190 aircraft
Kraft (UK)	January 2004	E	Launch of a global training program

According to Yin [58], the purposes of empirical studies can be divided into exploratory, descriptive, and explanatory. Explorative studies aim at seeking insight in order to find out what is happening. Descriptive studies aim at portraying an accurate profile of events, organizations, or situations. Finally, explanatory studies aim at seeking explanations of a situation or problem, typically in the form of causal relationships. However, in actual empirical studies often a mix of purposes can be observed [58].

The case studied conducted in the research had different general purposes to achieve; they belonged mainly to the types of explorative and descriptive case studies.

1. First explorative case studies were carried out in order to define the research problem and questions and to outline the research field.
2. The second set of explorative case studies intended to better understand the acceptance and communication issues in companies. An ex-post rationalization analysis allowed identifying the presence of relevant variables and factors affecting acceptance.
3. Descriptive case studies intended to verify the presence and the importance of variables and factors emerged from the literature and from exploratory case studies.

Moreover, according to Yin [58], six types of sources (S) of a case study can be identified:

- Documentation (S1). Three kinds of paper-based materials: learning materials, communication documents, administrative documents.
- Archival records (S2). Each organisation keeps track of many data. Signing an agreement the anonymity of the company and the treatment of data were agreed upon. Archival records collected in the training departments were: platform tracking data, learners' satisfaction data, organisational records, lists of names.
- Interviews (S3). Depending on the type of case study (explorative or descriptive) different interviews took place: top management interviews, HR or training management interviews, eLearners interviews.
- Direct Observations (S4). All the case studies included one or several site visits, which allowed direct observation of: environmental conditions, behaviours, practices, learning experiences.
- Participant observations (S5). Due to the fact that some organisations opened specific accounts for researchers to access their learning platform, it was possible: to attend an eLearning course, to collaborate at the design of eLearning courses, or to evaluate the eLearning experience.
- Physical Artefacts (S6). When accounts in the learning platforms were opened, researchers had the possibility to view one or more eLearning courses; in some cases, off-line courses were provided on CD-ROMs.

In Table 1 an overview of the case studies is offered, which describes the types of sources that have been used.

B. Enabling factors: a list from the literature and the case studies

Main findings were obtained through the integration of the ex-post rationalization analysis and descriptive case studies. It was possible to compare the list of variables identified in the literature review with actual eLearning experiences in companies.

The starting list of variables was mainly confirmed by case studies but some variables were merged or added (refining). The richness of these experiences allowed to better describe all the variables and to find significative indicators (operationalization); in addition, the identification of critical areas led to the creation of a taxonomy (clustering), as it is shown in Table 2.

TABLE II.
LIST OF ENABLING FACTORS AS FOUND IN THE LITERATURE, AND MERGED/REFINED FOR THE FIRST AND THE SECOND SURVEY.

First list of enabling factors (# 42)	References	Description	Selection of factors, as used in the first survey (# 16)	Selection of factors of the second survey (# 17)
Communication behaviour	Rogers 1995	Different communication channels are used to promote eLearning activities among eLearners.	Communication behaviour	Communication behaviour
Marketing	ASTD & Masie 2001	Internal sponsoring activities.		
Norms of the social systems	Rogers 1995	Specific norms are created to facilitate the introduction of eLearning.		
Peer communication	Fuller 2000; Rogers 1995	Peer communication helps eLearners to understand eLearning.		Peer Communication
Social influence	Venkatesh et al. 2003	Peers affect opinions and expectations about eLearning.		
Social integration	Tinto 1975; Inan 2004	ELearners experiment a social environment as in a classroom context.		
Subjective norm	Venkatesh and Davis 2000	Opinions and involvement of supervisors influence eLearner decisions.		
Corporate Motivation	Frankola 2001	Level of motivation of the organization in supporting eLearners' efforts.	Corporate Motivation	Corporate Motivation
Engagement	Collis and Pals 2000	ELearners are offered good reasons to attend eLearning activities.		
Managerial oversight	Frankola 2001; ASTD and Masie 2001	Involvement of the management helps the learning department to promote eLearning.		
Performance Review	ASTD & Masie 2001	Perception of being monitored enhances motivation to complete an eLearning activity.		
Support	Prendergast 2003	A support system encourages eLearners in starting an eLearning activity.		Support
Culture	Veiga et al. 2001	ELearning acceptance is influenced by specific cultural beliefs or tradition of a company.	Culture	Culture
External system	Bajtelsmit 1988	External environment influences eLearners experiences.		
Image	Venkatesh and Davis 2000	Audience of eLearning activities creates an image of eLearning within the organization.		
Perceived Compatibility	Rogers 1995	How eLearning is perceived as being compatible with organization's processes, practices and values.		

First list of enabling factors (# 42)	References	Description	Selection of factors, as used in the first survey (# 16)	Selection of factors of the second survey (# 17)
Effort expectancy	Venkatesh et al. 2003	ELearning activities do not seem to require too much time and energy.	Expectations	Expectations & experience
Expectations	Inan 2004; Frankola 2001	Expectations influence the level of acceptance of eLearning.		
Performance expectancy	Venkatesh et al. 2003	ELearning activities do not seem to require new complex skills on the side of eLearners.		
Experience	Szajna 1996; Venkatesh and Davis 2000; Venkatesh et al. 2003	Previous eLearning experiences affect acceptance of further eLearning activities.	Experience	
Goal Commitment	Tinto 1975	Learners know and understand goals of the organization.	Goal Commitment	Goal Commitment
Incentives	Wolski and Jackson 1999	Learning departments associate incentive systems to eLearning activities.	Incentives	Incentives
Rewards	Frankola 2001; Ely 1999	Forms of reward encourage eLearners in the intention of completing the course.		
Institutional Commitment	Tinto 1975, Ely 1999	ELearners are committed with institutional goals.	Institutional Commitment	Institutional Commitment
Perceived Observability	Rogers 1995	ELearning activities are observable by eLearners.	Perceived Observability	Perceived Observability
Perceived Trialability	Rogers 1995	ELearning tools can be tried in advance, on a limited base, by eLearners.		
Dissatisfaction with the status quo	Ely 1999	The level of dissatisfaction with the current situation.	Perceived Relative advantage	Perceived Relative advantage
Felt needs/problems	Rogers 1995	ELearning activities meet needs and problems felt by eLearners.		
Perceived Relative advantage	Rogers 1995	ELearners can compare eLearning with previous training solutions and see that there is an added value in it.		
Job relevance	Venkatesh and Davis 2000	ELearning activities are perceived as strongly related to job activities.	Perceived Usefulness	Perceived Usefulness
Output quality	Venkatesh and Davis 2000	ELearners perceive a quality impact onto their job due to eLearning activities.		
Perceived Usefulness	Davis et al. 1989	Perception of the usefulness of eLearning activities.		
Result demonstrability	Venkatesh and Davis 2000	ELearners perceive they can demonstrate results once they complete the course.		
Place	ASTD & Masie 2001	Creation of adequate physical conditions helps eLearners in attending an eLearning activity.	Place	Place
Blended solution	Oblender 2002	A mix of teaching/learning solutions encourages eLearners with different learning styles and different learning experiences.	Preparation	Preparation
Preparation	Prendergast, 2003; Arsham 2002; Lynch 2001; ASTD and Masie 2001	ELearners are prepared and introduced to eLearning activities.		
Facilitating conditions	Venkatesh et al. 2003	Environmental conditions facilitate eLearning activities.		
Time	Rekkedal 1972; Frankola 2001; Ely 1999	Allocation of time helps eLearners in attending eLearning activities.	Time	Time

First list of enabling factors (# 42)	References	Description	Selection of factors, as used in the first survey (# 16)	Selection of factors of the second survey (# 17)
Perceived Complexity	Rogers 1995	ELearning activities do not seem to require new complex skills.	Training	Training
Training	Wolski and Jackson 1999	Skills to become an eLearner are taught.		
Target choice	Masie 2002	Clear indication of the target publics.		
Voluntariness	Venkatesh and Davis 2000; Venkatesh et al. 2003; ASTD and Masie 2001	Level of voluntariness is clearly stated.	Voluntariness	Voluntariness

Once a first – more manageable – list of 16 enabling factors has been compiled as described above, two subsequent surveys have been designed and done in order to (a) check if the involved community of learning managers found it relevant / complete based on their actual experience of eLearning activities in their companies and (b) to rank the final list according to the importance of its factors.

C. Surveys

The first questionnaire was built in collaboration with the Masie Center (www.masie.com) and delivered in December 2005 to learning managers of a set of companies (n. 144) chosen among its Learning Consortium according to the following parameters: (a) to be users/clients of eLearning courses (companies whose business is developing eLearning were excluded) and (b) to have an extensive experience in eLearning. The Learning Consortium is a professional network that counts more than 200 members, most of them Fortune 500 companies. Associated companies come from many different fields (business services, manufacturing, petrochemicals, food and beverage, government, etc.). 42% (61 out of 144) answered and 95% of the answerers provided useful comments and suggestions to refine the list and to better focus the actions required to meet each single parameter.

In fact, 15 out of 16 parameters were declared present in their companies by more than 50% of respondents, and only the "Experience" one did not reach that threshold: that is why it has been combined with "Expectations". Comments by respondents suggested introducing "Support" and "Peer communication" as separate parameters, thus ending with a final list of 17 parameters.

This final list has been used for the second survey, aimed to rank parameters according to their relevance and impact onto eLearning acceptance, hence offering a first tentative Corporate eLearning Readiness Index.

Also the second questionnaire was compiled only by learning managers. The sample has been constituted by the 55 primary contacts of the Learning Consortium who left their data for a follow-up, 12 learning managers met during the case studies, plus other 139 learning managers of US and European companies; the Survey run online from June to December 2006 and got 54 valid responses, ranking the 17 parameters along a 5-grades Likert scale.

Results led to the final ranked list of seventeen enabling factors of the Corporate eLearning Readiness Index, as shown in Table 3.

TABLE III.
CORPORATE ELEARNING READINESS INDEX (CELERI).

#	Enabling factor	Entailed actions	Mean value	Standard Dev.
1	Perceived Usefulness	to build a connection between the eLearning activity and the learner's job	4.48	0.69
2	Corporate Motivation	to enlist managers in supporting and involving in eLearning activities	4.33	0.91
3	Support	declaration to provide technical and content support during the eLearning activity	4.28	0.90
4	Goal Commitment	to specify the behavioral/performance goals of the eLearning activity	4.22	0.79
5	Preparation	to specify details of the eLearning activity (start date, due date, content, objectives, outputs, requirements, assignments, evaluation procedures, etc.)	4.11	0.86
6	Institutional Commitment	to specify the organization's business goals for the eLearning activity	4.09	0.90
7	Culture	to align eLearning activities with other training activities and with the organization's values, processes and practices	4.09	0.98
8	Commun. Behaviour	to use communication/internal marketing channels to promote the eLearning activity (direct communication, intranet, posters, newsletters, sponsoring activities, etc.)	3.92	0.94
9	Voluntariness	to specify a target audience and/or the degree to which the activity is compulsory or voluntary	3.89	1.02
10	Time	to set specific time restrictions/deadlines for the eLearning activity	3.63	1.00
11	Peer Commun.	to place "champions" in the different locations to support activities	3.45	1.10
12	Training	to prepare/train eLearners about relevant issues and skills in order to attend successfully an eLearning experience (i.e. time management, self-directed learning, etc.)	3.44	1.09
13	Perceived Relative Advantage	to clarify the advantage(s) of eLearning (as compared with other training solutions)	3.24	1.23
14	Incentives	to create incentives and/or a recognition system for eLearning results	3.19	1.10
15	Experience & Expectations	to track eLearners' expectations and/or their previous experiences with eLearning	3.17	1.18
16	Perceived Observability	to provide eLearners with the opportunity to try technologies/tools before actually starting the eLearning activity	3.15	1.22
17	Place	to set guidelines for the physical environment where eLearning takes place (e.g., space, noise, interruptions, etc.)	2.81	1.12

V. CONCLUSIONS

This research has helped in making a step forward in the comprehension of the issue of innovation and eLearning acceptance; in particular, the Map of eLearning Acceptance (MeLA) and the Corporate eLearning Readiness Index (CeLeRI) offer two original tools to be further researched by eLearning researchers and to enter the eLearning practitioners' toolbox.

The second tool can be implemented by eLearning managers to enhance acceptance of their eLearning activities. Indicators of variables created in the operationalization phase can help practitioners in

assessing the first part of their learning processes. Actions suggested in CeLeRI constitute a body of operative steps to deal with the acceptance issue. Moreover, it enhances the awareness about practices, values and behaviours in the corporate sector.

In conclusion, a specific attention has been devoted to understand the role of communication and to identify the significant communicative behaviours in an organization. It is possible to state that companies of the sample seem to be sensitive to the eLearning Acceptance problem even if not fully aware and mature to create the proper context and to exploit communication channels.

In particular, it emerges that eLearning managers are familiar with tools and strategies to enhance eLearning Acceptance but they lack of a farseeing approach. They are more focused on solve short term issues instead of building an eLearning culture and a comprehensive environment to enhance acceptance of innovations.

Moreover, communication channels are more exploited to deliver information than to involve and motivate people.

Together with offering some tentative answers, this study has opened up many new research paths, which require to be further investigated. In particular, the cultural issue seems to require further research, in order to find out if the tentative Corporate eLearning Readiness Index has to be "localized" for different types of companies – in different business and geographical areas, as well as of different sizes.

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