

Lifelong Learning: State of the Art and Future Horizons

Zahra El Aouri

Lifelong learning or what is also referred to as continuous learning takes place as an effect of change caused by different events that happen in people's life under various conditions. Given the accelerated progress in technology and all the political, socio-economic and cultural changes it has brought with it, lifelong learning has become more imperative for the development of the human capital and, hence, for the sustainable development of the country as a whole. This concept of lifelong learning is highly recurrent in educational research, especially in western contexts which investigated case studies of successful lifelong learning projects. Therefore, in the light of research done on this concept, the present paper deals with the state-of-the-art of lifelong learning and its future horizons. Hence, it will cover the following points: First, light will be shed on the concept of lifelong learning and its various definitions. Second, the paper will deal with the main theories of learning which shape lifelong learning. Third, the focus will be on the resources that facilitate lifelong learning. Fourth, the paper will review some case studies on lifelong learning, and finally it will close down with some future horizons for research on lifelong learning in Morocco.

Continuous learning; lifelong learning; theories of learning.

Introduction

Through the last decades of the twentieth century and the beginning of the twenty-first century, it has become increasingly urgent to cope with successive changes in different fields. As a result, today's society has gradually turned into a knowledge-driven society in order to succeed in the rapid change which is taking place in the educational, cultural, socio-economic and political fields of the modern world. These changes were brought largely through what is commonly known as 'globalization', and which brought with it a fast growth, extension and application of knowledge through information and communication technology. Hence, to meet people's increasing demand for upgrading their knowledge and skills to adapt to this fast-changing environment, lifelong learning has emerged as a necessary step to make and as a road map to follow in order to build the knowledge society of the future. Therefore, many countries around the world have witnessed in recent years a growing interest in implementing lifelong learning policies.

In this paper and in the light of research done on the concept of lifelong learning, the focus in the first section is on discussing the concept of lifelong learning and its various definitions. The second section deals with the learning theories that underlie the concept of lifelong learning while the third section presents resources to facilitate lifelong

learning. Some successful case studies of lifelong learning are presented in the fourth section. Then, in the fifth section, the paper closes down with some future horizons for research on lifelong learning in Morocco.

1. The concept of lifelong learning and its definitions

Learning in general is an inherent feature of human activity, and it stems from a variety of life activities such as observing how other people do something, asking and discussing with others about different things, looking for information on one's own, experiencing with something for oneself, and learning through trial and error. As human beings, people always tend to do these activities unconsciously which makes them lifelong learners. However, the concept of lifelong learning cannot be easily defined since it is a complex and multifaceted concept. Actually, as Kunzel (2000) and Johnston (2000) (as cited in Aspin, 2007, p. 4) claim that 'lifelong learning' is a 'slippery term' which means different things in different contexts, and sometimes even in the same context it means different things to different people. This is because lifelong learning is an all-embracing concept as it is adaptable to many domains of life, including educational, social, cultural and economic domains. This is what is maintained by Field who considers that the difficulty in operationalizing and, hence, conceptualizing lifelong learning lies in its nature which is a "loose and all-encompassing concept focusing on something that we all do sometimes unconsciously" (2006, p. 2). Since the concept of lifelong learning is unclear and fuzzy, a number of scholars tried to come up with a plethora of definitions. For the sake of brevity, some of these definitions will be discussed below.

Jarvis (1990, p. 203) defines lifelong learning as "the process of learning which occurs throughout life"; this implies that learning starts from birth to death as a dynamic and ongoing process. Thus, lifelong learning can be considered as a part and parcel of people's life, and it includes all types of learning experiences that people go through. In this respect, lifelong learning involves the whole society and embraces all learning forms be them formal, non-formal, or informal at all age categories and all stages of life regardless of where this lifelong learning takes places or who is responsible for it (Candy, 2000; Cropley, 1979; Preece, 2011; Wain, 2009).

Besides, Longworth & Davies tried to define lifelong learning as:

"...the development of human potentials through a continuous supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and to apply with confidence, creativity and enjoyment in all roles, circumstances and environment" (1996, p. 22)

Longworth & Davies' definition conceptualizes lifelong learning as an incarnation of life experiences through which human beings acquire knowledge, skills and values, and they consider it as a model for the development of the human potential.

Cropley (1980, pp. 3 – 4) provided an all-inclusive view of the concept when he suggested that lifelong education should forcefully facilitate lifelong learning and, hence, make it:

1. last the whole life of each individual;
2. lead to the systematic acquisition, renewal, upgrading and completion of knowledge, skills and attitudes, as became necessary in response to the constantly changing conditions of modern life, with the ultimate goal of promoting the self-fulfillment of each individual;
3. be dependent for its successful implementation on people's increasing ability and motivation to engage in self-directed learning activities;
4. acknowledge the contribution of all available educational influences including formal, non-formal and informal.

2. Theories of learning underlying the concept of lifelong learning

It should be noted that there is no single learning theory on which lifelong learning can be based, but a myriad of learning theories shape this concept and can be applied in the lifelong learning process, depending on the context of learning. Thus, four learning theories will be reviewed as they have a strong and direct connection with lifelong learning.

2.1. Self-directed learning theory in relation to lifelong learning

According to Knowles, who is the pioneering figure of “self-directed learning”, this theory broadly “describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating their learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes”. (1975, p. 18)

This means that individuals plan, execute, and evaluate their own learning experiences in informal environments, outside the classroom. These environments range from the work place, organizations, the street, shopping stores to the house. Simply, self-directed learning can be incorporated into daily routine activities be them simple or complex. This self-directed learning can involve the learner in isolated activities such as doing research on the internet to explore information on a certain concept, or it can involve the learner while in communication with others such as teachers, tutors, experts or peers.

This theory of self-directed learning has a close link with lifelong learning in that through both of them, individuals can become aware of their learning needs and they can decide how to reach out for knowledge both formally and informally. This is why researchers such as Greveson & Spencer (2005) state that self-directed learning is a pre-requisite condition for lifelong learning. Furthermore, Candy (1990) claims that a mutual

relationship exists between lifelong learning and self-directed learning because through self-directed learning, individuals can become lifelong learners since the aim of lifelong learning is to equip individuals with skills and competences that help them learn on their own. Thus, lifelong learning and self-directed learning seem interrelated and form the basis of each other.

2.2. Experiential learning theory in relation to lifelong learning

Experiential learning theory is developed by David Kolb in the 1970's by drawing on the works of the philosophers John Dewey, Kurt Lewin, and Jean Piaget. This theory puts the learner at the heart of the learning experience. According to Kolb (2015, p. 37), "learning is described as a process whereby concepts are derived from and continuously modified by experience. No two thoughts are ever the same, since experience always intervenes." This means that learning and accumulating knowledge is continuous and deeply grounded in experience. Hence, experiential learning theory relies on life experiences and emphasizes the critical links that can be made between the classroom as a formal setting and the outside real world as an informal setting. This is why Kolb states that experiential learning "occurs in all human settings, from schools to the workplace, from the research laboratory to the management board room, in personal relationships and the aisles of the local grocery. It encompasses all life stages, from childhood to adolescence, to middle and old age." (2015, p. 43)

From this definition by Kolb, it is obvious that experiential learning theory shapes lifelong learning since both of them rely on experience as a source of learning. In both of them, learning is enduring and knowledge is built through experiencing at different stages of life and age. Moreover, lifelong learning requires skills and competencies that individuals need to solve problems in life and to adapt to new situations that emerge as a result of the rapid change that today's world undergo. These skills and competencies are offered by experiential learning. Thus, lifelong learning and experiential learning complement each other, especially that "[l]earning is the process whereby knowledge is created through the transformation of experience." As Kolb states (2015, p. 49)

2.3. Transformative learning theory in relation to lifelong learning

Transformative learning theory or what is referred to as Transformational learning was developed by Jack Mezirow in the 1970's and it postulates that all learners use different assumptions, expectations, and beliefs to make sense of the world around them. More specifically, Mezirow (2000) defines transformative learning theory as

the process by which we transform our taken-for-granted frames of reference
(meaning perspectives, habits of mind, mind-sets) to make them more inclusive,

discriminating, Open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action. (pp. 7-8)

This learning theory requires learners to participate in transforming knowledge by using the experiences, ideas, and arguments of others to justify their own assumptions. Actually, learners, according to Mezirow (2000), “learn to negotiate and act on [their] own purposes, values, feelings, and meanings rather than those [they] have uncritically assimilated from others – to gain greater control over [their] lives as socially responsible, clear-thinking decision makers.” (p. 8).

To illustrate this idea of how transformative learning can change people’s mindset, the pedagogy expert, Paolo Freire (2000) taught Brazilian workers to read by engaging them, through the use of transformative learning theory, in discussions about their working conditions and poor compensation procedures, thus helping them change their thinking and strive for social change. In other words, Freire helped them transform their earlier frames of reference concerning their work conditions, their social status, and their rights to new frames of reference which serve them better and improve their quality of life.

This theory of transformative learning is closely connected with lifelong learning since the guiding principle of the theory is to transform/change frames of references or what is called meaning structures in people’s minds. This transformation or change is a dynamic and ongoing process because it happens continuously as people go through different stages of their life, discovering new knowledge which makes them change and transform their old knowledge that forms the different frames of reference in their mindsets. Thus, transformative learning theory is clearly at the heart of lifelong learning.

2.4. Connectivism in relation to lifelong learning

Connectivism which is a learning framework developed by Siemens (2005) is based on the assumption that learning happens in a network form which is much influenced by technology, especially the World Wide Web. Actually, connectivism is very complex because, as Siemens (2005) claims, it stems from “the integration of principles explored by chaos, network, and complexity and self-organization theories”. (p. 9)

This theory, in fact, came as a reaction to the new learning environments created by the 2.0 technologies. In connectivism, learning takes place when knowledge is actuated by learners who connect to and participate in a learning community. This learning community is defined by Siemens (2005) as “the clustering of similar areas of interest that allows for interaction, sharing, dialogue and thinking together.” It should be noted that participating in such learning communities results in conversations between learners and other more knowledgeable members of the community. These conversations take

different forms such as words, images, videos, and any other multimedia. In brief, in the digital age, learners are able to create personalized learning environments and to produce and consume various learning resources. This is why Siemens (2005) states that “learning is a process that occurs within nebulous environments of shifting core elements – not entirely under the control of the individual.” (p.5)

Since connectivism as a learning theory was created to cater for the needs of the digital age learners who are required to engage in a continuous process of learning and managing information, it is obvious that this theory has a close link with lifelong learning. In this respect, Siemens (2005) says that “[c]onnectivism provides insight into learning skills and tasks needed for learners to flourish in the digital era.” (p. 7). These very skills and tasks are what individuals require to be lifelong learners. For instance, they are required to have the skills which allow them to perform different tasks such as searching for, selecting, organizing and sharing information across different learning communities on the web. This relevance of connectivism as a learning theory to lifelong learning is clearly reflected in the principles on which connectivism relies and which are listed by Siemens (2005, pp. 5 - 6) as follows:

1. Learning and knowledge rests in diversity of opinions.
2. Learning is a process of connecting specialized nodes or information sources.
3. Learning may reside in non-human appliances.
4. Capacity to know more is more critical than what is currently known.
5. Nurturing and maintaining connections is needed to facilitate continual learning.
6. Ability to see connections between fields, ideas, and concepts is a core skill.
7. Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
8. Decision-making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision.

In brief, this is why Siemens (2005) claims that “[t]he notion of connectivism has implications in all aspects of life.” (p. 7)

3. Resources to facilitate lifelong learning

Lifelong learning can be facilitated and promoted through different resources since learning in general is both an individual and an organizational activity. For this reason, resources for lifelong learning can come from organized structures such as education and available resources such as technological tools. In this section, the focus will be on three resources among others deemed of paramount importance to promote lifelong learning in society.

3.1. Tertiary education as a leverage for lifelong learning

Tertiary education or higher education concerns all the post-secondary educational institutions such as universities, colleges and vocational training institutions. Undoubtedly, these tertiary educational institutions play a vital role in facilitating lifelong learning since universities, especially what is known as open access ones, allow adult learners of all ages to join them.

Given the ongoing process of globalization and the fast-paced advancement of technology, many higher educational institutions around the world follow a strategic plan to make access to lifelong learning opportunities available for all. They try to ensure that education and learning are available to everybody in society, including those who aspire for personal development and cultural enrichment, which higher education can provide, and not limited only to those whose goal is professional development to meet the labor market requirements. This is why the quality of tertiary education is always at the heart of concerns of each country because improving the quality of education leads to the improvement of the quality of people's life. According to Pavel (2012, p. 124), there is always "an individual and social need to improve the quality of people's life, including the quality of what they learn over many years of organized schooling, how they learn it, and why they learn it".

3.2. Libraries as a resource for lifelong learning

Libraries are an essential part of every learner's learning environment regardless of their age, or gender, and they act as an institution responsible for knowledge construction and dissemination, making information accessible to everybody, anywhere and anytime. This is reinforced by the advancement of technology which has made library services more adaptable and accessible as they have undergone tremendous changes concerning the ways of disseminating information. This is clear as digital libraries emerged to cater for the new high-tech era, offering new services such as online catalogues, online booking, and access to large databases...etc

Apart from being a repository of knowledge resources, libraries can be considered a free place where people meet, discuss, and access various resources for educational, social and general knowledge purposes. The library is, in fact, a place where people can become lifelong learners since they learn and look for information according to their personal goals and self-development intentions. In the words of Somi & de Jager (2005), libraries engage their users in activities which render them critical thinkers, problem-solvers, independent information-seekers and, hence, lifelong learners.

Therefore, libraries can serve as a catalyst for lifelong learning since they provide people from different age categories with socio-cultural and educational development by offering access to information and knowledge. This makes of libraries a center for self-education throughout life and, thus, leads to building a knowledge society. In brief, libraries can be considered as people's university as it provides different types of

knowledge at an effective cost or sometimes at no cost, and accommodates different types of life interests.

3.3. E-learning as a sustainable factor for lifelong learning

Learning which takes place with the help of technology, especially the ICTs (Information and Communication Technologies), is the trend in the 21st century since technology has revolutionized different aspects of life in general and made a paradigmatic shift in education in particular. This shift is represented in what is commonly known as E-learning. In the literature, this concept is used by educational practitioners interchangeably with other concepts or terms such as online learning, distance learning, internet-based learning and web-based learning.

This E-learning concept refers to the use of ICTs to make access to online learning resources easy and effective. Abbad et al. (2009) define E-learning as any learning which takes place electronically or which is empowered by the use of digital tools. In the same vein, Wentling et al. (2000) define E-learning as the attainment and use of knowledge which is predominantly facilitated and disseminated by electronic means.

Since knowledge is largely distributed by electronic means, technology can be regarded as the optimum resource which can render lifelong learning a reality because with digital tools, people of different ages can learn virtually anytime and anywhere they want without barriers. Therefore, technology, especially E-learning, is a motivating tool for people to learn on their own, and it makes the process of learning a highly personalized and private experience as Edwards (1997) put it.

Within this E-learning arena, people have become both consumers and producers of web-based content. For example, there are those communities of experts who produce published content like Britannica Online, and databases such as ScienceDirect or Jstor, but still there is another community of people who participate in the production and consumption of knowledge such as Wikipedia, Blogs, Vlogs, forums ...etc. These people who produce and consume at the same time are lifelong learners who, according to Aspin & Chapman (2000) and Field (2001), are in constant need of updating their knowledge, competencies and skills depending on their personal or employment-driven motives.

4. Successful case studies of lifelong learning

Actually, the literature still needs more empirical studies to explore lifelong learning as there are few case studies which deal with the implementation of a clear lifelong learning framework.

To cite an example, Brosens et al. (2015) conducted research on prisoners in Belgium who were involved in accessing social-cultural programs such as visiting the library, practicing sports activities, doing cultural activities, pursuing education or vocational training, and mental health care. These programs were designed with the aim to

promote lifelong learning among these prisoners. This study showed that among the program activities which the prisoners engaged in, visiting the library emerged as the most preferred activity which increased the tendency to engage in other lifelong learning programs. The library and the librarian can orient the prisoners to the right resource to solve their problems, develop their skills and competencies, and, hence, become lifelong learners.

Another case study is reported by Salcudean et al. (2014) on the implementation of a lifelong learning program in Romania. This program is called “the University in the Community” and it was implemented within Babes-Bolyai University of Romania. This program provided access to courses with topics of general interest (management, computer science, film criticism, creative writing...etc). The participants in the program most of them were women and young people with varying age range. Generally, the participants were satisfied with the program and showed high interest in the subjects presented at the university.

5. Future horizons for research on lifelong learning in Morocco

Higher education is a leverage for lifelong learning and the latter can never be promoted and enhanced in a country without starting with education first. Therefore, the university is the immediate target if lifelong learning is to be established as a policy to sustain the development of a country. In this section, I highlight a number of suggestions that may inspire and open future horizons for research on lifelong learning in Morocco.

1. First, investment in higher education is primordial since research and the production of knowledge are the key players in developing lifelong learning. To this end, the main mission of the modern university is to find solutions to societal challenges and to conduct research related to areas of priority.
2. Second, higher education should shape and adapt to the transforming world in this era of rapid technological change by addressing challenging issues through research and knowledge production. This can be done through a move towards more interdisciplinary research because universities are living laboratories where solutions to different societal problems are generated.
3. Third, universities should be viewed as hubs for learning, knowledge generation and research conduct, and the gap between the world of academia and the external world (enterprises, industrial companies, local communities... etc.) should be bridged to maintain sustainable development of the country.
4. Fourth, a balanced approach between the humanistic and instrumental or economic function of the university should be implemented. That is, universities should prepare young people at the humanistic level such as enhancing their self-development and at the instrumental level by preparing skilled labor for the development of the country.
5. Fifth, making community service a priority among students at university because it develops a sense of voluntary work and enhances lifelong learning

skills in youth. This community service can develop social and critical awareness which helps young people both find solutions to their local community problems and cater for the needs of their community and contribute to the common welfare of their country.

6. Sixth, universities should not be seen as a place where people are trained in various disciplines just to serve the labor market, but they should be regarded as active agents in political and economic policy decisions. This is because universities play an important role in developing the country as they educate good citizens, future leaders, innovators etc.

All this cannot be achieved without providing social justice and more democratized access to education because without social justice, it is difficult to implement a lifelong learning policy in the country and encourage citizens to become lifelong learners.

Conclusion

The main point to retain from this state of the art paper about lifelong learning is that the latter is of primordial concern for the development of a country. Without a lifelong learning policy, adapting to the new successive changes due to the rapid technological advancement can by no means be a reality. For this reason, the Moroccan government should adopt a lifelong learning policy and design a clear lifelong framework by trying to create, for instance, a national agency for lifelong learning. In this agency, experts from different fields should be responsible for creating lifelong learning programs which can be implemented at different levels of education (formal, non-formal, informal) and in different learning environments (school or university, work environments, family environment etc)

References

- Abbad, M. M., Morris, D., & de Nahlik, C. (2009). Looking under the Bonnet: Factors Affecting Student Adoption of E-Learning Systems in Jordan. *The International Review of Research in Open and Distance Learning*. 10(2): 1-25 DOI:10.19173/irrodl.v10i2.596
- Aspin, D. N. (2007). *Philosophical Perspectives on Lifelong Learning*. Netherlands:Springer
- Aspin, D. N., & Chapman, J. D. (2000). Lifelong learning: concepts and conceptions. *International Journal of Lifelong education*. 19(1): 2-19 DOI:10.1007/978-1-4020- 6193-6_1
- Brosens, D., De Donder, L., Dury, S., Vanwing, T. & Verté, D. (2015). LifeLong Learning: The Prison Library as a Bridge to Participation. *Procedia - Social and Behavioral Sciences*. 191: 1496 – 1500 <https://doi.org/10.1016/j.sbspro.2015.04.434>
- Candy, P. C. (2000). Reaffirming a proud tradition: Universities of lifelong learning. *Active Learning in Higher Education*. 7(2): 101-125 DOI:10.1177/1469787400001002002
- Candy P. C. (1990). "The transition from the learner-control to auto-didaxy: more than meets the eye". In: Long H., et al. (eds.), *Advances in Research and Practice in Self-Directed Learning*. (pp. 9–46). Oklahoma: Oklahoma Research Center
- Cropley, A. J. (1980). *Towards a system of lifelong education: Some practical considerations*. New York: Pergamon Press, Inc & Unesco Institute for Education
- Cropley, A. J. (1979). "Lifelong education: Some theoretical and practical considerations". In: A. J. Cropley (Ed.), *Lifelong education: A stock-taking* (pp. 99-115). Hamburg: UNESCO (VIE Monograph, No 8)

- Edwards, R. (1997). *Changing Places? Flexibility, Lifelong Learning and a Learning Society*. London: Routledge publishing
- Field, J. (2006). *Lifelong Learning and the Educational Order*. Oakhill: Trentham Books Limited
- Field, J. (2001). Lifelong education. *International Journal of Lifelong Education*. 20 (1/2): 3-15
<https://doi.org/10.1080/09638280010008291>
- Freire, P. (2000). *Pedagogy of the Oppressed. 30th Anniversary ed.* New York: Bloomsbury
- Greveson G. C., Spencer J. A. (2005). Self-directed learning – the importance of concepts and contexts. *Med. Educ.* 39(4), 348–349. DOI: 10.1111/j.1365-2929.2005.02115.x
- Jarvis, P. (1990). *An International Dictionary of Adult and Continuing Education*. London and New York: Routledge
- Johnston, R. (2000). “Community education and lifelong learning: local spice for global fare?” In: Field, J. and Leicester, M. (Eds), *Perspectives on Lifelong Learning. Education Across the Lifespan*. London: Falmer Press
- Knowles, M. S. (1975). *Self-directed Learning: A Guide for Learners and Teachers*. Prentice Hall: Cambridge Adult Education
- Kolb, D. A. (2015). *Experiential Learning: Experience as the Source of Learning and Development*. New Jersey: Pearson Education, Inc.
- Kunzel, K. (2000). “Europe and lifelong learning: investigating the political and educational rationale of expansionism”. In: Field, J. and Leicester, M. (Eds), *Perspectives on Lifelong Learning. Education across the Lifespan*. London: Falmer Press
- Longworth, N., & Davies, W. (1996). *Lifelong Learning: new vision, new implications, new roles for people, organisations, nations and communities in the 21st century*. London: Kogan Page
- Mezirow, J. (2000). “Learning to think like an adult: Core concepts of transformation theory”. In Mezirow, J. et al. (Ed.), *Learning as Transformation: Critical Perspectives on a Theory in Progress*. San Francisco: Jossey-Bass Publishers, pp. 3-33
- Pavel, A. P. (2012). The importance of quality in higher education in an increasingly knowledge-driven society. *International Journal of Academic Research in Accounting, Finance and Management Sciences*. 2(1): 120-127 Retrieved from: https://econpapers.repec.org/article/hurijaraf/v_3a2_3ay_3a2012_3ai_3al_special_3ap_3a120-127.htm
- Preece, J. (2011). Research in adult education and lifelong learning in the era of CONFINTEA VI. *International Journal of Lifelong Education*. 30(1): 99–117 DOI:10.1080/02601370.2011.538180
- Sălcudean, I. N., Vereş, V. A. & Pop, C. M. (2014). The Social and Cultural Dimension of Lifelong Learning in the European Union. Study Case: Babes-Bolyai University. *Procedia - Social and Behavioral Sciences*. 142: 162 – 168 DOI:10.1016/j.sbspro.2014.07.634
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*. 2(1) Retrieved from http://www.itdl.org/Journal/Jan_05/article01.htm
- Somi, N.G., & De Jager, K., (2005). The Role of Academic Libraries in the enhancement of Information literacy: A Study of Fort Hare Library. *South African Journal of Library and Information Science*. 71(3): 259-266 DOI: <https://doi.org/10.7553/71-3-595>
- Wain, K. (2009). “Lifelong learning and philosophy”. In: P. Jarvis (Ed.), *The Routledge International Handbook of Lifelong Learning* (pp. 390-400). New York: Routledge
- Wentling T.L., Waight C., Gallagher J., La Fleur J., Wang C. & Kanfer A. (2000). E-learning – a review of literature. *Knowledge and Learning Systems Group NCSA* 9.1–73

Lecturer Zahra El Aouri PhD. She is currently an associate professor of Applied Linguistics and TEFL at the Department of English Studies, Faculty of Letters and Humanities, Cadi Ayyad University in Marrakesh – Morocco. Her main research interests remain within the field of Applied Linguistics and TEFL including second language acquisition and language learning, motivation and language learning strategies, teaching methods, curriculum development and syllabus design and educational issues in general. She is also interested in research methodology and the application of statistics through the use of SPSS in the educational field. (zahra.educaid@gmail.com / z.elaouri@uca.ma)