E-learning sustainability: creation of a new platform for designing new community identity through lifelong learning

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Abstract: Creating a new e-learning platform is an important way of building a new design community identity through lifelong learning, a significant meeting space for not only professionals, but also for people working outside established enterprises to assess and make improvements in sustainable supply chain management. The e-learning platform launched by University S. Raffaele Roma (Italy) is now raising awareness and opening new markets for the green economy by spreading a positive vision, bringing effective tools to people’s attention, putting players in touch, creating systems, highlighting good practices, and improving good models. The objective is to create a permanent place for meetings and exchanging knowledge, for spreading throughout the world of design and business the idea that sustainable development is an opportunity not to be missed (Italian Design as a value, innovation and strategy – not only for product but also process!). Focus on what role design should play in innovation in the future.

Keywords: e-learning; lifelong learning; collaborative innovation; sustainable design; knowledge toward specialisation; ethical education; network system; training professionals; design thinking.


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1 Introduction

The current speed of change means that employees need to be trained continuously in order for companies to avoid the dangers of being out-thought and out-manoeuvred by competitors. These training initiatives (incorporating individual and group training activities) need to be monitored and managed via a consistent and reliable tracking system that can be stored, consulted and analysed as required.

The system’s data will be useful for management reports on productivity and for assessing individuals’ career advancement. This system of training management – often referred to as a learning management system (LMS) – is a key element of an effective professional development plan as well as being a key element of an organisation’s human resources strategy.

There seems to be universal agreement that the worldwide e-learning market will show fast and significant growth over the next three years. The worldwide market for self-paced e-learning reached $35.6 billion in 2011. The five-year compound annual growth rate is estimated at around 7.6% so revenues should reach some $51.5 billion by 2016. While the aggregate growth rate is 7.6%, several world regions appear to have significantly higher growth rates. According to recent regional studies, the highest growth rate is in Asia at 17.3%, followed by Eastern Europe, Africa, and Latin America at 16.9%, 15.2%, and 14.6%, respectively.

Each of the world’s regions has its idiosyncrasies in terms of the factors that drive this market. The US and Western Europe markets are the most mature. The USA spent more on self-paced e-learning than anywhere else in the world. Western Europe is the world’s second largest buying region for e-learning products and services but Asia is predicted to outspend Western Europe in e-learning terms by 2016.

Today the role of the designer is written into a plan where innovation – as a fundamental tool for the growth of businesses – must pass from being characterised as an irregular occurrence to having a more systematic nature in which its individual creative capacity must consequently change to being the creative capacity of the system.

2 Background

It is becoming clearer and clearer that the value and significance of design is overcoming the traditional aesthetic dimension, hitherto understood as a generic ability to create beautiful shapes or to improve the functionality of those already in existence. Ethics and beauty are the current key words, to appreciate and transform into actions. The producers of goods and services in the design world, already looking towards the values of aesthetics, functionality and know-how, can improve their profile, even financial, with the consolidated support of local resources (supply chain) and with technological and process innovation from a sustainable point of view. In order to carry out real changes both in our society and in our production methods we need a parallel revolution in our way of thinking that will change our behaviour, starting in the workplace. Less waste of
raw materials and energy, and the project at the centre of product life cycle together with actions characterised by corporate social responsibility are the cornerstones of change – a turning point that could affect the current economic crisis, changing it into opportunities and challenges. Incentives for research and training for technical and sales staff are crucial for businesses, together with communication that is more focused and transparent.

Those intangible factors which are decisive in contributing to the success of a product and a company are now being highlighted: sustainability, brands, patents, know-how, entrepreneurial capacity, human capital, design, etc. are elements of extraordinary importance for tackling markets that are ever more complex, together with a public that is ever more demanding and unpredictable.

Sustainability can be seen as a method for directing and communicating the quality of a company’s products, processes and services, with techniques that increase its perceived value. Sustainability is as a new way of doing business, to be recognised, to combine quality, innovation and recognisability, and to invest better and to protect inventions.

In this case, it is important to be aware of the business potential of sustainability: which is the potential for innovation, greater competitiveness, and improvement (the intangible factors), and to compare the successful (and unsuccessful) examples in order to identify possible methods of management, development and future synergies.

Unfortunately, the limits, in terms of size, financial means and the managerial culture of many companies still do not always allow them to fully exploit the potential that comes with the adoption of a competitive strategy based on these assumptions.

3 E-learning platform for sustainability

In order to increase international understanding and awareness of our respective institutions, University San Raffaele Roma are always involved in collaborating in a variety of areas related to higher education and program research and to encourage collaboration on research and development between the different institutions as agreed by the coordinators of other open e-learning platforms.

Since 2006, University San Raffaele Roma has provided the first national Architecture and Industrial Design degree on an e-learning platform. The participants (even if already employed, temporarily unemployed or geographically distant) are therefore now completely free to decide when and where to use the content of the university. The main purpose is ‘lifelong learning’, to upgrade the skills needed for a professional profile that requires mastery of theoretical and practical foundations and large levels of autonomy and responsibility in the fields of design, characterised by increasing technological and organisational complexity and ever-growing competition. Italian design is seen as a strategy for innovation and business implying a particular set of values. The project has a specific vocation regarding the concepts of transversality and contamination.
The learning and education sector, like all industries, needs strategies, development policies, laws, qualifications and promotional instruments, which require political attention. At the end of the course participants will have developed the following important skills:

- knowledge of the products and production processes with particular reference to and comparison with Italian fashion and design
- designing a collection (product and processes)
- knowledge of how to plan and carry out market research and a marketing plan for the development of an innovative product (or process)
- knowledge of how to innovate the local product through knowledge of new styles and trends
- knowledge of how to plan and conduct a communication plan that includes promotional and innovative branding
- knowledge of the materials and technologies available for the ‘enhancement’ of innovative local production
- knowledge of how to plan the process of the distribution and sale of a product
- knowledge of how to lead a group at work and motivate them to achieve results.

E-learning, through theoretical study, will allow for the analysis of case studies and group work, allowing for learning by ‘doing’ and contextualising the concepts of the individual production experience. For each module, lessons and papers are downloadable directly from the online platform at any time of day. The aim is to achieve the highest professional qualification profile. The designer (or project/product manager) is responsible for the programs and innovative projects that will bring about change, and for implementing it and using structured theoretical and practical knowledge with significant experience that can be applied to business processes, which assume responsibility for the organisation and its customers.

The main purpose of the course is to upgrade the skills needed for a professional profile that requires mastery of the theoretical and practical foundations and large amounts of autonomy and responsibility in the fields of fashion design, which are characterised by increasing technological and organisational complexity and ever-growing competition. Italian design is a value system, and an innovation and business strategy.

The most challenging issue that design must deal with now is the redesigning of a new system of knowledge and alliances, a multicultural system that feeds on new suggestions and theory.
Figure 1  S. Raffaele Roma e-learning education maps (see online version for colours)

Figure 2  S. Raffaele Roma e-learning education maps (see online version for colours)
Figure 3  S. Raffaele Roma e-learning education maps (see online version for colours)

Figure 4  S. Raffaele Roma e-learning education maps (see online version for colours)
4 Online learning tools: technological solution

Each student is provided with a user name and password that allows entry into the internet platform dedicated to online degree and access to learning materials online and CD-ROM/DVD with instructional materials offline where established. The platform for each subject, a space dedicated to student’s virtual classroom, consists of a diary online activities to be carried out during the week (sections of learning materials, online collaborative activities which participate in trials ongoing planned); a forum for discussion, requests for information, insights. A bulletin board for announcements of organisational type; a mailbox for the delivery of the exercises and deliverables required by the teacher; specific learning resources (exercises, supplementary materials, etc.). A virtual environment, where applicable, referred to as the live session that is activated in times and days specified for each subject, a system that integrates text chat with a virtual whiteboard systems for file sharing, and for ‘guided tours’ of internet sites, real-time tests, etc. To meet the needs of the University San Raffaele Roma’s educational activities, MediaTouch technology partner of the University, has created a platform for distance learning, customising and integrating software components primarily of Open Source. The starting point for the delivery of e-learning Moodle, one of the most popular Open Source platforms in the world. Best known for its ergonomics, Moodle has been designed following the pedagogical theory of social constructivism, but it is very versatile for the large amount of available modules and highly customisable thanks to the availability of the source code. From this platform, MediaTouch has developed a comprehensive solution through the implementation of additional modules, customisations and integrations with other software components, in order to fully satisfy the demands of teachers and head teachers of University San Raffaele Roma, and to provide the while services related technical assistance (based trouble ticketing systems) and secretarial education. The system of distance education is supplemented by a set of high-level technological solutions for the implementation of the functionality of students’ office.

5 Knowing how (and why) the system works

Learning in the field of design, then, means learning to ‘systemise’ knowledge related to actors and other specialists, and to connect applications and organisational skills, knowledge and know-how. The multifaceted nature of design and connective requires that ‘a school has in it many souls’ providing students with a network of expertise and professionalism that fosters trans-disciplinary and allow them to build their own paths towards ‘mending’ languages and making disparate contributions. It is essential, of course, that such a school is a node in a larger network, which connects the actors in the design of its territorial system. The entire territory is a ‘becoming school’ for students, particularly those in a high-intensity relationship-driven design, as is the case in Milan. It is also important, as already noted, that the schools ‘systemise’ each other, to form a common front on issues of common interest. This does not always take place, but increasingly there are frequent actions that trigger a dynamic exchange between the centres of learning. These include cooperation projects at EU and global level, exchanges between students, international workshops, conferences and seminars, as well as scientific connections which match the forms of training and research design. Though they may become increasingly distant from self-referential logic, thanks to the same rules
of competition, the public and private schools will observe each other with interest, establish comparisons and references and qualitative models formed at national, European and intercontinental levels. Permanent links between international schools are established, which become the basis for access to the training market in a new country, forming systems whereby global networks can establish a relationship with territorial neighbourhoods.

6 Lifelong learning: knowledge towards specialisation

The progressive complexity of the social structure and the Italian production and global revival of forms of craft-industrial production mixed with the new global division of labour, the emergence of ever new market niches related to the service and to mediate between people and businesses have also ensure that the provision of training related to the design, as well as training in general. The lifelong learning project aims to update and qualify designers, operators, employees, executives and managers on issues necessary to support the competitive development of the socio economic area (with particular reference to the peculiarities of their ‘cluster’), can play a active and proactive role in the process of renovation and redesign of the ‘new’ local systems.

The professionals need to form a retraining to assess, develop, sell, convey the image of the design-oriented manufacturing sector (fashion design) in a ‘cross’ that combines pragmatism and imagination, managerial and planning in support of the markets and the development of skills for managing human resources. The proposed training will see the participation of persons who, at different organisational levels and in various industries and service, have expressed the need for upgrade and long life learning.

The project has a specific vocation on the concepts of transversality and contamination. The trail is well able to provide both practical experience and knowledge of both project-specific case studies, with a multidisciplinary approach that combines pragmatism and imagination, managerial and planning skills.

The faculty is composed of academics, professionals and consultants with significant experience in the fields of planning, design, study and management, communication and marketing industry. A significant contribution by visiting professors from the international area.

7 Training professionals

Producing innovation through design has become vital and indispensable for the production system.

In Italy, and Milan in particular, we have many of the most interesting cases of companies of fashion (apparel, accessories, jewellery) and design who were able to combine an efficient managerial with a creative entrepreneurship, innovation and design. The educational trail is able to provide both practical experience and knowledge of the project and specific ‘case history’. The training course prefers a multidisciplinary approach that combines pragmatism and imagination, managerial and planning skills.

The functional area of reference are product (and process), the industrial production, marketing, communication, retail, distribution and brand management. The Italian economic system is engaged in a major process of change in order to regain
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competitiveness and to respond to the challenges of the global economy. A process that has as main objective productivity growth and, therefore, requires a strong investment in innovation of products and production processes, organisation and ultimately in human resources. It is a path faced by individual companies, but it is necessary that beside them there are institutions at national, regional and local know how to understand the meaning of the changes taking place, immediately adapting programs and operational strategies.

8 Conclusions

Learning design has a naturally strong link with industry and the job system, which in both cases testifies to many internship experiences (in university these experiences are mandatory) and which involves industries in their learning projects. These links are also verified by a wide range of exchanges, as explicated in a large number of competitions, workshops and joint projects. Creativity is involved from the bottom to top. Research into ‘new’ design is searching for new fields. Design is a conceptual project penetrating inside life, distorting all service enterprises. Life-design is the perception of which outcomes can arise from interpreting society’s needs, especially interpreting what is suggested indirectly. It focuses itself on human beings, along with meetings, jobs, expectations, entertaining, learning and movement. Projects for communities, social situations and living moments.

The question that this article has aimed to answer is whether a platform for e-learning can become a tool for the development of new models for creativity, design and innovation, transforming the concept of e-learning, and shifting towards the concepts of creativity learning, learning design and learning innovation. The experience described here suggests that this is what happens, generating new needs in terms of functionality of the platform, which must then be enriched with elements that encourage debate and the exchange of the community (collaborative innovation). In order to encourage creativity, design and innovation are not associated with the concept of randomness, but are part of a process and a method that is implemented in a dynamic way with the use of e-learning, producing a shift in the concept of e-learning.

At last we can say that an e-learning platform is now very important to:

• promote and disseminate the culture of design, stimulating demand
• structure an offer of services to develop processes based on design innovation in enterprises, measured by their real needs
• encourage the use of services facilitating understanding and access
• promote the emergence of a new network of service companies in the field of design, a real infrastructure for operating in the territory of new knowledge, creating by young professionals coming from a large pool of specialised training that puts together a package of skills to support innovative business processes.

For the future the aim is to enhance used current strategies to facilitate educational content access to students with disabilities subtitling of video contributions. This feature also can also manage contents translated into different languages. In view of student’s internationalisation therefore it will allow students to benefit from educational contents (initially developed only with Italian language).
References


