Education and Sustainable Development: “Third Mission” of University of Rome Tor Vergata

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Abstract: The paper aims to explore the transition from a traditional passive model to a more proactive and dynamic model of the education system at University level. Therefore, the research seek to analyse the evolution of the University’s approach to integrating into curricula, topics as CSR and Sustainable Development and the link between education, territory, society and innovation and the shared value, through case studies at faculty level. In particular, it analyzes some innovative practices of training (education+Action) promoted in 2015 by the School of Economics at the University of Rome Tor Vergata. The findings of the project are inductive to develop a dynamic bottom-up model of learning and education dissemination on the sustainable development. The model allows to: (1) sensitize students to be active and shape their future, (2) create the profile of “local ethical promotors”, (3) create and strengthen the local territorial networks, connecting the networks for local development with those for social inclusion and training; (4) contribute to the creation of a system of services to responsible territorial development.


1. Introduction

Sustainable development is an important global objective to overcome the economic, environment and society crises in many countries. One of the main instruments to develop a smart, sustainable and integrated growth (European Strategy 2020) is through quality education able to promote inclusively and equitable learning opportunities (Sustainable Development Goals; Rio+20), specifically on sensitive issues such as social responsibility, social entrepreneurship and sustainable innovation, so that all citizens can acquire and develop competencies and professional skills needed to promote their employability, active citizenship, and intercultural dialogue.

The production based system of goods and services in scientific research (the whole hi-tech) are equivalent to 30% of the world GDP. The creative/innovative industry is worth another 15% of GDP. The vocational training is around 6% (OECD, 2014). Around 8-10% is represented by health, based almost entirely on scientific medicine and the high qualification. The culture, to which we refer, therefore, represents 60% of the world economy.

Education plays a critical role in promoting sustainable development and improving the individual’s ability to engage in the environment and development issues. Education changes people’s attitudes towards assessing matters of sustainable development that concerns them. Therefore, there is an increased required orientation for all disciplines, including classical and social sciences, to address objectives related to the environment and sustainability. Discussing the sustainability requires a holistic and interdisciplinary approach, bringing together various disciplines and institutions while retaining their distinct identities (Thessaloniki Declaration, 1997).

In the last decade, due to the recession, there has been a reduction in public expenditure in education in many EU countries and therefore, a reorganization of their institutions. Among the OECD countries, Italian government spending on education is the lowest (4.6% of GDP), investing just 1% of GDP in the university and research, compared to OECD average of 1.5%. (Istat (2015); OECD (2015)). In the meantime, the society as a whole requires increasingly attention to responsible behavior and awareness to the consequences of the individual and collective actions on the environment. As such, a paradigm shift occurred, seeing citizenship the main promoter of sustainable initiatives at the local level by stimulating a new model of “territorial governance”. Therefore, academic institutions are going through a reconfiguration of their role from a passive actor, with the sole purpose of providing “high education”, to that of an active promoter of cross-training programs and oriented to the territory, due to collaborations with nonprofits, Public Administrations, SMEs and citizens: the so-called “Third Mission”.

The traditional teaching mainly based on the transfer of information is no longer able to provide the tools needed to act responsibly and independently and ensure a “sustainable” development of the society. Education on the sustainability (environmental, economic or social development in a broad sense) is currently seen as a commitment and an opportunity that engage various social actors, at different levels and with multidisciplinary expertise, to define objectives, strategies, actions aimed to integrated activities able to produce a cultural growth with impact on the environment and society.

Education is an essential tool for achieving awareness about the environment, ethics and values and also strengthens the attitudes and skills needed for sustainable development and an effective participation in the decision-making (Agenda 21 Ch. 36, 1992).

2. Aims and Methodology

The research seeks to understand what are the main features of the new role played by the University in the promotion of economic, social and environmental sustainability. It also looks at what are the behaviors adopted to sensitize various stakeholders on this issue, in dealing with challenges, between opportunities and contradictions, in the context of globalization and interdependence between markets.
After a brief research background that frames the importance of education, the first part of the research introduces a literature review of the main international strategies for sustainable development with a focus on “Triple Helix Model” and “Quadruple Helix Model” and defines the concept of “Third Mission” taking into consideration the status-quo of the universities’ educational programs on the Social Responsibility and Sustainable Development in Italy (Paragraph 3). The theoretical part is enriched by qualitative analysis of best practices developed in the School of Economics, at the University Tor Vergata (Paragraph 4) and the empirical data gathered from three surveys submitted as part of the Laboratories’ pilot projects and the teaching course module “CSR and social reporting”. The concluding remarks include considerations on the “Responsible Program education” model analyzed in the research and the open issues.

3. A theoretical interpretative model on the new role of the University

The increasing pressure of environmental policies and changes in public expectations has increased awareness of the institutions, for-profit and non-profit organizations with the importance of the sustainability dimension. In the wake of the economic crisis of 2007-2008, enterprises and institutions are required not only to achieve economic results but also to demonstrate commitment to social and environmental issues, contributing to the creation of a new civil economy.

In a phase of strong economic and social difficulty, the culture and research represents the moral energy that can help countries mitigate the effects of the crisis. In this context, the Universities, in particular, the Italian universities, recognizes the responsibility to commit to talent development, supporting ideas and multiplying the intellectual energy of the country. Therefore, the academic activity development, mainly based on core activities, such as high education, training and research, should be integrated by the so-called “Third Mission”, which is one of the main tools enabling resources allocation (Malakoff D., 2013).

“Third Mission” refers to a set of activities by which the University triggers processes of direct interaction with civil society and businesses, with the aim of promoting the growth of the territory. Therefore, the knowledge becomes instrumental for attaining output production (Novelli G. and Talamo M., 2014).

Taking into consideration more than half of the world GDP (about 52%) is based on the “triangle of Eco” (knowledge economy), the education is one of the most significant economic sectors and the spending on education and research can promote economic growth, improve productivity, contribute to individual and collective development and reduce social inequalities. Therefore, it is necessary for the university, to develop policies and appropriate actions to intercept part of this flow through innovative and creative systems in order to promote the direct application, enhancement and use of knowledge to contribute to the social, cultural and economic development of the society.

The link between the school, academic university offer, and job market, allows that businesses and civil society find in the territory the needed knowledge and skills, ensuring sufficient guidance to young people entering workforce marketplace. In this context, the linking between “science” and “society” encourages dialogue between the parties in order to enhance the territory of reference by creating new networks and strengthening existing ones between the various actors with which University operates (Figure 1).
Therefore, there is a shift, from an industrial society where reigned a dichotomous model industry-government to a growing relationship between university-industry-government (Etzkowitz H., 1993; Etzkowitz H. and Leydesdorff L., 1995). The latter relationship requires a balanced configuration of “three helix” for the transition to a knowledge society, in which the university and other institutions collaborates with the industry and government, also by implementing joint initiatives (Etzkowitz H. and Leydesdorff L., 2000), for sustainable socio-economic development.

“Triple Helix” model considers that the potential for innovation and economic development, in a knowledge society is largely based on the role played by the University and the hybridization of the elements resulting from the relationship between universities, industry and government in order to generate new formats of institutional and social production, transfer and application of knowledge (Ranga M. and Etzkowitz H., 2013).

Open Innovation 2.0 (OI2) is a new paradigm based on a Quadruple Helix Model where government, industry, academia and civil participants work together to co-create the future and drive structural changes far beyond the scope of what any one organization could do alone. It encompasses also user-oriented innovation models that expect to take advantage of ideas’ cross-fertilization leading to experimentation and prototyping in real world setting (European Commission, 2015) of the projects designed by the actors of the four-helix (Figure 2).
In this period of transition to an “Open Knowledge Society,” the university plays a critical role in the physical space of encounter between academia, civil society, for-profit and non-profit organization and PA. The first step in creating a university of the future is to ensure that the institution establishes a relationship with the Society of reference: this involves a rethinking of strategies, organization and operating procedures, therefore, reinventing university outside the perimeter of the “old-fashioned” public administration. The academia can create networks between different actors operating in the territory, communicating with the society and the territory and creating a virtuous circle for the social and economic development (Third Mission). Therefore, the university can act as a “regional hub” that triggers participation processes, engaging not only students but also the citizens, NGOs, businesses and local governments. Such processes are often initiated by education training programs in the economic, social and environmental themes, considered by applied projects in the territory, implementing, therefore, a principle of training/action.

Considering the concept of “Global Corporate Citizenship” by Schwab (2008), which states that the business is a holder of citizen rights and duties, and a fundamental agent to improve the global practices, such concept can be extended to all organizations including academic actors being active in the economic, social and environmental development, disseminating knowledge and “global” experiences in the local territory and especially in creating the future class of managers enlightened and sensitive to issues of sustainability.

The Italian universities adopted teaching modules related to “sustainable development and social responsibility” from 2008, with a delay of about ten years than in North America. In mid ’90s in the USA and Canada there were more than 40 professorships and more than 500 courses in universities and business schools working on the theme (Dunfee, Werhane, 1997). There is also a delay with respect to other European countries, whose experiences dates back to the early 2000s.

A 2008 study developed by the Italian Centre for Social Responsibility (I.C.S.R) underlines that despite the growing attention to these issues, increasingly common among the three-year degrees, magisterial and post-graduate courses, are still very few Italian Universities able to train professionals in this area (the so-called “CSR manager”). In particular, the study reveals that, compared to the Anglo-Saxon world, in continental Europe, and especially in Italy, the CSR teachings modules has the following particularities and gaps: most of the time are promoted as optional courses, not placed in a training program, organic and evolutionary, and are structured ad hoc; often introduced in the curricula due to free initiative of teacher, that holds expertise and
interest in the subject; often the courses programs focus only on certain aspects of social responsibility, disregarding the general knowledge and vision (strategic) plan that should govern such training offer; are based on a purely theoretical approach and traditional teaching methods with frontal lectures.

On a general note, should be underlined the evident lack of a strong contact between universities, institutions, businesses, and territory, as emphasized by the above “Quadruple Helix Model”. This aspect isolates the courses of social responsibility from the real operational world. However, should be stressed that there are fragmented initiatives encompassing more innovative teaching approaches, which represent best practices, such as the training programs for 2014-2015 launched by the School of Economics at the University of Rome Tor Vergata.

4. The case of the University of Rome Tor Vergata

School of Economics of the University of Rome Tor Vergata is located in the VI District at outskirts of Rome. The area presents several problems, such as social deprivation, poverty, and micro-criminality, a low degree of education, unemployment, racial inclusion, and security. The faculty, that welcomes about 5,200 students, started in the early 2000s with a course on the topic of “Social reporting”, and launched its first course on “CSR and social reporting" in 2009-2010. The later, from its initial stage, has been structured following the "Anglo-Saxon" perspective based on a strong link between the theoretical approach (in “triple bottom line" perspective) and practice, case studies and group works, with interactive classroom and business professional’s testimonials. The course aimed to a large degree to strengthening the contact between universities and institutions-associations-businesses in the territory, also in anticipation of subsequent placements of the students in training projects/ internships at the partner businesses of the course.

Recent finding of a survey, in which participated 56.45% women and 43.55 men between 20 and 31 years, who attended the course of “CSR and social reporting” from 2013 to 2015, shows the following interesting data: 30% of students attending the CSR exam, subsequently discussed the final thesis on the subject and some of them are winners of national awards for “Best thesis on sustainability” while 25% considered that the thesis project in CSR was helpful in overcoming the job interview. Also, 63% of respondents currently are employed, and 42% found a job within six months of graduation especially in the for-profit sector (about 63%). The less enthusiastic data are those related to the job role in CSR or sustainability activities, having received just a single positive answer. The results show that 94% of students have a medium- high average satisfaction with the course (Figure 3), also confirmed by the increasing number of taken exams for a. y. 2014-2015, about 200 students examined, among which about 40 students are Erasmus.

1 Promoted for ten years by the Observatory Socialis.
With the collaboration and support of the Commune of Rome/VI Municipality, Lazio Region and Next-New Economy for all\(^2\), has been activated by the teacher of the CSR course, extra-training activities (6 ECTS) called “Laboratories for the new economy - Preparing for the Future”, also open to students from other universities.

The overall objective of the laboratories is to promote the awareness of students to a new kind of social responsibility, focused on the expectations and the needs of their territory. During the training is required, in fact, the concrete elaboration (individual or in groups) of innovative proposals for sustainable development in the territory, starting from experiences already realized or identifying new needs to be answered with concrete and innovative proposals (stimulation of self-entrepreneurship). The training consists of 3 phases: information/training, co-creation and public speaking. During the 5 meetings, the organizers have experienced the self-guided approach of the participants, who, through the instruments of co-design, stakeholder analysis and SWOT, project-work format developed ad hoc by the organizers, have realized the ‘idea of the final project work’. The themes of the projects were different: the protection and management of the commons goods, cultural initiatives, social inclusion and regeneration, activities of critical and responsible consumption.

In the laboratories attended around 120 students, mostly men (56%) of average age 25 years from the School of Economics, Law, and Social Sciences. The workshops produced 21 projects, grouped into three categories: 1) Design of “Ethical Cash Mob”\(^3\), aimed to promote a new way of interaction between citizens and businesses; 2) realization of video story-telling of a responsible company, which explains the selection criteria of an identified sustainable business in the territory, its ways to involves citizens, eventual problems potentially identified during the implementation of sustainable initiatives; 3) proposal of innovative ideas of sustainable development in environmental and social context, to be replicable in the territory.

More than a third of the projects presented in the final stage of the laboratories were actually concretely implemented, such as: business of furniture articles with recycled materials, commercial activity of organic products, activities of “cash-mob”, the app on “Made in Italy” and there is in working progress the project on recycling at the university level.

\(^2\) A civil society association that aims at promoting and spreading the economic culture of sustainability. Other partners: Acli, Agisa, Legambiente, Angelicum, Green Challange; LUISS, Univ. Unitelma Sapienza.

\(^3\) The “Ethical Cash Mob” or “MOBilization in the territory” means a public initiative, that based on a context of constructive dialogue among responsible citizens and sustainable entrepreneurs, awards virtuous and open to confrontation local businesses, by gathering a large group of participants at the point of sale of the company, and engaging them to acquire, through innovative and interactive methods, its eco-responsible products.
The main aim of the initiative, defined, for its characteristics, as “FormAction” (education + action), is thus: to stimulate young people self-entrepreneurship and search for new and valid tools of grassroots mobilization to be integrated in the sustainable local development; enable meetings, collaborations and synergies between local entrepreneurs and creative young people; stimulate a hub of creative ideas among students, support forms of self-employment and social innovation; raise awareness among students on environmental issues and sustainability.

The survey findings submitted to the participants in the final stage of the laboratories shows that there is a general appreciation of the path attended: the participants assessment recognized an average mark rather high, not below 3 (on a scale from 0 to 5), in achieving different project aspects (e.g. content, coordination and learning). More than 58% (Figure 4) recognized an increased knowledge in the field of CSR and sustainability after such activities. However, when assessing the acquired level of transversal competences, the results show the lowest average (3.15), agreed by 38.2% respondents. The assessment on the techniques transfer to enable self-entrepreneurship, co-design idea evaluation and development of autonomous critical skills and choice, show rather low results (both aspects have averages less than 3.5 and the highest appreciation exceeds little over 50%). However, the results confirms the success of this first experimental edition of the laboratories on the theme of Territorial Social Responsibility (TSR), that, acquired a general consensus at the overall University, and enables programming a further second edition with the youth at the center as advocates of an innovative culture and promoters of change for future generations.

The “Labs for the new economy” have been designed in close collaboration with the “IInd Edition Event of CSR and Social Innovation” in Rome and with the Oscars of Sustainability that is a competition of innovative idea among youth promoted by Next and supported by the Lazio Region. The second edition of the event has been of strong interest to students at the School of Economics, with more than 100 attendances and active participation in seminars and workshops.

The event awarded 2 out of 3 Oscar’s of Sustainability to the projects developed by the students of University of Tor Vergara, projects created during the “Laboratories for the new economy”:

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4 “Preparing for the Future: From producer to consumer ... of ideas,” Cascina Triulza, Pavillon of Civil Society - September 27, 2015 at 15:00 - 18.00 hrs.
• 1st Prize: Oscar for the best proposal for MOBilitation in the territory, assigned to EQUOMOB group for the “Cash Mob_RiCompriamoci il future/ Cash Mob_BuyingBack the future” project. It was implemented during the “Ethical Cash Mob” event on March 21st at the outskirts of Rome, in Tor Bella Monaca, with the participation of citizens, students and teachers determined to prize- “voting with your portfolio”- the fair trade products of Altromercato and the first sustainable supermarket of Lazio, Simply Market.

• 2nd Prize: Oscar for the best “video story-telling” of a socially responsible business, assigned to the TV6 “Bite the prejudice” group. The video tells the story of a restaurant/pizzeria, named Locanda dei Girasoli, which promotes the work and integration of disabled children. In order to show the university’s commitment towards the business commercial activity, later, was organized the “RistoMob” where more than 100 administrators, researchers, students and friends attended to support the economic activity and emphasize, once again, the power of “voting with the portfolio” and further, inserting the business within the university’s conventions.

5. Conclusion and consideration

Among the strengths of academic offer on the themes of “sustainable development” and “social responsibility” at the University of Rome Tor Vergata should be emphasized, the provision, in the School of Economics, of a structured, organic and evolutionary training course, structured on ad hoc basis and characterized by several actions:

• The first level undergraduate course of “CSR and social reporting” with an “international orientation” but mainly focus on understanding the “local context”, with the aim to strengthen the connection between universities and institutions/organizations/businesses in the territory, according to “Third Mission”;

• Optional extra-formative activities such as, the “Lab for the New Economy”; such path of “formAction” allows to develop a bottom-up model of learning and education dissemination on the sustainable development able to: (1) raise the need of stimulating confrontation on the sustainability issues, including young people, public and private institutions, local businesses and third sector organizations to identify needs and proposals for sustainable development of the territory; (2) support young people who can assist the territorial organizations or can decide to constitute new ones, and which can bridge or integrate the different territorial subsystems, such as businesses, social promotion, school, and
universities; (3) create new networks and systems and spread social responsibility behaviours; (4) connect the networks for local development with those for social inclusion and training: create a stable relationship between the policy development, labor, education, universities and social welfare; (5) identify good practices and creating new ones with the students particularly attentive to the development and social inclusion.

These two activities, which are closely linked to each other, are not isolated from the rest of the didactics, due to the fact that within the CSR course program are planned lessons with a cross-cutting approach and also due to the declination of the theme in other academic courses, such as: “Business Strategy”, “Business Economics and Public Administration”, “Economics of Non-Profit Organizations”, “Health Economics”. In addition, within the course, there are testimonies of teachers from other faculties, such as literature and philosophy: it enables a constructive synergy between experts from diverse areas guaranteeing a “business oriented” approach that takes into account the values and ethics.

The context shows a strong connection between universities, institutions, businesses, and territory, as per the aim of “Quadruple Helix Model”, linking the academic offer on sustainability and social responsibility to the practice. The above projects show, in fact, how government, industry, Tor Vergata University and participants of civil society worked together, sharing ideas to co-create the future, in a perspective of shared value creation.

The academic offer weakness to be addressed is due to the belated awareness of the students about the importance of CSR themes (teaching class provided only for 2nd level undergraduates). A recommended action requires to introduce, at the undergraduate level, a course on the topics of “Social Responsibility -Territorial Development -Social Innovation” (3 ECTS) from the first years of university study, able to raise awareness to mapping needs, actors in the territory and operational instruments (SNA; Systems Thinking/Dynamics models). As such, the early awareness should contribute to:

- Guide children to adopt a responsible behavior in their daily activities towards economic, social and environmental aspects (propensity to recycling; raising awareness to energy-saving, car sharing).
- Stimulate the creation of a student’s association bearer of sustainability values within the University and able to realize concrete projects, according to the model “Chapter” of Net Impact of North America or other private Italian Universities (Green Challenge - LUISS).

The current strength of the University Tor Vergata is the enlightened leadership coordination of the Prof. Rector Novelli, who has actively participated in all the initiatives described above. The new vision encompasses long-term strategic objectives of the institution towards design and implementation of a development path encompassing the sustainability and a unitary cultural system, no longer confined to the School of Economics but integrated with all the other macro-areas of the University (Economics, Biology, Engineering, Medicine, Philosophy and Letters).

Among the challenges encountered at the University level, should be noted the lack of a central coordination center for sustainable activities and the gap in the traditional and online communication systems, as well as in reporting strategies. In this regard, among the projects under consideration to overcome this critical aspect there are:

- introduce training courses on sustainability, to be shared among the faculties of the University; for 2015-2016, it is scheduled the transformation of the laboratories in extra training programs launched at the University level, providing the collaboration of teachers but mostly the participation of the students from different faculties, in order to stimulate a cross-fertilization of ideas;
- strengthen the research activity, transforming the “Covision Lab” (initiated in 2012 from an multi-stakeholder and multidisciplinary training initiative, consultancy and research) in an interdepartmental research center at the University level, with a more integrated and cross-cutting approach, based on a close collaboration between all faculties, with the aim of
stimulating the internal exchange between the teachers and the mutual sharing of ideas, proposals, critical issues, promoting communication and internal achievements visibility of the University campus;

- design an academic offer for postgraduates on the themes of sustainability and social responsibility along with the *triple bottom line approach*, integrated at the level of the faculty and territory (Quadruple Helix /Third Mission), in partnership with profit and non-profit organizations (SDSN, Global Compact, Next, Observatory Socialis, Enterprises and University), providing an integrated course with modules from other masters at University level;
- linking the training course on sustainability to courses dedicated to the creation of start-up/social enterprises incubators;
- Social reporting, to promote *benchmarking and bench learning*.

The role of the University Tor Vergata as primary place of production and transmission of knowledge in the territory, it is one of main potential levers to overcome the vicious cycles of the economic crisis and social decay that plagues the areas’ of Municipality neighborhoods. A virtuous relationship between science, knowledge and society contributes to the growth of human capital, as well as productive and civil, and the culture of professionalism, all being necessary for a healthy social and economic development.

As pointed out during the research analysis, the enthusiasm and social values guiding the teachers and students are conflicting often with the limited economic resources, territorial problems and the lack of appropriate reforms that impede the implementation of rapid change and innovation. The “Third Mission” confirms to be an activity partially able to allocate funds for the development of university activities that produce extra-university projects (e.g. the projects developed into the laboratories). Moreover, the strong presence and activity of the third sector organizations increasingly play a fundamental role in the transition to a sustainable and resilient “Open Knowledge Society”.

Figure 5. “Triple helix Model" evolution
Finally, in line with the objectives for 2030 of the “Sustainable Development Network”, related to step 4 - ensure inclusive and equitable quality education and promote life-long learning opportunities for all - the long-term prospect embraced at the University level is a gradual change based on transparency, dialogue and shared growth through the implementation of strategic links within the University and with the territory from the perspective of “Third Mission” and “Quadruple Helix Model”, with the substantial increase in the number of students and adults who have the necessary skills, including technical and professional skills in the field of sustainability, employment, obtaining a decent work and entrepreneurship.

Moreover, this is feasible along with the students’ knowledge and skills necessary acquisition that makes possible to promote sustainable development through education on sustainability, sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and resilient, global citizenship and enhancement of cultural diversity and the culture contribution to sustainable development. The advancement of such knowledge is possible through the academic courses open to all and with a cross-cutting approach of “formAction”.

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