



The European Experience in Lifelong Learning and the Restructuring of the Economy

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9.1 INTRODUCTION

Learning is different from teaching and as noted by Illeris (2016) it concerns the mental processes that will lead to permanent changes or results as well as the interactive processes that develop between individuals or a person with learning material and his social environment and that lead again to changing behaviors, attitudes and skills.

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There are three forms of learning that can take place during a person's lifetime. These are formal learning, non-formal learning and informal learning. The first and most widespread of these three forms, formal learning, takes place within the formal education system (primary, secondary and tertiary education) and is addressed to specific ages depending on the level of education, while depending on the level of education is mandatory. Non-formal learning takes place in any space (workplaces, institutions of social activities, institutions of formal education), is not mandatory and is a conscious and voluntary choice of the individual. Informal learning takes place throughout the life of the individual in any space and through it the individual forms attitudes, choices, knowledge and behaviors while his consciousness can be affected (Lionarakis, 2013).

Lifelong learning includes all learning and educational activities, of any type, content or level, that take place in the context of any form of learning and in which individuals of all ages and educational levels participate, in a technical phase of their biological and social cycle. It is based on the assumption of the continuity of the learning path (Karalis, 2010). The goals of lifelong learning are to promote employment and the active participation of citizens so that human capital stays alert throughout its life by continuously improving its quality with significant expectations for its outputs in the production process (Allert et al., 2004).

Today's education systems focus on the development of cognitive skills, however non-cognitive skills that cultivate an individual's ability to work with others and solve problems are becoming increasingly important. Current education systems are also "time constrained" in a way that may not make them suitable for current or future job markets. In other words, they impose narrow career and experience decisions at a young age. The distinction between formal education and the labor market needs to be bridged, as learning, research and development (R&D), knowledge sharing, retraining and innovation take place simultaneously throughout the life cycle, regardless of work and education level. Lifelong learning programs also offer a second chance to those leaving the formal education system. Research results (Kugler et al., 2016) show that vocational training and formal education are complementary investments and that there are teaching implications for family members, especially among those seeking distance education with a high basic level of education.

With the current developments associated with the advent of the 4th Industrial Revolution, combined with the great challenges associated with

the aftermath of the, 2008, financial crisis, the COVID-19 pandemic crisis and a number of other global trends that take place, it is now necessary to train the workforce. The term “education” means the further education of the individual, i.e., beyond the limits set by the basic educational system. Obviously, training is closely linked to the individual’s freedom and free will to develop his or her abilities and skills. It mainly concerns people who are mature, settled and usually older, while the decision for training is mostly conscious.

The present chapter firstly (Sect. 9.2) presents the effects of lifelong learning on societies and economies. Then (Sect. 9.3), lifelong learning in Europe is presented, as well as (Sect. 9.4) lifelong learning in the new Era of digitalization and the 4th Industrial revolution. Finally, in Sect. 9.5 the role of skilling and reskilling for the necessary restructuring of economies is presented.

9.2 THE EFFECTS OF LIFELONG LEARNING ON THE SOCIETIES AND THE ECONOMIES

Theoretical approaches about the importance of lifelong learning have varied considerably over the last decades. During the 1970s, lifelong learning was the answer to the changing socio-political conditions of the period (Boshier, 1998). However, until the mid-1980s, lifelong learning was not considered to be linked to the labor market and economic progress. Therefore, lifelong learning programs were initially linked to the individual’s personal development (Rogers, 2002), while they were unaware that through these programs the trainee’s professional skills are developed at the same time. The role of lifelong learning began to be increasingly understood after the 1980s, when—on the occasion of the foundations laid for the theory of human capital and investment in it (Becker, 1974)—the societies began to realize the benefits of all forms of learning.

However, the importance of lifelong learning has changed over the years and from the social dimension the burden has shifted to the needs of the economic field. Thus there is highlighted the need to upgrade the knowledge and skills of human capital in an ever-changing economic environment. The connection to the labor market is perhaps the main reason why so much value is attached to lifelong learning (Nuisl, 2001).

In an ever-changing and highly competitive labor market, lifelong learning is a key factor in both individuals’ personal development and

overall economic development. Differences between countries in GDP per capita generally reflect differences in labor productivity (McGowan & Andrews, 2015). In turn, these labor productivity gaps are largely a function of differences in the productivity ratio and the concentration of human capital that a country has at its disposal. While human reserves have increased, highly educated workers have significantly increased labor productivity over the past 50 years (Braconier et al., 2014; Fernald & Jones, 2014). At the same time, the growing economic importance of knowledge is expected to increase the return on investment in skills, thus enhancing the further increase in income inequalities within countries in the coming decades (Braconier et al., 2014). In this context, the ability of economies to effectively develop existing human capital reserves and strengthen the capacity of the population through lifelong learning will be of greater importance in combating the slowdown in growth and the increase in inequalities. Cedefop (2011) shows that initial vocational education and training are positively associated with many social outcomes: those who have completed vocational education and training report significantly higher levels of citizen participation, self-esteem, job satisfaction and satisfaction about their economic status.

In an evolving world, lifelong learning can contribute to the efficiency of the education system and create benefits for the economy and society (Kim & Moore, 2005; Marengo & Marengo, 2005; Moravec et al., 2015; Mothibi, 2015; Trubina & Braines, 2016). Kuppens et al. (2015) point out that higher levels of education are associated with a wide range of positive outcomes: better health and well-being, higher social trust, greater interest on politics, lower political cynicism and less hostile attitude toward immigrants.

At the state level, lifelong learning contributes to the development of democracy (Hoskins & Mascherini, 2008) and the creation of a culture of conscientious citizenship and to the establishment of structural reforms. At the same time, lifelong learning helps to redistribute resources in an economy. Lifelong learning can also be an important source of motivation and well-being in the workplace, as satisfied employees are more productive, collaborate more effectively and display higher levels of creativity and innovation (FinALE, 2018), while at the same time lifelong learning leads to lower health costs, improvement social relations and salary increases (NIACE, 2012).

The most important benefits of enhancing lifelong learning are related to obtaining a higher income, finding better jobs, higher individual and

social well-being and health, greater social inclusion and participation in voluntary activities, greater capacity for innovation and higher competitiveness. Lifelong learning contributes to the development of new skills in key areas such as digital transformation, leadership and management of change. This is not only a vital source of competitive advantage, but it is essential for the long-term viability and survival of the company.

Lifelong learning becomes vital for both society and the economy and for economic policymakers, businesses and individuals, as skills and occupations evolve over time (Marengo & Marengo, 2005; OECD, 2013; Trubina & Braines, 2016). It is reported to have several positive effects on adult learners and society, leading to poverty reduction and reduced domestic violence (Hammond, 2002; Jarvis, 2006; Miller & Mullins, 2002; van der Veen & Preece, 2005) and leads to a better quality of life, greater self-confidence and self-efficacy (Kubzansky et al., 1999; Vega Dienstmaier et al., 1999). It can also be a lifelong resource for older people to achieve a good quality of life during aging (Meeks & Murrell, 2001). Lifelong learning, in addition to focusing on enhancing personal and career life, simultaneously promotes thinking, self-expression and action, and facilitates positive and profound changes in the quality of life of those involved (Hudson, 1999). The acquisition of knowledge and skills through continuing education improves the efficiency and effectiveness of individuals, while giving them the necessary supplies for a successful professional career.

In addition, quality of life and self-efficacy also have a major impact on the learning process and outcome. Studies show that students with poor health perceptions have a higher risk of low academic achievement or drop out of school (Huurre et al., 2006; Lasheras et al., 2001). Therefore, lifelong learning, quality of life and self-efficacy are significantly related to each other.

Enhancing the importance of lifelong learning can also be rooted in the close family circle, since if, for example, a family member shows zeal for his or her continuing education, there will be an impact on other family members, especially in the newer ones. The range of potential benefits is very wide, and often includes, among many other things, better family well-being because of higher self-fulfillment of the trainee family member, improved health due to higher awareness and prevention, higher earnings and career choices, and greater ability supporting other family members by transmitting the benefits of their learning, knowledge

and experiences. Learners often become role models for other family and community members who then follow their own learning paths.

In addition to the economic benefits associated with higher levels of skills and education, numerous studies (Cutler & Lleras-Muney, 2012; Grossman, 2006) have shown that education is closely related to health and well-being (Kempton et al., 2011; Spasojevic, 2010; Van Kippersluis et al., 2011). Field (2009) reports the positive effect of education on health, especially mental disorders, while Lochner (2011) reports improved health-related behaviors. Hammond and Feinstein (2005) and Jenkins (2011) find significant benefits from participating in learning to increase participants' self-confidence and perceived well-being. Some studies focus on reducing mortality (Albouy & Lequien, 2009; Clark & Royer, 2013; Van Kippersluis et al., 2011), while others focus on the positive effect of self-perceived health, the reduction of long-term health problems (Kempton et al., 2011) or health-related behaviors, such as reducing smoking (Conti et al., 2010).

At the same time, lifelong learning and more generally, the increase in educational attainment and continuing education appear to reduce crime (Hjalmarsson et al., 2011; Lochner & Moretti, 2004; Sabates, 2008). Machin et al. (2011) find that an annual increase in people continuing their education reduces the conviction rate for property-related crimes. According to Buonanno and Leonida (2006), a 10% increase in continuing education rates leads to a 4% reduction in property crime and a 3% reduction in overall crime. Groot and Maassen van der Brink (2010) showed that the number of years of education significantly reduces theft and violence, but at the same time increases tax fraud offenses.

9.3 LIFELONG LEARNING IN EUROPE

The European Union in its text on lifelong learning “The Goals, Architecture and Means of Lifelong Learning” (Gass, 1996), where 1996 was also designated as the “European Year of Lifelong Learning”, proposes the economic dimension over the social dimension for the objectives of lifelong learning stating that:

- a. The economic dimension includes investing in human resources, promoting employment in an era of structural change and making the company a key partner in the learning society.

- b. The social dimension refers to the removal of the traditional division of life (education, work and pension), to equal opportunities and to the provision of educational opportunities of multiple forms.

At the Summit on Fair Employment and Growth in Europe on November 17, 2017, the European Parliament, the Council and the European Commission proclaimed the European pillar of social rights. One of its 20 main principles refers to education, training and lifelong learning: every person has the right to high-quality and inclusive education, training and lifelong learning to acquire and maintain skills that will enable him to participate fully in society and to successfully manage changes in the labor market. The European Commission points out that most children entering primary education today are likely to end up working in new forms of employment that do not yet exist, and that large-scale investment in skills and a general review of education systems and lifelong learning systems will be required.

Thus, it is essential that the European education area will be able to respond to the functioning of European democracies, to changes in European labor markets, to demographic changes, to changes resulting from climate change and to the limits of natural resources, in combination with economic and social inequalities, supporting digital, business skills, other skills (science, technology, engineering, math), cybersecurity and artificial intelligence skills and metacognitive skills, such as those related to citizenship. To this end, tools should be developed to enhance the basic skills of young people as part of national lifelong learning strategies. The European Commission (2020) also supports Member States in implementing tools for teaching staff, such as open mass online courses, self-assessment tools, networks and e-learning platforms.

According to the results of a study by Cedefop (2017a, 2017b) on a sample of 35,645 people regarding their opinion on vocational education and training (VET), most EU citizens agree that people in vocational education learn skills required of employers (in their country) (86%), while only 9% disagree. Two out of three respondents (67%) agree with the proposal “vocational training allows you to find a job quickly after obtaining additional qualifications or a diploma”, while 26% disagree. About three out of five respondents (61%) agree that “vocational training leads to well-paid jobs”, while a similar percentage (60%) agree that “vocational training leads to jobs that are considered very high”. In both

statements, about one in three respondents disagree (32 and 33% respectively). Overall, these findings confirm the generally positive picture of vocational training throughout the EU, especially in terms of acquiring relevant vocational skills, but also in finding work, increasing job earnings and recognition.

Focusing on the contribution of vocational training to the acquisition of relevant vocational skills, there is a divergence of views in the various EU-27 countries. The European Commission also emphasizes the importance of VET in addressing the needs of employers and in addressing skills shortages (European Commission, 2012). At least three quarters of respondents in each country agree with the statement that “VET provides skills that are useful to employers”. In several countries, at least nine out of 10 respondents agree with the statement: Finland (96%), Cyprus (94%), Austria (94%), Malta (92%), Germany, Greece, Sweden (all three countries with 91%), Ireland and Slovakia (both countries with 90%).

Regarding the opinion of EU citizens for the role of VET in society, they consider that it brings positive benefits. Focusing on respondents whose upper secondary education was mainly vocational, more than four out of five agree that VET strengthens their country’s economy (86%) and plays an important role in reducing unemployment (83%). Also, four out of five agree (80%) that VET helps to address social inclusion.

However, it seems that the EU-27 failed to meet the target set under the strategic framework for European cooperation and training (ET 2020 Working Group) according to which, at European level, an average of at least 15% of adults should participate in lifelong learning by 2020. The latest results from the European Union (EU) labor force survey show that in, 2020, the participation rate in the EU-27 stood at 9.2% and 10% in Euro area (Fig. 9.1).

9.4 LIFELONG LEARNING IN THE NEW ERA

In the modern digitized era of the 4th Industrial Revolution, new technologies will create new jobs and replace existing ones. It is estimated that almost half of the jobs in developed economies are particularly vulnerable to being replaced by new, digital technologies within the next decade or two (Frey & Osborne, 2017). For workers to be able to cope with the growing dynamics of the labor market, they need to acquire greater mobility in jobs, occupations and industries. The relative importance of their skills for a particular job will decrease, while the skills immediately

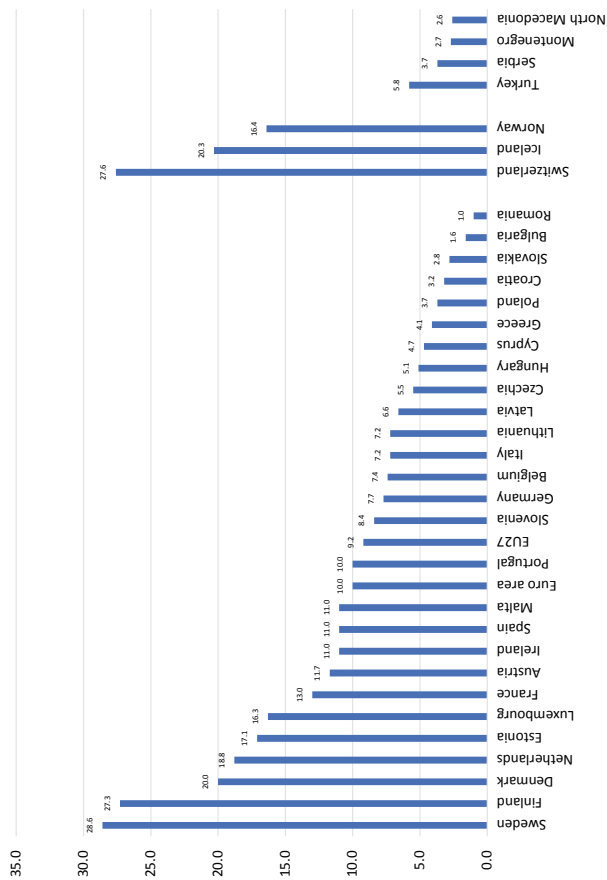


Fig. 9.1 Participation rate in education and training (last 4 weeks) by sex and age (Source Eurostat [trng_lfse_01])

applicable to the new occupation will increase. To maintain workers' jobs and strengthen their resilience to technological change, more and more workers must be constantly updated and trained and adapt their skills to the new demands of the times, to improve their mobility in positions, professions and industries.

Therefore, technological change will accelerate further in the digital age. This will require an even greater need for a workforce that can respond more flexibly to an ever-changing demand for labor. Jobs in less developed countries may face even greater challenges. Digital technologies will also create many new jobs, in different occupations or industries, while requiring different skills from current jobs (Autor, 2015; Brynjolfsson & McAfee, 2011).

Adult education policies developed in the age of computerization should refocus on the challenges of the new Era. The policy has responded to the ever-changing demands of computer-age skills, with an emphasis on lifelong learning (ILO, 2010; OECD, 2003, 2005, 2010, 2015; UNESCO, 2009, 2016). Lifelong learning has also been recognized as an important goal of the United Nations Sustainable Development Goals, however many of the policies implemented fail to target those workers who need more education and training and provide practical skills needed for the job rather than general, non-cognitive and digital skills required for occupational mobility (OECD, 2016). They focus mainly on training skills in specific occupations or specializing in specific industries that enhance employee productivity in their current jobs, but place very little emphasis on general skills that enhance employee mobility in jobs, occupations or industries. In other words, this process can be described as static, avoiding adding dynamic features that will make the professional course of human resources more flexible and secure. Therefore, training these general skills will help employees to adapt flexibly to technological change. It will increase their mobility in jobs, occupations and industries, thus increasing their opportunities for permanent employment, even if the company in which they work, or the industry is facing problems.

As many new skills are difficult to codify, theoretical, non-cognitive and digital skills enable employees to complement—rather than compete with—new technologies (Autor et al., 2003; Deming, 2015). Theoretical skills are intellectual skills that determine the ability to learn, evaluate and take initiative. They enable employees to better understand and critically reflect on why they are doing what they are doing, to solve creative

problems that are not routine, and to acquire new knowledge or problem-solving skills that accompany new technologies. Higher competencies in these skills will also enhance employee mobility in jobs, occupations or industries (Poletaev & Robinson, 2008; Geel & Backes-Gellner, 2011).

Non-cognitive skills are the characteristic patterns of values and behaviors that determine an individual's attitude toward learning and initiative. Non-cognitive skills, also called "soft" skills, include basic "employability" skills such as accuracy, reliability, responsibility, integrity, honesty and the work discipline that is important for all jobs, especially for those with low cognitive skills requirements (Lerman, 2013; OECD, 2015; Van de Werfhorst, 2014). Employers undoubtedly value these skills even more than basic cognitive skills such as reading or writing (Lerman, 2013). Values, behaviors and attitudes that are a prerequisite for learning, problem solving and creativity, such as curiosity, open-minded people, determination, self-confidence and self-motivation. These non-cognitive skills facilitate the accumulation of theoretical skills by enhancing the willingness to learn (Almlund et al., 2011; Kautz et al., 2014). Therefore, deficits in non-cognitive skills often go hand in hand with lower cognitive skills and lower creativity (Cunha et al., 2010; Sternberg, 2006; Whitmore Schanzenbach et al., 2016).

Moreover, social (interpersonal) skills such as the ability to communicate or work in teams are important in many ways. On the one hand, the ability to direct, coordinate and motivate colleagues are a valuable managerial skill that complements theoretical skills. On the other hand, caring for the well-being of others is a valuable skill in a variety of services, including health services and society. In any case, social skills will be difficult to replace by technology soon. Digital skills are cognitive skills that are specific to the use of digital technologies and working in digital environments.

9.5 LIFELONG LEARNING AND ECONOMIC RESTRUCTURING THROUGH SKILLING AND RESKILLING

Neoclassical economic models suggest that a one-time increase in human capital stock leads to a one-time increase in productivity, while endogenous models suggest that the same one-time increase in human capital can lead to a permanent increase in labor productivity and growth. In the short run, both models produce similar results, but in the long run endogenous models result in significantly higher returns on investment

in human capital (Wilson & Briscoe, 2004). Regardless of the specific models adopted, there is strong evidence that lifelong learning increases productivity and higher levels of growth. If education is measured by the skills acquired, the education of a population is closely linked to the long-term growth rate of a nation. However, if the years of education are used as an approximate variable for education, there is a much weaker relationship with economic growth (Woessmann, 2014).

At EU level, this requires a continuous focus on mutual learning and cooperation in education and training policies in the Member States. Regardless of the models adopted, the macroeconomic benefits of education are undeniable: for example, Woessmann (2014) reports that an increase in educational achievement of 50 PISA points translates into a 1% higher growth rate in the long run. If the EU managed to upgrade learning processes by 25 PISA credits, this would result in a profit of € 35 million.

It is understood that economic policymakers need a clear picture not only of how labor markets and economies are changing, but also of the extent to which their citizens are being equipped with the skills needed in the twenty-first century. People with low professional skills face a much higher risk of financial disadvantage, a higher chance of being found unemployed and poor quality of health compared to a highly trained workforce.

Skills can change a person's life by favoring their economic and social development, contributing to the improvement of well-being and promoting their social inclusion (OECD, 2013). Without the right skills, people will be marginalized in society, technological progress will not translate into economic growth, and businesses and countries will not be able to compete in an increasingly complex global environment.

As the demand for workforce with information analysis and communication skills increases and as technology permeates all aspects of life, people with poor writing and arithmetic skills are more likely to face the problem of unemployment. Lack of IT skills limits adults' access to many basic services, better paying jobs and access to further education and training, which is vital to developing and maintaining skills in working life.

Enhancing the skills of adults through lifelong learning and e-learning methods could be the springboard to tackle social exclusion and help integrate into the labor market (Cedefop, 2016).

The link between skills and prosperity applies not only at the individual level but also at the country level. Countries with low skills are lagging in terms of competitiveness as the global economy tends to become increasingly dependent on a skilled workforce (OECD, 2013). At the same time, skills inequality is related to income inequality. The way skills are distributed to the population has a significant impact on how wealth is distributed in society.

Investments in skills could be captured by increasing labor productivity, reducing the cost of hiring more skilled workers, saving production downtime due to a lack of qualified staff, providing training opportunities and internal dissemination of knowledge. These are probably the main reasons why companies are involved in training (Hogarth et al., 2012; Pfeiffer et al., 2009). Riley and Robinson (2011) identify significant positive effects of human capital on corporate profitability. Lebedinski and Vandenberghe (2013) show that university graduates are 23% more productive than secondary school graduates and 42% more than primary school graduates. Higher education and continuing education equip people with skills and abilities that enable them to be more productive. It also equips people with the knowledge and skills that enable them to create and adopt new ideas that promote innovation and technological progress (Woessmann, 2014).

However, one of the most frustrating aspects of evaluations of voluntary training is that employees who needed training are usually less willing to participate (Caliendo et al., 2016; OECD, 2016; Schwerdt et al., 2012). This is probably due to insufficient information, to the limited existence of non-cognitive skills that make it difficult to perceive the benefits of voluntary lifelong learning, class reasons, belief in determining their course in external factors such as fate or fate and not their own action (Caliendo et al., 2016). Furthermore, we should not forget that education in lifelong learning programs cannot be an obligation and awareness of the benefits of trainees from attending training programs should be increased (Barr & Turner, 2017).

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