

## EUROPEAN EDUCATIONAL AND NEW PERSPECTIVES FOR TEACHERS' SKILLS

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**Abstract:** *This paper explores the evolving landscape of 21st-century skills required for teachers, with a focus on aligning these requirements with current European educational policies. It underscores the critical role of teacher professional development in addressing the challenges posed by a rapidly changing society and in fostering essential competencies among students. The introduction contextualizes the urgency highlighted by the OECD PIAAC survey (2013), which revealed that Italian adults exhibit significantly lower skill levels compared to their counterparts in other high-competency countries. The discussion on "21st Century Skills" examines the shift from traditional knowledge-based education to a more integrated approach that combines fundamental skills, transversal competencies, and character qualities. This section also aligns with the European Skills Agenda (2020), which emphasizes the need for continuous learning, digital inclusion, and the integration of cross-disciplinary skills into curricula. An in-depth analysis of the OECD PIAAC results from the first cycle illustrates the concerning state of literacy and numeracy skills among the Italian adult population, highlighting the percentage of low-skilled learners, including those with higher educational qualifications. This analysis is extended with data from the second cycle (OECD 2021), which confirms persistent deficits in basic skills, especially in literacy and numeracy, indicating a continued need for targeted policy interventions. The paper concludes by emphasizing the importance of teacher professionalization and the integration of European educational policies into teacher training practices. It advocates for continuous monitoring of PIAAC data and the implementation of effective measures to address adult skill gaps. Future perspectives include fostering innovative teaching methods, international collaboration, and a focus on inclusive education to enhance teaching quality and student outcomes in alignment with 21st-century demands.*

**Keywords:** *European, education, teacher, skills.*

### 1 Introduction

This paper seeks to shift the academic discourse towards the imperative of developing 21st-century competencies within the educational framework, particularly emphasizing the integration of these competencies into teacher training programs. As societies continuously evolve and face unprecedented challenges, the ability of educational systems to adapt and equip students with relevant skills becomes increasingly critical. The role of teachers in this context is pivotal, as they are responsible for not only imparting knowledge but also for fostering a range of competencies that students need to navigate and succeed in a complex world. The OECD Programme for the International Assessment of Adult Competencies (PIAAC) provides a crucial lens through which to examine the effectiveness of current

educational practices. The 2013 PIAAC survey underscored a pressing concern regarding the competency levels of Italian adults, revealing that their skills were markedly inferior when compared to adults in other high-performing countries. This disparity highlights the need for a transformative approach to education that extends beyond traditional content knowledge to include critical skills such as problem-solving, digital literacy, and emotional intelligence. The integration of European educational policies into this discussion is essential, as these policies outline strategic directions for developing a resilient and competent workforce. For instance, the European Skills Agenda (2020) emphasizes the importance of continuous learning, digital integration, and the incorporation of transversal skills into educational curricula. These policies reflect a broader recognition of the need to align educational practices with the demands of a rapidly changing labor market and societal expectations. In this context, teacher training emerges as a critical area of focus. Effective professional development programs must not only address current educational needs but also anticipate future demands. This requires a paradigm shift in how teachers are prepared and supported throughout their careers. Embracing a lifelong learning approach, integrating innovative pedagogical practices, and ensuring alignment with European educational standards are key to enhancing teaching quality and, consequently, student outcomes. By examining the implications of the PIAAC findings and the relevance of European educational policies, this paper aims to provide insights into how educational systems can better prepare teachers and students for the complexities of the 21st century. The goal is to contribute to the development of educational strategies that are both responsive and proactive, ensuring that they meet the evolving needs of society and the global economy.

## **2 21ST CENTURY SKILLS AND EUROPEAN EDUCATIONAL POLICIES**

The term "competence," derived from its Latin origins, denotes the capacity to move together towards a common goal. This definition reflects the dynamic and interactive nature of competencies, which encompass not only theoretical knowledge but also practical skills and personal dispositions. In recent years, European educational policies have increasingly emphasized the importance of competencies that extend beyond mere factual knowledge. This approach is exemplified by the document "New Vision for Education: Fostering Social and Emotional Learning Through Technology," published by the World Economic Forum (2016), which identifies 16 fundamental competencies divided into core skills, transversal competencies, and character qualities.

### **2.1 CORE SKILLS**

Core skills include basic competencies such as literacy, numeracy, scientific literacy, technological literacy, financial literacy, and social and civic literacy. These skills are essential for active participation in contemporary society and form the foundation for the development of more complex competencies.

### **2.2 TRANSVERSAL COMPETENCIES**

Transversal competencies encompass critical thinking and problem-solving, creativity, communication, and collaboration. These competencies are vital for addressing complex

problems, working effectively in teams, and adapting to new contexts. The ability to think critically and creatively, communicate clearly, and collaborate with others is increasingly demanded in both the workplace and daily life.

### **2.3 CHARACTER QUALITIES**

Character qualities such as curiosity, initiative, determination, adaptability, leadership, and social and cultural awareness are equally crucial. These qualities influence how individuals tackle challenges, adapt to changes, and interact with others. Promoting these qualities in young people is essential for preparing them to become responsible citizens and effective professionals.

### **2.4 EUROPEAN EDUCATIONAL POLICIES**

European educational policies, such as the European Skills Agenda for sustainable competitiveness, social equity, and resilience (European Skills Agenda, 2020), aim to develop an education and training system that equips citizens with the skills necessary to face future challenges. Strategic priorities of the European Union include promoting lifelong learning, digital inclusion, and integrating transversal skills into school curricula. The European skills agenda emphasizes the importance of continuous and flexible learning that allows individuals to update and expand their skills throughout their lives. This vision acknowledges that the skills required for personal and professional success continually evolve and that formal education must be complemented by opportunities for non-formal and informal learning.

### **2.5 COMPETENCY-BASED TEACHING**

According to Comoglio (2004), competency-based teaching necessitates a significant shift in pedagogical practices, as it involves the integration of various dimensions of knowledge and the promotion of meaningful learning. This approach highlights the importance of teaching that values both theoretical knowledge and practical skills, aiming for the holistic development of the individual. Competency-based teaching focuses on active and participatory methodologies that engage students in authentic learning experiences. These methodologies include cooperative learning, problem-based learning, project-based learning, and the use of digital technologies to facilitate personalized and interactive learning. The goal is to develop competencies that are relevant and transferable to different contexts of daily life and professional environments.

## **3 THE OECD PIAAC SURVEY: FINDINGS FROM THE FIRST CYCLE**

In 2011, the OECD launched the decennial Programme for the International Assessment of Adult Competencies (PIAAC), which evaluated the skills of adults aged 16 to 65. The first cycle of this survey provided a comprehensive overview of literacy, numeracy, and problem-solving competencies among adults in participating countries, including Italy.

### **3.1 KEY FINDINGS**

- ***Literacy Skills***

The results for Italy revealed low literacy skills within the adult population. The term "literacy skills" refers to the ability to understand and use written information in various contexts. According to the collected data, a significant proportion of Italian adults exhibited difficulties with these fundamental skills. Specifically, the results indicate that 27.9% of the Italian population falls into the category of low-skilled learners, meaning individuals with a low level of literacy proficiency. These alarming data suggest that a substantial portion of the Italian adult population is unable to perform reading and writing tasks deemed essential for active participation in contemporary society. For instance, many adults struggle to comprehend complex texts, interpret graphs and tables, or draft written documents effectively.

- ***Numeracy Skills***

The numeracy skills of Italian adults, which include the ability to use and interpret numbers and mathematical data in every day, work-related, and social contexts, are equally concerning. The percentage of individuals with low numeracy skills is high, indicating widespread difficulty in applying basic mathematical knowledge to practical situations. This gap can have significant implications for personal financial management, understanding health information, and making informed decisions in daily life.

- ***Problem-Solving Skills***

Another area assessed by PIAAC concerns problem-solving skills in technology-rich environments, referring to the ability to use digital tools to solve problems and complete complex tasks. Here too, Italy's results were below the average of participating countries. Poor familiarity with digital technologies and limited capacity to utilize online resources for solving everyday problems represent additional barriers to social inclusion and improved employment opportunities.

- ***Demographic Analysis – Educational Attainment***

The analysis of the data revealed that skill levels are closely related to educational attainment. Among those categorized as low-skilled learners, 20.9% have completed secondary education, while 4.1% hold a university degree (INAPP, 2017). These data suggest that, although higher formal education can enhance competencies, it is not always sufficient to ensure adequate levels of literacy and numeracy.

- ***Demographic Analysis – Age Groups***

A concerning finding is that approximately half of the low-skilled adults are under 44 years of age, with nearly 25% in the 25 to 34 age brackets. This generation, generally considered to have the highest productive and innovative potential, instead shows significant gaps in fundamental skills. This may represent a severe limitation for employment prospects and the ability to adapt to an increasingly dynamic and technologically advanced labor market.

- ***Implications for Educational Policies***

The results from the first cycle of the OECD PIAAC survey underscore the urgent need for targeted interventions to improve the competencies of Italian adults. Educational policies should focus on:

- Lifelong learning: promoting continuous education programs that enable adults to update and enhance their skills.
- Digital inclusion: developing initiatives that facilitate access to digital technologies and acquiring skills necessary to use technological tools effectively.
- Targeted support: providing personalized support and educational resources for adults with low skills, particularly targeting vulnerable groups such as young adults and those with low levels of formal education.
- Cross-sectoral collaboration: engaging educational institutions, employers, and civil society organizations in an integrated approach to address skill gaps and promote more effective and inclusive learning.

#### **4 THE OECD PIAAC SURVEY: RESULTS FROM THE SECOND CYCLE**

The latest data from the OECD PIAAC survey, published in 2021, confirms that Italy continues to show significant deficiencies in basic skills, with difficulties in literacy and numeracy. The PIAAC survey evaluated adult competencies in three main areas: literacy, numeracy, and problem-solving in technology-rich environments.

- ***Literacy Skills***

The report from the second cycle of the OECD PIAAC survey (2021) highlights that 28% of Italian adults possess literacy skills below Level 2 of the PIAAC scale. This level represents a critical threshold: adults below this level often struggle to understand and effectively use written texts in every day and work contexts.

- ***Numeracy Skills***

Numeracy skills present an equally concerning picture: 32% of Italian adults have numeracy skills below Level 2. These skills are essential for a wide range of daily activities, such as managing money, interpreting statistical data, and using measurements and graphs. Adults with low numeracy skills often encounter difficulties in solving basic mathematical problems and applying numerical concepts to practical situations, limiting their ability to make informed decisions and fully participate in society.

- ***Problem-Solving in Technology-Rich Environments***

In addition to literacy and numeracy skills, the survey assessed problem-solving abilities in technology-rich environments, which include the capacity to use digital technologies to solve complex problems. Here too, Italy falls below the OECD average, with a significant percentage of adults demonstrating difficulties in effectively using digital technologies for problem-solving. These competencies are increasingly crucial in a rapidly evolving labor market, where the ability to adapt and utilize digital tools is fundamental for productivity and employability.

- ***Demographic Analysis – Educational Attainment***

The demographic analysis of the second cycle data confirms that skill levels are strongly influenced by educational attainment. Adults with higher levels of education tend to have better competencies than those with lower levels of education. However, there remains a significant percentage of low-skilled learners even among adults with secondary and higher education diplomas. This suggests that while formal education is an important factor, it is not sufficient on its own to ensure adequate levels of literacy and numeracy skills.

- ***Demographic Analysis – Age Groups***

Demographic data also show that skill deficiencies are not limited to older adults. Approximately 25% of adults in the 25-34 age group display literacy and numeracy skills below Level 2. This is particularly concerning, as this age group represents a crucial phase for professional development and active workforce participation. The presence of significant gaps in basic skills among young adults can have serious implications for the country's competitiveness and economic growth.

- ***Implications for Educational Policies***

The results from the second cycle of the OECD PIAAC survey highlight the urgent need for targeted policy interventions to improve basic skills among the Italian adult population. Educational policies should address the following key areas:

- Strengthening basic education: it is essential to improve the quality of basic education to ensure that all students acquire adequate literacy and numeracy skills. This includes updating school curricula and adopting effective teaching methods that promote active and engaging learning.
- Lifelong learning and continuing education: promoting lifelong learning programs that allow adults to update and enhance their skills. This requires creating flexible and accessible training opportunities that meet the diverse needs of the adult population.
- Digital Inclusion: Developing initiatives that facilitate access to digital technologies and acquiring the necessary skills to use technological tools effectively. This includes digital training for adults and the promotion of digital skills in schools.
- Personalized support: providing personalized support and educational resources for adults with low skills, with particular attention to vulnerable groups. This may include tutoring programs, adapted educational materials, and specific training courses.

## **5 Conclusions and future perspectives**

In recent decades, the value of competencies as educational outcomes has gained increasing prominence in global educational discourse. The transformation of schools in response to socio-economic and technological changes has placed greater emphasis on the importance of training students not only with solid theoretical knowledge but also with the ability to apply such knowledge in complex and dynamic contexts. In this regard, the professionalization of the teaching workforce and the continuous professional development of teachers have become strategic priorities to ensure high-quality education and to promote key competencies among students.

### **5.1 THE PROFESSIONALIZATION OF THE TEACHING WORKFORCE**

The professionalization of teachers is a crucial component for improving the quality of education. In a rapidly evolving world, it is essential that teachers not only have a solid initial preparation but also participate in continuous professional development programs that update them on new teaching methodologies, emerging technologies, and best pedagogical practices. Initial training must be designed to provide teachers with a strong foundation in pedagogy and subject content, while also integrating transversal skills such as problem-solving, creativity, and the management of emotional and social dynamics in the classroom. The approach of lifelong learning is particularly relevant in this context. Continuous professional development should be seen as an opportunity for teachers to update and reflect on their professional practice, adapting to the new demands of the educational system and emerging societal challenges. This requires significant investment in resources and time by educational institutions and governments, but it is essential to ensure that teachers can effectively respond to the needs of students and the evolving educational context.

## **5.2 INTEGRATION OF EUROPEAN EDUCATIONAL POLICIES**

European educational policies, as outlined in the European Skills Agenda for Sustainable Competitiveness, Social Fairness, and Resilience (2020), provide valuable guidance for the implementation of targeted educational strategies. These policies emphasize the importance of developing an education system that promotes not only technical and professional skills but also transversal and socio-emotional competencies. Integrating these policies with teacher training practices can help improve the quality of teaching and, consequently, student learning outcomes. For instance, the inclusion of digital skills and emerging technologies in school curricula and teacher training programs is crucial for preparing students to face the challenges of an increasingly digital world. Moreover, policies promoting personalized learning and educational inclusion can help ensure that every student, regardless of their needs and background, receives high-quality education.

## **5.3 MONITORING AND ADAPTATION**

It is essential to continue monitoring the data from the OECD PIAAC surveys and to adopt effective measures to address the gaps in adult competencies. The OECD PIAAC surveys provide a critical overview of adult competencies and the challenges that need to be addressed. The results of these surveys offer valuable insights into where improvement efforts should be concentrated, and which areas require urgent attention. Continuous analysis of PIAAC data allows for the identification of emerging trends and the adaptation of educational policies and training programs in response to these trends. Policymakers, educational institutions, and training organizations must use this information to design targeted and evidence-based interventions that can effectively address skill deficiencies and promote continuous and inclusive learning.

## **5.4 FUTURE PERSPECTIVES**

The future perspectives for the Italian educational system and the professionalization of teachers should include:

- Educational innovation: experimenting with and implementing innovative teaching methodologies that promote active learning, collaboration, and student autonomy. The

use of digital technologies, gamification, and project-based learning can provide new opportunities to engage students and develop their competencies.

- International collaboration: participating in international educational initiatives and projects to share best practices and experiences with other countries. International cooperation can provide insights and effective strategies for improving competencies and education globally.
- Focus on inclusion and equity: ensuring that educational policies and training programs address the needs of all students, including vulnerable and disadvantaged groups. Promoting an inclusive and supportive educational environment is essential for improving learning outcomes and reducing inequalities.

In conclusion, addressing the challenges and opportunities that emerge from the OECD PIAAC surveys requires a coordinated and strategic commitment from all stakeholders involved in the educational system. Only through an integrated, evidence-based approach oriented towards continuous improvement can high-quality education be ensured, preparing students to face the challenges of the 21st century with competence and resilience.

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