

Digital Education Model in Italy

Shuo Zhao^{1, 2, *}



¹School of International Studies, Communication University of China, Beijing, 100024, China

²International College, Krirk University, Bangkok, 10220, Thailand

Abstract: After 21st century Italy begins to initiate the development of educational information technology, and digital education develops rapidly. Digital education model in Italy focuses on cultivating students' abilities and qualities, fully respecting students' individuality and nature. With support from the government and society, a digital education model has been formed. In digital education stage, universities in Italy focus on stimulating students' interest in learning, allowing them to grow up in a relatively relaxed social environment. More social practice allows students to have a deeper understanding and cognition of abstract things and knowledge in their memory, while also retaining curiosity and imagination. Students are required to query relevant knowledge and content through the digital library or the Internet, improve their ability and awareness to explore knowledge and develop students' independent learning habits and behavior. Overall, government management and social atmosphere as well as specific universities are more in line with digital development of quality education in Italy, and are conducive to the improvement of students' comprehensive literacy and abilities. It is an educational system with a long-term development perspective which brings us enlightenments in digital education, namely emphasizing the improvement of different types and levels of higher education, strengthening quality assurance system of digital education, highlighting the construction of key disciplines and forming national characteristics, implementing cloud-based education method.

Keywords: Digital; Education Model; Italy

DOI: [10.57237/j.jeit.2024.02.001](https://doi.org/10.57237/j.jeit.2024.02.001)

1 Introduction

After the 21st century, Italy begins to initiate the development of educational information technology. The implementation of the National Digital School Plan in Italy has led to unprecedented rapid development of educational information technology [1], and the research investment and teaching network construction of Italian universities have reached the world's advanced level.

Italy's higher education is slowly transitioning towards mass and market-oriented higher education. Higher education will not be limited to elite education that only serves a few people, but will gradually transform into mass education. Expanding enrollment on the basis of

existing universities and planned renovations to smaller ones have become the only way out. As a result, there is a shortage of resources caused by the expansion of educational institutions. Behind a series of transformations, there are drawbacks derived from the transformation of the educated population. Compared to the elite education goals, the popularization transformation will inevitably lead to a decline in education quality and more unequal distribution of educational resources in a short period of time. It was not until 1990 that Italy had to consider comprehensive reform as various issues accumulated to an irreconcilable stage. With the increasingly close commu-

Funding: 14th Five-Year Plan Project (No. AGDB23172) of Beijing Education Science which is titled "Digital Education of European Universities in the Post-pandemic Era"; Humanities and Social Sciences Planning Fund Project of the Ministry of Education, which is titled "Development of ICT Digital Education in European Universities"(No. 23YJA880084).

*Corresponding author: Shuo Zhao, 1754224618@qq.com

Received: 4 March 2024; Accepted: 19 April 2024; Published Online: 24 April 2024

<http://www.jeduit.com>

nication and cooperation among EU member states, Italy, as a member of the EU, has become an important initiator and participant in the Bologna process [2]. In order to enhance the linkage with European countries, Italy's higher education system has undergone several representative reforms in the past decade. Among them, a major reform in 1999 is undoubtedly the most representative, which enabled Italy to truly align with the European Union in its higher education system. On the one hand, this reform enables students to obtain degrees more efficiently. On the other hand, it has achieved efficient integration of cultural literacy and professional knowledge. With the advancement of reform projects, Italian higher education has not only improved the existing educational hierarchy system, but also improved the professionalization of students, showing a trend of diversification and selectivity. The number of university registrations and graduates has significantly increased.

2 Characteristics of Italian Higher Education

2.1 Diversification of Types and Levels of Higher Education in Italy

Italy's higher education has the characteristics of diverse educational categories and levels. In terms of categories, Italian courses include diplomas and degrees; In terms of hierarchy, Italy divides higher education into three levels - undergraduate, master's, and doctoral. The second and third levels are further divided into two and three levels, respectively. In addition, higher education in Italy is divided into two parts: the university sector and the non university sector [3]. Among them, the university department has the same elements as conventional universities in China, mainly comprehensive universities that include various majors; Non university departments mainly include painting, vocal music, literature, and highly specialized technical training, and these schools are also the most representative and well-known institutions in Italy. Finally, in Italy, there is no certification from relevant departments. Similar to some training institutions in China, they often arrange to learn one or even multiple skills, and finally complete their studies by obtaining a vocational and technical certificate.

2.2 Enhancing the Internationalization Level of Higher Education

Since the beginning of the 21st century Italy has promoted the integration of its domestic higher education system with international standards, and thereby enhance its overall visibility in the world. Italy and China have launched a series of higher education cooperation projects, among which the Marco Polo Plan is a program that encourages Chinese students to exchange and study in Italy. Since the end of 2005, Italy and China have strengthened academic exchanges, enhanced understanding, and further consolidated bilateral relations [4]. By establishing two dedicated institutions to coordinate relevant communication activities the personnel participating in this program are also very diverse, covering doctoral, master's, undergraduate, and members of multiple institutions. In addition, in 2013, Italy introduced relevant policies that clearly stated various requirements: to strengthen cooperation with foreign countries and introduce more internship opportunities; Actively introducing new exchange projects; Increase the annual quota for studying abroad and increase the ratio of foreign students.

With the development of internationalization of higher education, Italy has put talent introduction on the agenda. In order to alleviate the pressure of human resource shortage, EU countries have introduced policies to improve talent circulation. Therefore, in 1994, the European Council passed a resolution on the entry of third country nationals into the territory of EU member states for learning [5]. In 1999, 48 EU countries initiated the Bologna process and established the European Higher Education Area in 2010. This policy was also reflected in subsequent immigration regulations. Against the backdrop of the vigorous promotion of education internationalization throughout the European Union, Italy has also followed suit in promoting relevant reforms. On the one hand, it has improved its core competitiveness, and on the other hand, it has stimulated the vitality of domestic universities and improved the quality of education.

3 Collaborative Efforts from Government to Universities

Italy's digital higher education includes higher education courses at levels 5/6/7/8 of the International Classifi-

cation of Education (ISCED). To enhance the internationalization level of such higher education, the Italian Ministry of Foreign Affairs provides generous scholarships to international students, in order to promote cooperation among various parties in multiple fields, further enhance the international influence of Italy's various systems, and further enhance Italy's cultural soft power [6]. Meanwhile, some regions have also offered generous scholarships to attract high-quality talents. In order to further retain talents, multiple relevant departments and educational institutions in Italy have jointly launched the "Smart Stay Care" campaign, which involves a large number of personnel, lasts for a long time, and has a wide coverage. It covers internship opportunities, high scholarships, and tuition exemption opportunities, which effectively attract foreign students to come to Italy for exchange and study and are more willing to stay in the local area [7]. In the unique professional fields of Italy, relevant institutions have also launched multiple welfare policies to attract and retain high-quality talents.

The Italian Ministry of Foreign Affairs has reached a science and technology cooperation agreement with third countries to increase support for digital technologies. It has developed new projects from multiple perspectives and dimensions such as biology and medicine, aerospace, and mechanical manufacturing, providing more high-quality internship opportunities and inviting experts from various countries to participate in guidance, thereby attracting more cutting-edge talents to participate in exchange and learning in Italy. Further enhanced the internationalization process of Italian higher education.

If you want to learn more about studying in Italy now, you can consult through a dedicated agency established within the Italian embassy. This undoubtedly greatly increases the willingness of foreign students to study in Italy. In addition, the embassy will also serve as a bridge connecting universities interested in establishing exchange and cooperation with Italy, further expanding the scope of cooperation. When students come to Italy, they will come into contact with two different levels of institutions [8]. On the one hand, consultation points located in the Lombardy, Emilia Romagna, and Liguria regions can provide assistance and solve problems for international students; On the other hand, the internal branches of universities at all levels are responsible for carrying out a series of activities to help international students integrate into Italian universities as soon as possible. They also provide guidance on the life problems encountered by international

students, including document processing and legal issues, and collect and organize various problems faced by international students for better assistance in the future.

In addition to resource allocation by administrative and specialized agencies, Italy is also actively promoting the internationalization of higher education through online platforms [9]. In order to improve the efficiency of handling and consulting for international students, relevant departments in Italy have established multiple portal websites to provide more efficient policy interpretation for talents interested in studying in Italy. At the same time, you can also submit relevant applications and handle business on the website. This will greatly reduce the preparation time for international students and increase convenience. Moreover, the portal website itself has a good promotional effect, greatly expanding Italy's promotion efforts in the internationalization of higher education.

4 Consolidating the Foundation of Digital Universities

"Digital coffee" has become a new way for Italian teachers to share new digital education methods. Teachers often communicate online about the software or web pages they have discovered, in order to explore how to use digital technology to improve classroom expression and attractiveness. Many classmates and parents will participate and provide advice for their children.

"Digital coffee" is a successful attempt at digital education in Italy. Many clubs in Italy are actively involved in the digitalization process of education. The Federation of Italian National University Information Societies and the Italian Ministry of Education jointly launched the "Plan for the Future" program, which provides an interactive and non interactive education model for primary and secondary schools across the United States, allowing students to learn computer and programming. In the 2020 to 2021 academic year alone, there were over 7000 schools with approximately 3 million students participating.

The Italian education department began implementing the national "Digital Schools" project in 2015, investing £1 billion in digital and innovative services for schools, in order to enhance the digital cultural literacy of the population through this initiative. This project has a total of 35 indicators, including: laying optical cables on campus, establishing wireless networks on campus, establishing digital data for teachers and students, and strengthening

information technology education.

In order to consolidate the hardware facilities of "digital schools", the Italian government provided \$40 million in high-speed networks to 32000 primary and secondary schools in May this year, which is 80% of the country's schools; At the same time, coupons for computer consumption have been provided to low-income residents in the United States. In addition, the Ministry of Education has started implementing the "School 4.0" project, equipping 100000 classes nationwide with the most advanced digital instruments, and establishing professional laboratories in each high school to create conditions for students to learn technology in areas such as robotics, cyber-security, and big data.

5 International Development of Digital Education

There are many indicators to measure the internationalization level of higher education. Such as the number of international students, the diversity of country distribution, the number of two-way exchanges between teachers and students, and the number of dual degree courses. One of the important indicators is the number of subjects and majors that offer English language instruction. Compared to Germany, France, and Spain, Italy offers the most all English taught majors. The most popular course for international students is Milan Institute of Technology's all English taught courses. Milan Institute of Technology not only broadens its channels for selecting more outstanding students from around the world, but also has become the top ranked university in Italy in the QS ranking system for several consecutive years. According to data released by the Federation of Italian University Presidents in 2019, the number of all English taught courses (undergraduate and master's courses and combined undergraduate and master's courses) offered in the 2018/2019 academic year increased by 178% compared to the 2012/2013 year. Private design and fashion schools also offer numerous all English taught courses.

Italy has the most world cultural heritage sites, with 58 (according to the latest UNESCO data). According to data from the Italian National Bureau of Statistics, as of 2018, Italy has a total of 4908 cultural relics and museums, including 3882 high cultural and artistic value museums, 630 ancient sites, 327 archaeological areas, and 69 national ecological landscape parks (ECOMUSEI). On average,

every 12000 Italian residents own one museum. There are also some resources that cannot be felt or experienced in other countries, which are even more like a fish in water for students studying design fashion. Such as Milan Fashion Week, Design Week, Furniture Exhibition, Venice Biennale, etc. Students studying art can personally experience the masterpieces of famous Renaissance artists up close. Extracurricular academic and cultural resources are actually very important for learning. When your cultural foundation is solid and your background knowledge is rich, you will find it easier to understand many things in textbooks, textbooks, and exams, and your impression will be deeper. As a result, you will have less time to memorize and review by rote. And in the process of learning culture, your language ability, research level, and way of thinking are also improving. One move brings many benefits. Due to limited space, we have reached the point.

Since the deep-seated reform of Italy's higher education system in 2010, Italian universities and higher art institutions have also been continuously exploring and innovating in the curriculum system. The continuous emergence of new courses and all English taught courses. Especially in terms of cultural heritage protection, cultural heritage digitization, application of artificial intelligence technology, sustainable development, ecological design, and new art technologies, we keep pace with the times and continuously integrate tradition and innovation. Italian universities and art schools have received investment from the Italian National Recovery and Resilience Program (PNRR), which will increase talent cultivation efforts in addressing climate change, sustainable development, ecological and energy transformation, and digital transformation.

The most basic positioning of Italian higher education is to meet the needs of the country's economic and social development for higher education talents, and its disciplines and curriculum system are mostly set up to meet the needs of Italian industries and public service institutions.

6 Enlightenment of Digital Education in Italy

6.1 EMPHASIZE the Improvement of Different Types and Levels of Higher Education

In Italy's higher education, early restrictions were es-

established on the admission of secondary school graduates. But today, the choice of degree field will no longer be limited to the corresponding front-end foundation. In addition, the "3+2" two-level degree system proposed in Italy's reform process provides a good theoretical foundation for subsequent undergraduate studies through the addition of three-year courses. The following two years of professional training also provide strong professional guidance, improving the professional literacy of talents and providing a solid foundation for employment and subsequent studies [10]. Italy has further subdivided its higher-level master's degrees into two levels, which effectively improves the flexibility of selection and allows for more efficient selection of the required training according to one's own needs. This is more adaptable compared to the degree system with fixed years and stages. In addition, Italy has also introduced Master degree courses with a unique mindset, no longer limited by objects and time and space, based on higher freedom for learners. Finally, Italy has established and improved a highly targeted and scalable professional training model to cultivate the knowledge and skills required for special professions. From a practical perspective, although higher education in China has undergone hierarchical promotion, there are still certain shortcomings in flexibility and targeting, and the characteristics of training plans are not clear enough, which leads to insufficient professional performance of talents.

6.2 Strengthening Quality Assurance System of Digital Education

Italian digital education ensures that educational outcomes meet expected standards through several aspects: firstly, it is based on the EU's requirements for the quality of education in member countries within the region, which is an important external constraint for ensuring the quality of education in Italian universities; Secondly, there are guidance requirements for the education system work issued and formulated by Italy's domestic education and government departments; Finally, there are quality assurance institutions jointly established within and among universities, which have strong supervisory capabilities. The multi-dimensional guarantee system is constrained step by step and effectively cooperates with each other, providing effective guarantees for the quality of higher education in Italy. This has also made Italy rely mainly on the low enrollment and graduation rates since the 20th

century. In terms of ensuring education quality, China can also draw on its diversified and multi-level linkage mechanism to put forward higher requirements for the education quality, which is one of the core competitiveness of universities.

6.3 Highlighting the Construction of Key Disciplines and Forming National Characteristics

Italy is a world-renowned cradle of art, and its strong artistic atmosphere has attracted a large number of students who come to exchange and learn. The Italian government actively leverages this advantage, increases support for its unique specialties, creates academic cards with artistic characteristics, and effectively enhances the international reputation of Italian higher education. However, in comparison, China, which has a deeper cultural heritage, still has a long way to go in forming distinctive disciplines with international influence. It is regrettable that domestic universities gather, but cannot form a systematic and standardized regional characteristic academic discipline. Focusing on building China's academic reputation for the world, enhancing China's academic core competitiveness and international influence, is a powerful driving force for China's higher education to align with internationalization in the future.

6.4 Implementing Cloud-based Education Method

Italy has always been committed to deepening higher education reform, actively promoting the internationalization of higher education, and connecting with vocational education, improving education levels to promote educational equity. It is noted that a cloud-based education method is implemented, which includes online and offline teaching. Without adding additional teaching staff, teachers can complete various teaching tasks according to their own advantages. Data-driven, students-centered and digital technology is driving changes in various aspects of education, management, evaluation, examination, employment.

Digital education, as an aid and extension to schools and classrooms, is increasingly valued by countries around the world for promoting interaction between online and offline. In recent years, various countries have

successively introduced policies related to digitalization of education, and have achieved some results in practice. UNESCO calls on countries to promote the digital transformation of education while ensuring the use of strong technological means to provide more equal educational opportunities for everyone.

7 Conclusion

In the initial stage of educational digitization, Italy mainly focused on individual awareness and channels of information technology application. However, in the later stage, it vigorously promoted the application of information and communication technology and introduced a series of policies to accelerate the construction of broadband networks, cultivate the information literacy and ability of teachers and students, and develop and apply content resources. Especially during the pandemic, Italian universities have developed various forms of remote teaching models, further promoting the process of educational digitization.

In the process of developing educational digitization, Italian universities have continuously strengthened the training of educational digitization personnel, striving to improve their cultural literacy and technical level, resulting in a large reserve of talents in the later stage, and thus promoting the development of educational digitization. At the same time, in the process of information-based teaching management, emphasis is placed on achieving high efficiency in resource utilization and allocation, and promoting the further acceleration of educational digitization through information resource collaboration and sharing.

Starting from 2020, the Italian Ministry of Education launched “School 4.0” program, which equips university and high school classrooms with the latest digital equipment. According to the 2022 Italian Education Digitization Industry Market Report, as one of the four major economies in Europe, Italy's education digitization covers a diverse range of education public services and is in a leading position in Europe and even the world.

References

- [1] Di Pietro Giorgio. Changes in Italy's Education-related Digital Divide. *Economic Affairs* Volume 41, Issue 2, 2021: 252-270.
- [2] Piromalli Leonardo. Higher Education Policy in Practice: Digitalization and the Governance Reform in an Italian University (1988-2021). *History of Education*. Volume 52, Issue 6, 2023: 937-952.
- [3] Zhaohui Fo. Reform of the Italian Higher Education System in the Bologna Process [J]. *Foreign Education Research*, 2008 (02): 74-78.
- [4] Guzzo Tiziana; Caschera Maria Chiara; Ferri Fernando; Grifoni Patrizia. Analysis of the Digital Educational Scenario in Italian High Schools during the Pandemic: Challenges and Emerging Tools. *Sustainability*. Volume 15, Issue 2, 2023: 1426-1426.
- [5] Yan Li, Yujing Zhang. Development and Measures of Internationalization of Italian Higher Education [J]. *China Higher Education*, 2020 (17): 62-64.
- [6] Tejedor Santiago, Cervi Laura; Pérez, Escoda Ana, Jumbo Fernanda Tusa. Digital Literacy and Higher Education during COVID-19 Lockdown: Spain, Italy, and Ecuador. *Publications*. Volume 8, Issue 4, 2020: 48-48.
- [7] Taglietti Danilo, Landri Paolo, Grimaldi Emiliano. The Big Acceleration in Digital Education in Italy: The COVID-19 Pandemic and the Blended-school form. *European Educational Research Journal* Volume 20, Issue 4, 2021: 423-441.
- [8] Andrea Garavaglia, Valentina Garzia, Livia Petti.. Quality of the Learning Environment in Digital Classrooms: An Italian Case Study. *Procedia-Social and Behavioral Sciences*. Volume 46, Issue C., 2012: 1735-1739.
- [9] Le Zhang. Characteristics of the Development of Higher Education in Italy and Its Inspiration for China [J]. *Science and Technology Information*, 2018 (22): 152-154.
- [10] Tomczyk Łukasz, Limone Pierpaolo, Guarini Piergiorgio. Evaluation of Modern Educational Software and Basic Digital Competences among Teachers in Italy. *Innovations in Education and Teaching International*, Volume 61, Issue 2, 2024: 355-369.