

DIGITAL LITERACY FOR THE LABOUR MARKET: INCLUSIVE TRAINING IN HIGHER EDUCATION

M. Potes Barbas, P. Matos, N. Lopes

Instituto Politécnico de Santarém - Escola Superior de Educação (PORTUGAL)

Abstract

Understanding the term “inclusion” is a challenge today. Contemporary society assumes a diversity of definitions in order to clarify the various aspects that constitute this domain. This, in an attempt to correspond to the globality that the concept of inclusion entails. However, applying “inclusion” in a real context and effectively, specifically, social and digital inclusion for students with intellectual difficulties, is a real challenge, because in addition to forcing a paradigm shift in the context where the experience is inserted, it adds a sense of responsibility and adaptability in the institutions and human resources that perform their profession in them. In this case, it is about the creation of a unique model in Portugal of training in Higher Education, to train students with intellectual difficulties who want to continue their studies, improve their social, professional and digital skills and, above all, enhance a set of skills, attitudes and behaviours essential for their social and labour inclusion in the labour market. It is further added that this model is only possible with the addition of formal and academic education to the non-formal and informal education component of each student. This means that it is necessary to ensure that this training model is fully adapted to the social, pedagogical and emotional needs of each student, and it is essential to situate and understand the importance of two agents involved in this process: (i) families, who are the starting point for the motivation of this target audience and (ii) volunteers, who are from stakeholders, technicians to trainers and other students.

Keywords: Digital literacy, social inclusion, digital inclusion, training, higher education.

1 AN OVERVIEW OF THE CURRENT STATE OF THE ART AND THE RELATIONSHIP WITH THE DIGITAL LITERACY TRAINING FOR THE LABOR MARKET

The Digital Literacy Course for the Labor Market based on several studies, reports, initiatives and projects, of national and international context, aims to guarantee a holistic strategy that meets the needs of the target audience (young people with intellectual difficulties) and that understands the current Inclusive Education paradigm and its social and digital inclusion strategies. In this sense, one of the fundamental aspects for the implementation of this course has undergone a thorough literature review and study of the state of the art. Thus, this review process was divided into two parts:

- a) One, with a greater focus on social, educational and digital inclusion strategies.
- b) Another, with a considerably more segmented focus on the subject of Digital Literacy.

The literature review process allowed to delineate the investigative flow that supported, in a multipurpose way, the implementation of a unique training and adapted to a specific target audience, in a context of Higher Education.

Thus, as a starting point for the study of this training, the Progress Report on the implementation of the European Disability Strategy (2010 - 2020) (European Commission, 2017) was taken into account, which indicates a set of situations that pass, among other things, the aging of the European population and the fact that, as the EU population ages, the number of Europeans with disabilities increases significantly. Thus, in 2020, around 120 million Europeans are expected to have a disability. Still on this type of indicators, the European Disability Strategy (2010 - 2020) (EC, 2017) indicates that people with disabilities have the right to work on an equal footing with other people, with the Equality Directive employment prohibits discrimination in employment. However, large-scale challenges in accessing the labor market for this target audience are still identified. These were even more visible in the context of an economic crisis, which made it difficult to improve the employment situation of people with disabilities: only 48.7% had access to these conditions while the percentage of people without disabilities who accessed them was 72.5%.

With regard to access to quality and inclusive education, this indicator remains elusive for many people with disabilities. Indeed, about 22.5% of young people with disabilities are dismissed early from various education and training scenarios, against 11% for students without disabilities. In addition, only about 29.5% of people with disabilities (age range 30-34) have completed higher education or equivalent, compared to 42.5% for people without disabilities.

Finally, 30% of people with disabilities are at risk of poverty or social exclusion in the EU, against 21.5% of people without disabilities. The degree of disability - severe or moderate - significantly increases the risk of poverty or social exclusion.

This framework allows us to have an overview of citizens with disabilities and their main needs and difficulties of effective insertion in the educational and work contexts, being important to focus on the educational aspect that this training assumes as a priority challenge for the social and educational inclusion of young people with intellectual disabilities. To this end, the most recent report of the ET2020 Working Group on Higher Education - "Inclusion in Higher Education: Promoting life-changing opportunities for people from underrepresented groups. Political conclusions from the Peer Learning Activity in Brussels" - summarized some of the most significant contexts, results and good practices with regard to inclusion in higher education and the promotion of opportunities throughout life that benefit people from disadvantaged or less socially represented groups. Although the topics "inclusion", "access to all" "and" quality "are seen as fundamental pieces for the future of Higher Education Institutions (HEIs), there are still few opportunities for a target audience such as people with disabilities, migrants and other underrepresented groups who do not find the same equality to enter higher education or to complete a higher education course. This document further states that a more comprehensive approach to higher education inclusion policies is needed, although some progress has been made, for example, in some of the Peer Learning Activity (PLA) countries. There are some recommendations that this report considers essential for the successful implementation of inclusion policies in this field, such as:

- a) Establish a mixed policy capable of responding to the needs of these disadvantaged groups when they are integrated into higher education;
- b) Define a comprehensive strategy and the adoption of a long-term political commitment to enhance inclusion in higher education;
- c) Implement a governmental approach as a whole aimed at creating strategies to change fundamental policies that address the educational disadvantages of this target audience;
- d) Identify holistic strategies and coherent policies capable of responding to these problems;
- e) Promote collaboration between higher education institutions, schools and local communities that promote inclusion (sharing of good practices).

Finally, when an analysis is made of the policies that served as a basis for promoting inclusion in Higher Education, it is understood that investments at various levels (social, educational, technological and professional) are still necessary for this type of systems to be able to offer an agile and adequate response to these most disadvantaged groups and communities. Particularly, with regard to measuring progress towards inclusive goals, in monitoring the intended and unintended effects of inclusion policies and in analysing the complexity of the factors underlying these processes. In addition, there is a need for greater investment in the training of teaching staff in Higher Education in order to improve and adapt learning and teaching practices to students from disadvantaged groups, particularly students with intellectual difficulties and with a degree of disability equal to or greater than 60 % (European Commission, 2019).

With regard to the dimension of Digital Literacy, it is important to consider the national panorama in terms of technological evolution and access to information and communication technologies. In this sense, the report made in 2019 by the European Commission on the Digital Economy and Society Index (IDES) shows that Portugal ranks 19th among the 28 EU Member States in terms of "Connectivity", "Human Capital", "Use of Internet services", "Integration of digital technologies" and "Digital public services" (European Commission, 2019). Despite Portugal showing significant improvements, with slightly better scores compared to the previous year's report in four of the dimensions presented, the country continues to underperform in the "Human Capital" dimension. Thus, Portugal occupies the 23rd place among the 28 Member States and has a score significantly lower than the EU average. According to the European Commission (2017), in 2017, half of the Portuguese population lacked basic digital skills and about 30% had no digital skills, meaning that they did not use technologies in their daily lives, nor had they ever surfed the net. Internet (EU average:

43% and 17%, respectively). It was, therefore, a digitally illiterate population. However, still on the dimension of digital literacy, several initiatives have been implemented over the past few years with a view to reducing these numbers. One of the strategies adopted was the creation of the e.2030 National Digital Skills Initiative (Portugal INCoDe.2030), which aims to reinforce the framework of competences of Portuguese citizens in this field through five main lines of action: "Inclusion"; "Education"; "Qualification"; "Specialization" and "Research". It should be noted that these references do not present sufficiently concrete data on the applicability of this type of strategy to target audiences such as people with intellectual disabilities. It is in this sense that training in Digital Literacy for the Labor Market is born and outlines as a priority the social, educational and digital inclusion of students with intellectual difficulties in a context of Higher Education.

It should be added that this training is in line with the report made in 2017 by the Special Needs Working Group on Science, Technology and Higher Education, which verifies the relevance of this type of offer to the target audience in question, particularly with regard to touches on the topic of "Recommendations: support for improvement and change", through the presentation of proposals for improvement and change in access to higher education by citizens with special needs (GT-NECTES, 2017).

2 INCLUSIVE TRAINING DIGITAL LITERACY FOR THE LABOR MARKET

The training presented here began in October 2018, at the ESE of IPSantarém, as a pioneering course in Portugal inspired by a model with 12 years of experience at the Autonomous University of Madrid, in Spain, a model that does not confer a degree aimed at young people with Intellectual and Developmental Difficulty (DID). The offer created in Portugal shares the same type of structure in terms of the study plan as the offer of the Autonomous University of Madrid, in the sense that: "The study plan is structured according to two fundamental premises. On the one hand, to reinforce the inclusion of students' work through the learning of professional skills and, on the other hand, to complement the above, to contribute to the personal and social development of students through humanistic studies focused on values, emotional education and acquisition of social skills "(Gasset & Herrero, 2017).

Thus, the fundamental objectives of this course are:

- To train young people with special needs, aiming at the development of the necessary skills to perform a profession with sustainable employability;
- Develop eSkill's and soft skills that allow them to respond to societal challenges;
- Train, in networking, potential employers and mentors so that they can establish bonds and a sustained accompaniment of young people in the workplace;
- Establish partnerships with entrepreneurial companies that focus on creating inclusive jobs;
- Promote interaction between the business community and teaching and research institutions.

Although this training does not confer any degree or title, students will receive a certification that will enable them to exercise professions in the administrative, hotel, health, communication, marketing, among others. The 1st edition of the course has 11 registrants, selected from 18 candidates. The training of four academic semesters¹ was presented and approved by the ESE bodies of IPSantarém. It is important to note that the students of this course come from various regions of the country, such as Santarém, Lisbon and Évora. We believe that the bet on implementing this training is very relevant and fundamental for the construction of a more inclusive society, as it is directed towards employability, enhancing, improving and facilitating the construction of each student's professional profile.

The methodology adopted in the implementation of this training project is relevant in the context of Higher Education in general because it is an experimental implementation, studied / investigated and evaluated, which corresponds to one of the fundamental missions of higher education institutions (HEI): to build knowledge with a highly qualified faculty. The conception of this offer occurs in the full exercise of the pedagogical and scientific autonomy that higher education institutions are invested in, thus allowing the work that teachers dedicate to this training, precisely because of what is involved in

¹ Study plan for the Digital Literacy training for the Labor Market. Available in <http://w3.e.se.ipsantarem.pt/literaciadigital/p-estudos/>

teaching work (and in their own career) considered, assigned and valued on an equal footing with the teaching work of all other initial training.

The relevance of this offer taking place in the context of Higher Education is also due to the fact that it offers young people the possibility of immersing themselves in a stimulating learning environment, "inhabited" by people of their age, with whom they can naturally identify in various aspects. , and the conviction that these links of identification, communication and relationship are themselves promoters of well-being and learning (for all). This is evident from the experience of the team at the Autonomous University of Madrid, from whom we received the inspiration and knowledge that we set out to adapt to the Portuguese reality with the creation, at scientific level, of a Hub in Digital Literacy and Social Inclusion².

In addition, this non-formal training methodology adapted to such a specific target audience is also relevant in the context of Higher Polytechnic Education, in particular, because it offers, not "advanced" training (degree awarding) but training of technical-practical nature in order to prepare for autonomous work. This is another element of relevance to what the mission of this subsystem of Higher Education is. The same applies to the idea that the research that takes place in this context, precisely given the nature of its mission, has some particularities (among others, the character of connection to professional praxis, to contexts).

Finally, with regard to the methodological process of this type of training strategies, it is the fact that it is appropriate to the context of a Higher School of Education, and this is one of the places with the greatest scalability for the training of Educators for all education system, and where trainers, a fortiori, will have the best conditions to guarantee the highest quality of education to which young people are entitled. It is also appropriate because all teachers, regardless of their specific area, are "interconnected" with Education, research in Education, are sensitive to the search for improvement and their own professional development as trainers, and that the latter, when it occurs, only values the higher education institutions themselves.

3 RESULTS

The Digital Literacy training for the Labor Market, during the academic years 2018-19 / 2019-20, achieved a set of relevant results in terms of raising awareness of the need for the integration of this population in higher education institutions, within reach of a set of positive effects on young people who attend it, be it effects on their performance, either in the way they relate, in their self-esteem or even in their autonomy as adult citizens. This area of social inclusion has generated growing interest in Portuguese society, making it a priority for educational and socio-economic policies, as evidenced by Law 4/2019, which establishes the employment quota system for people with disabilities, with a degree disability equal to or greater than 60%. At the same time, the issue of digital literacy has also emerged, due to the constant transformation of information and communication technologies (ICT) and their respective integration in school, professional and family contexts, thus becoming essential for the daily lives of citizens.

3.1 Dimensions

In this way, and given the relevance of the theme, this training presented results in the following dimensions: Social; Pedagogical; Policy; Professional; Technological; Economic.

3.1.1 Social

Thus, as a result in the Social dimension, this course enhanced the following:

- a) Knowledge and skills in activating for effective learning in inclusive contexts;
- b) Positive effects for the families of young people who manage to integrate the labor market, as well as their local communities (better self-esteem for the elements of the target group);
- c) Less pressure on their families not with regard to their children's future concerns; and better interaction with the community, as these young citizens become more autonomous and self-sufficient;

² Hub on Digital Literacy and Social Inclusion. Available in <http://pololiteraciadigital.ipsantarem.pt/>

- d) Social inclusion of youth at risk in society and in the future labor market.

3.1.2 *Pedagogical*

As for the Pedagogical dimension, this training presented the following results:

- a) A unique and fully adapted model of training in Digital Literacy with the Labor Inclusion component in the context of Higher Education focused on the inclusion of young people with intellectual disabilities. This model was recognized by several entities at national level as good practice to be disseminated;
- b) A curriculum / study plan centred on the needs of this target audience and the different realities of the labor market. This curriculum demonstrated to be able to: (i) Enable young people to work in different public and private work contexts; (ii) Train with tools to adapt to different business cultures; (iii) Show that this initiative provides the means for these young people to know how to work as a team, to be able to reflect on their practice and to show themselves involved in a responsible way with activities in the work context;
- c) A practical guide (Handbook) that collects all the results, statistical data, pedagogical, social, digital and professional strategies implemented, studies and other quantitative and qualitative elements that were collected over the two years of training. This Handbook³ is available as a dissemination tool, so that all Higher Education Institutions (HEIs) at national level can replicate this good practice in their own institutions.

3.1.3 *Policy*

With regard to the political dimension, this project contributed to the promotion of necessary reforms and improvement of progress in teaching and learning in different institutions: “knowledge triangle” in the European research area: research, innovation and education. It is even more important with the new legal framework, in force from this year, which requires the hiring of people with disabilities in entities with more than 75 employees (Decree-Law No. 4/2019, 10 January).

3.1.4 *Professional*

Regarding the Professional dimension, this training enabled the integration of 11 professional and paid internships for students of the Digital Literacy for the Labor Market course. The monetary contribution for students came from several protocols with the companies and stakeholders involved in this inclusive project. Some of the companies already had similar experiences when they participated, in previous years, in initiatives of the same nature. Among these companies, some stand out for having the “Inclusive Employing Entity Brand”, which aims to promote public recognition and distinction of open and inclusive management practices, developed by employers in relation to people with disabilities (IEFP, 2015).

3.1.5 *Technological*

As for the Technological dimension, this project had the following results:

- a) The integration and implementation of digital, adaptable and flexible platforms, as well as the dissemination of all videos, digital presentations and photographs built over these two academic years, particularly through the use of Padlet as a mediating and sharing platform for content learning for students. In fact, the use of this tool with this target audience is justified, essentially, because it “provides a free multimedia” wall “that can be used to encourage participation and real-time assessment of the entire class. (...) Since, it allows students to write their ideas on sticky notes and then put those same notes on a large virtual sheet. Padlet provides a unique and intuitive experience, being a useful tool in the field of digital literacy, as it works with a variety of different devices, does not require participants to create accounts to use it, and does not require any special technical know-how” (Fuchs, 2014).
- b) The creation of a group in the WhatsApp application with all the students where, in an easier and faster way, it could transmit all the information related to the course and where the students could also ask questions. This group quickly became the largest vehicle of communication between students and the coordination of the course. This WhatsApp communication group

³ Official Handbook of the Digital Literacy Training for the Labor Market, available at <http://w3.esep.ipsantarem.pt/literaciadigital/handbook/>

resulted in a more in-depth study and analysis, corresponding to a discourse analysis in the media, since from September 26, 2018 to February 17, 2019, more than 3,000 messages on various subjects were recorded among students.

- c) The development of a CV model in digital format and accessible through QR code, which could be used by students in the training. This model followed an adapted structure (graphics, typography, color and interactive elements) in order to be easily filled in and used by the students. This model was called e-portfolio⁴ and was awarded the Innovation distinction in the Poliempreende 2019 Contest.

3.1.6 Economic

Finally, with regard to the Economic dimension, this training resulted in a format of integration and sharing of the project for its dissemination in local entities, companies and NGOs, improving its visibility and facilitating the integration of this target audience in the labor market, thus promoting not only the generation of economic income, but also the competitiveness between institutions.

We are also pleased to note that this course holds the 1st INCoDe.2030 Action seal⁵, awarded by proposal from the Ministry of Science, Technology and Higher Education, thus publicly recognizing the high merit it holds. In addition, this project received an award, awarded by the Regional Health Administration of Lisbon and Vale do Tejo (ACES Lezíria), entitled "Movimento Escola de Afetos, Escola de Sucesso"⁶. This course has contributed to policy changes at the national level (Opinion of the General Secretariat for Education and Science on Training in "Digital Literacy for the Labor Market"⁷) and internationally (Inclusion in higher education - Promoting life changing opportunities for people of under-represented group⁸). In November, we will disseminate this course in all HEIs in Portugal.

4 CONCLUSIONS

The creation of this course helped young people with Intellectual and Developmental Difficulties (DID) to be more autonomous and active contributors to social and environmental causes - See the results obtained with the personalized assessment in each course unit in the Course ("I Learned")⁹ and the articulation built with the job market¹⁰.

Another objective to comply with this course will be to ensure, in an effective and agile way, the dissemination of the good practices acquired with this training model and to share them with the Polytechnic, Universities and Institutions / Associations, so that this type of unique and pioneering strategy can be replicated by mainland Portugal and the islands.

However, one of the conclusions reached after the completion of this project is the construction that there remains a large knowledge gap with regard to the key factors for the successful inclusion of people with DID in the labor market. There are not enough relevant scientific studies and analyses on the key competences of people with disabilities and their development needs for inclusion in the labor market. In addition, there is a lack of identification of the main competences in digital literacy, as well as their role in facilitating the inclusion process. However, empirical studies and initiatives, such as this training, have shown us the importance that the development of digital literacy skills has been playing in terms of the employability perspectives of this group.

The lack of integrated approaches, methods and resources limits the offer to this target group, not only in terms of its educational and training processes, but also in terms of communication and mentoring mechanisms. Effective and successful methods, resources and approaches must be identified, developed and scientifically validated to promote the social, digital and employment inclusion of

⁴ CV E-portfolio model, available at <https://www.docdroid.net/8kYNrJs/cv-literacia-digital-pdf>

⁵ 1st INCoDe.2030 Action seal in <http://w3.ese.ipsantarem.pt/literaciadigital/wp-content/uploads/2019/07/Selo-InCode2030.pdf>

⁶ Prize "Movement School of Affections, School of Success" available at <http://w3.ese.ipsantarem.pt/literaciadigital/wp-content/uploads/2019/07/Carta-de-Compromisso.pdf>

⁷ Opinion of the General Secretariat for Education and Science available at <http://w3.ese.ipsantarem.pt/literaciadigital/wp-content/uploads/2019/07/Inf-G24-de-2019.pdf>

⁸ *Inclusion in higher education – Promoting life changing opportunities for people of under-represented groups* available at http://w3.ese.ipsantarem.pt/literaciadigital/wp-content/uploads/2020/04/PLA-Social-Inclusion_Policy-Conclusions-1.pdf

⁹ <https://youtu.be/eUkUHXV4Sgo>

¹⁰ <http://w3.ese.ipsantarem.pt/literaciadigital/videos/>

people with disabilities. In addition, the creation of a holistic model that can define and implement research strategies will ensure a battery of scientific and technological indicators in this field.

As such, there is still a way to go for these practices to be added as a knowledge base to the state of the art in skills, practices and ways to proceed to promote the employability of people with DID. Thus, it is still necessary to carry out a compilation of experiences, empirical studies and other initiatives to measure the effective results that these strategies bring, both for the target audience and for all stakeholders involved. In addition, the importance of defining a holistic, scientifically validated model that addresses the different factors that are crucial to success, in terms of weight and role, to increase the likelihood of success and effectiveness in employability of people with intellectual disabilities is still important. a mission to develop and implement.

REFERENCES

- [1] United Nations Regional Information Center for Western Europe. Guide to Sustainable Development - 17 OBJECTIVES TO TRANSFORM OUR WORLD. 2017. Available in <https://unric.org/pt/objetivos-de-desenvolvimento-sustentavel/>
- [2] European Commission. Digital Economy and Society Index (IDES). 2019 Country Report. Available at <https://ec.europa.eu/digital-single-market/en/scoreboard/portugal>
- [3] DGEEC (Directorate-General for Education and Science Statistics. Survey of SEN in Higher Education Establishments –2019/2020. Available at <https://www.dgeec.mec.pt/np4/428/>
- [4] ET2020 Working Group on Higher Education. *Inclusion in higher education – Promoting life changing opportunities for people of under-represented groups*. Policy conclusions from the PLA in Brussels, 11-12 April 2019. Available at http://w3.es.e.ipsantarem.pt/literaciadigital/wp-content/uploads/2020/04/PLA-Social-Inclusion_Policy-Conclusions-1.pdf
- [5] European Commission. *Inclusive and connected higher education*. 2019. Available at https://ec.europa.eu/education/policies/higher-education/inclusive-and-connected-higher-education_en
- [6] European Commission. *Progress Report on the implementation of the European Disability Strategy (2010 - 2020)*. COMMISSION STAFF WORKING DOCUMENT. 2017. Available at <https://ec.europa.eu/social/main.jsp?catId=1484>
- [7] Fuchs, B. The writing is on the wall: using Padlet for whole-class engagement. *LOEX Quarterly*, 40(4), 7. 2014.
- [8] GT-NECTES (Working Group on Special Needs in Science, Technology and Higher Education. Final Report. 2017. Available at <https://www.portugal.gov.pt/pt/gc21/comunicacao/documento?i=relatorio-final-do-grupo-de-trabalho-para-as-necessidades-especiais-na-ciencia-tecnologia-e-ensino-superior>
- [9] Institute of Employment and Training. Brand Inclusive Employer. 2015. Available at <https://iefponline.iefp.pt/IEFP/medMarcaEntidadeEmpregadoraInclusiva2.do?action=overview>
- [10] Izuzquiza Gasset, D., & Rodríguez Herrero, P. Inclusion of people with intellectual disabilities in university. Results of the *Promotor* program (UAM-PRODIS, Spain). *Siglo Cero: Revista Española sobre Discapacidad Intelectual*, vol. 47, nº 260, pp. 27-43. 2016.