



# The Contribution of Interdisciplinary Education to the Development of Students Competences with Intellectual Disabilities. An Analysis from the Social and Rights Model

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## Abstract

Interdisciplinary education is presented as an opportunity to address the challenges of education, especially in the case of the most vulnerable groups. People with intellectual disabilities, because of their specific cognitive processes that influence their learning, have particularly suffered the consequences of school exclusion. In recent years, international treaties have addressed the inclusive education of people with disabilities as one of the problems to be tackled, in a context of diversity and learning for all, and at all stages of life. In the face of difficulties, the foundations that define interdisciplinary education make it a good practice for achieving equal educational opportunities, by addressing content in a holistic way that is close to real problems. This chapter delves into interdisciplinary education as a strategy available for the learning of people with intellectual disabilities, under the approach of the social and rights model, establishing links between the context and the person through new approaches, thus offering a new framework of opportunities for lifelong, quality and inclusive learning.

## Keywords

Interdisciplinary teaching · Disabled people · Inclusive education · Lifelong learning

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## Introduction

The educational inclusion of students with intellectual disabilities is one of the current social problems related to education in a context in which it is urgent to implement models that guarantee equal opportunities [1]. Disability is nowadays a matter of rights. The activism of the disability social movement and the demands of people with disabilities themselves [2] have put disability on the political agenda as well as on a level of social recognition. In the field of education, the right to inclusive education has a relevant position in the United Nations Convention on the Rights of Persons with Disabilities (CRPD) [3], although it is true that this has not always been the case.

Inclusive education implies the transformation of educational cultures, policies and practices in order to eliminate or minimise the barriers that prevent the presence, participation and progress of excluded groups. In short, it would be a matter of aligning educational regulations and experiences with the principles that define the social model of disability, as a current conceptual framework in which learning problems, and others that affect people with disabilities, are not so much in the person, but in an environment that is not adapted, not accessible and that prevents the development of the competences of these students [4]. Underlying this conception is the rights model and the recognition of inclusive, free and quality education [3].

Among the new learning approaches, interdisciplinary education is beginning to gain special relevance, as a response to a changing and complex environment, which can help to understand reality from a holistic conception and beyond the sum of disciplines [5].

In this chapter we address interdisciplinary education as a strategy for success in the teaching–learning process of people with intellectual disabilities, showing how it can compensate for some of the peculiarities that prevent them from achieving success in their educational processes, both formal and non-formal. Based on the current conceptualisation of disability and, therefore, on the importance of having friendly and adapted environments, education is presented as a permanent right for people with intellectual disabilities, a right that should not only be recognised, but also become a reality through new approaches and specific actions.

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## A New Paradigm for Interpreting Disability: The Social and Rights Model

The evolution of what we understand by disability, its conceptualisation and intervention policies are undoubtedly the result of the application of scientific, genetic and therapeutic advances, but also of social changes and how disability is interpreted sociologically. These interpretations have given rise to models that broadly coincide with different historical periods, and with their corresponding definition of the individual, in accordance with the philosophy of each era [6, 7].

The traditional or eugenic model, the medical or rehabilitative model and the social model have given rise to successive theories that over the years have explained disability from a sociological perspective, but have also had important consequences on the lives of people with disabilities and the way in which they have been supported, also in the educational sphere.

The three aforementioned models are conditioned by different explanations of the causes of disability (divine, medical or social) and the role that society provides for disabled people [4]. Depending on how these questions are considered, each society has generated individual and collective responses to people with disabilities, and even plans and designs its care policies [8], including those of an educational nature [4].

The current interpretation of the social and rights model emphasises people's capabilities over disabilities. At the educational level, it focuses on developing competences rather than on limitations in functioning [9]. It stems from the demand of disabled people themselves to be recognised for the great contribution they can make to society if it accepts them as they are [10]. Universal accessibility, design for all and mainstreaming in disability policies become its differentiating elements, inspired by the activists, people with disabilities, who created a basic model for understanding the new paradigm of disability [11].

A longitudinal historical analysis of the explanatory models of disability shows a conflicting, even confrontational, relationship between the so-called medical model and the current social model, a relationship of tension resulting in an important conceptual change of disability which is produced by definitively overcoming this confrontation [8].

The medical or rehabilitative model, which has prevailed since the second half of the twentieth century, makes it possible to overcome the approaches of a first traditional model of disability, which considered it to be the consequence of a tragedy or divine punishment, and which condemned disabled people to social isolation or, in the worst case scenario, to extermination.

This new medical model results from the application to disability of medical-biological approaches to explain diseases, considering disability as a permanent consequence of diseases or accidents [12]. It inspires the International Classification of Impairments, Disabilities and Handicaps of the World Health Organisation [13], offering for the first time an excellent category of useful tools and research for medical approaches linked to disability, by emphasising aspects related to the health and well-being of the person [14].

It was also the time of the origin of the associative movement that began to raise its voice about the needs of disabled people and which would later demand the exercise of their rights [15]. Another aspect of interest is that, based on this interpretation of disability, the question arises that disability cannot only be "rehabilitated", but also prevented [7].

Reactions to the principles of the medical or rehabilitative model generated, around the 1960s, the so-called social model of disability, which marked the beginning of a profound change in the treatment and definition of disability at an

international level, generating a very active current of positioning led by people with disabilities themselves [16–19].

The social model is full of interpretations and manifestations [8] that bring it closer to a paradigm than a model [20]. Furthermore, it generates academic, social and political consensus by considering that disability is no longer exclusively a personal problem caused by an impairment, so that social factors become a first level element in the situation of the person with disability [4]. In its more integrative interpretation, the social model explains that social causes are enormously influential in disability, but without forgetting the medical and psychological substrate that sustains them [21], establishing relationships between the different levels that interfere in disability (biological, personal and social) in order to implement coordinated interventions on each of them in a balanced way [8]. Under this new interpretation, the problem of integration or the possibilities of participation of disabled people in different environments would not be so much in the person, but in a context that does not allow that participation, that disables [20].

This approach inspired the publication of a new International Classification of Functioning, Disability and Health (ICF) [22], after identifying the need to modify the excessively medicalised approaches of the 1980 Classification [13]. It incorporates personal and environmental factors, which implies that the context is also a determining aspect in the construction of disability, and explicitly states the need to operate on the basis of individuality and not on the basis of collectivity [23].

Currently, the social model has just been shaped by incorporating the field of rights, with two new foundations for understanding disability: the need to give equal value to all the lives of all human beings; and the obligation to guarantee the same rights and opportunities to all people [24]. Both should currently inspire policies and methodologies of attention to diversity [25], finding international recognition for the first time in the United Nations International Convention on the Rights of Persons with Disabilities [26].

This implies that educational systems must be adapted and adequate to the learning peculiarities of disabled people, especially those who have greater difficulties. The application of new systems of educational intervention will help people with intellectual and developmental disabilities to develop their competences and prepare themselves for life, solving some of the main difficulties that conventional education generates for them.

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## **Historical Approach to Interdisciplinarity from the Integrated Approach and Theoretical Foundations**

Studies on interdisciplinarity and transdisciplinarity have gained prominence and relevance over the last 30 years [27], with many researchers focusing on interdisciplinarity [28–30]. However, some of the classical authors of ancient Greece, such as Plato and Aristotle, had already managed to systematise the knowledge available up to that time in a global way, involving different areas of knowledge.

It was not until the fifteenth century when, in the Renaissance, the objects of study of the different sciences began to be studied in greater depth. It was from that moment onwards when knowledge began to be fragmented and greater specialisation was sought, leaving the disciplines with no links between them [31].

Gradually, during the seventeenth and eighteenth centuries, autonomous areas of knowledge appeared and a strong specialisation took place, particularly in the natural sciences, with the development of new, independent and differentiated scientific disciplines, thanks to which many scientific and technical advances were made [32]. This disciplinary organisation was finally institutionalised in the nineteenth century, with the creation of the modern university and the development of the concept of discipline in France [27], which legitimised the study of fragmented knowledge, based on the benefit for a process of industrialisation that was beginning [33]. However, some authors such as Ortega y Gasset [34] were critical and argued that the specialisation of knowledge had distorted the real vision of the world, leading many researchers to take a reductionist view of the problems and revealing a certain nostalgia for an integrated culture.

Thus, from the second half of the twentieth century onwards, hybrid disciplines began to emerge that sought to break down disciplinary boundaries in order to confront the problem of ultra-specialisation and address phenomena from various areas of knowledge [35]. Interdisciplinarity was thus born as a reaction to specialisation, due to the dissatisfaction that the perspective of classical science generated in various fields of knowledge.

At present, the changing nature of knowledge and the complexity of problems due to their multidimensional nature mean that the concept of discipline must be broadened and new concepts such as multidisciplinary, interdisciplinarity and transdisciplinarity have appeared [30]. Therefore, we can say that there are three different approaches to talk about integration [36]. These approaches make us move from an integration of disciplines without transforming them when we speak of multidisciplinary to a full fusion with a holistic perspective in transdisciplinarity, passing through the convergence or connection of interdisciplinarity [37]. Transdisciplinarity is a young term and its initiators include Jantsch et al. [27]. According to Morin [38], we must be able to understand the complexity that surrounds us and seek explanations to problems in a broad context, going beyond a simple sum of disciplines [5].

The concept of interdisciplinarity was defined by Unesco [39] as the cooperation of various disciplines, which contribute to a common goal and which, through their association, contribute to the generation of new knowledge, new languages and a common perspective, breaking disciplinary boundaries in search of the circulation of concepts and the formation of hybrid disciplines [5, 40]. In this way, the concept of interdisciplinarity is understood as a level of collaboration between disciplines that implies reciprocity and mutual enrichment, to the point of elaborating broader conceptual frameworks that modify the disciplines in contact and make them dependent on each other [41]. Consequently, an interdisciplinary vision generates integrative qualities that disciplines did not have in isolation, which provides an organisation of knowledge that is more closely linked to reality [42].

Therefore, if integrated learning content can be designed in multidisciplinary, interdisciplinary or transdisciplinary ways [43], in the proposal we are presenting we will take as a reference the interdisciplinary approach whose characteristics are close to the needs of people with intellectual disabilities. We consider that it can be a first step to work with this group in which such an approach is already innovative.

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## The Concept of Interdisciplinary Teaching

In the field of education, problems of an interdisciplinary nature constitute an opportunity to educate in a non-fragmented perspective of the world. Most of today's major social problems (immigration, inclusion, climate change or ageing) must necessarily be addressed through interdisciplinary studies and, in this context, an interdisciplinary pedagogy seeks to deepen the teaching–learning processes so that students acquire a holistic view of complex phenomena in both nature and society [44]. In this sense, despite the different meanings of interdisciplinarity, there is consensus that this term is the principle of all curricular design and didactic methods, so it must be assumed by teachers and students and as a process of enriching the curriculum and the learning of its actors [45].

We therefore understand interdisciplinary teaching as the educational act where interrelationships and reciprocal actions between academic disciplines at curricular, didactic and pedagogical levels are established and manifested. This leads to articulations, complementarities and convergences, strictly speaking, from different aspects (purposes, concepts, learning strategies, values, skills, etc.) so that the student integrates the learning processes and their knowledge in the context of a contextualised and complex object of study; and the management of diverse teams.

According to Hasni [46], Lenoir [47] and Lenoir and Sauv   [29], there are three processes in this approach: one is carried out by the teacher, the integrative approach, where there is a curricular articulation of the study programme; at the didactic level, in the planning of the educational intervention and its reflection; and at the pedagogical level, by providing the activities and methods. The other is carried out by the learner: integrating learning processes by engaging in mediating processes that encompass stages of learning, for the objectification between the learner and the objects of learning. And as a result of the two processes an internal cognitive product is generated, the integration of knowledge (integrated knowledge), defined by the learning outcome acquired by the learner (knowledge, skills, learned and integrated and/or developed competences). Therefore, an integrated teaching–learning process has to be related not only with learning content, but also with personal development in a social sphere, according to students' abilities.

Approaches in the literature, including the Handbook of Interdisciplinarity [48, 49], state that there is no single interdisciplinary didactic model, since achieving the purposes of interdisciplinary teaching requires higher cognitive

processes, inter- and intrapersonal learning that are not addressed by a single model. According to research [29, 50], one or several interdisciplinary pedagogical models can be adopted.

A very common teaching and learning strategy in interdisciplinary teaching is problem solving, as it favours the understanding of concepts and the establishment of connections between them [51], promotes the ability to integrate knowledge in order to apply it [52], benefits the development of self-directed learning skills, information gathering and self-assessment techniques and, in addition, prepares for professional performance [53]. On the other hand, other authors confirm that interdisciplinary teaching reaches students at a cognitive level, as it improves relational skills, has the ability to adapt knowledge in unexpected and changing contexts [54], generates flexible thinking, favours the development of learning skills or the integration of different contexts and at the level of values contributes to developing sensitivity towards others, learning to move in diversity or to be more confident [55]. In short, it seeks to develop competences through intellectual challenge, the relationship with everyday life and its relationship with the context, and contributes to critical thinking. The efficiency of integrated teaching–learning is justified with the connection of learning to life, because life is a whole [43].

As outlined above, the process of interdisciplinary teaching is mediated by the management of diverse teams, since the formation of interdisciplinary teams is required both at the level of teachers and students and, if possible, with the participation of the community. At the level of teachers because it is with them that the process of carrying out the aforementioned articulation is initiated and developed. Diverse teams of students because they reflect the diversity of cultures, attitudes, abilities, etc., and they are the ones who will carry out the integrative activities. It has also been shown that diverse and effective teams enhance the process and result of the work [56] and that they must be managed in such a way to develop relationship skills within them, because dialogue is fundamental for the objective of interdisciplinary teaching to be achieved.

Thus, teachers need to re-evaluate their role in the classroom as this strategy involves organisational changes that can promote more meaningful learning experiences by connecting academics with real problem solving. In this sense, it is of great importance because combining several educational paradigms offers the possibility for each learner to learn in his/her own style [57]. The training of future teachers for integrated teaching must therefore be addressed, as it consists of organising content on the basis of its interdependencies and interrelationships in order to unify subject matter that is taught independently and in isolation [58].

Interdisciplinary or integrated teaching is believed to develop critical thinking, self-learning skills, deep learning and problem-solving skills [59]. In this sense, education is seen as the cornerstone for supporting not only active citizenship but also equal opportunities and social cohesion.

## **Conceptualisation of Intellectual Disability and Educational Problems Faced by People with Different Special Educational Needs**

Disability, to a greater extent intellectual or developmental disabilities, is a term that is frequently associated with more or less significant difficulties in adaptive skills and in the acquisition of learning, especially in the learning of all those tasks and areas in which psychological functions of reasoning and metacognition are involved. These difficulties affect both formal and informal educational processes and manifest themselves in all contexts or domains of life [60].

If we stick to the concept and the current classification of intellectual disability, we notice that, as in the rest of the disabilities, an “ecological perspective” has been imposed that allows, in the case of intellectual disability, not to understand it as an absolute or fixed feature of the person, but that leads us to consider the interaction of the person with his/her environment, and especially the effect that supports can provide for his/her better functioning in society [61].

There is currently a certain academic and scientific consensus on the definition of intellectual disability coined by the American Association on Intellectual and Developmental Disability (AAIDD), which is the most widely recognised internationally [62]. This definition refers to limitations in both intellectual functioning and adaptive behaviour as expressed in conceptual, social and practical adaptive skills [63].

According to what has been pointed out so far, in the case of intellectual disability, probably more than in any other disability, it deserves special consideration to be analysed from a biopsychosocial approach, and to be understood as a particular state of functioning, which entails limitations in reasoning, problem solving, academic learning or abstract thinking [64].

Learning difficulties, which in most cases are linked to intellectual disability or developmental disabilities, generally have their origin in intrinsic factors, or limitations in brain functions or structures, in neurological alterations or dysfunctions that cause delays and alterations in the development of psychological functions and, often, a below average IQ. Therefore, it is not uncommon to find difficulties related to reasoning, attention, working memory, development and application of learning strategies and metacognition, directly involved in learning and adaptation to the environment.

The interaction of the person with the environment can be a condition that significantly decreases or increases the effects of the disability. Although intellectual disability may occur in conjunction with other disorders (e.g. sensory impairment, severe emotional disturbance, attention deficit hyperactivity disorder, specific learning difficulties) or with extrinsic influences (such as cultural differences, educational deficiencies, inappropriate or insufficient instruction), it is not the result of these conditions or influences.



According to the above, intervention in both formal and informal teaching and learning processes should be based on a number of methodological principles, as argued by Frith [65], Cuesta et al. [66], Howlin [67], Rios et al. [68], Mesibov and Shea [69], Martos-Pérez and Llorente-Comí [70] and Guerra and López-Gómez [71]:

1. As an initial condition, any intervention must be individualised, combining the interests, abilities and needs of each person. The learning style and pace of work of each person with a disability will be a determining factor when programming any activity. Prior to this programming, and after the analysis of individual needs, an individualised planning of support will be carried out, which may be natural, professional, technological or material.
2. Programmes, and therefore educational intervention, will be aimed at enhancing personal development in all areas of daily life, and therefore in all disciplines. Their planning will focus on relevant achievements and their development and organisation will be evaluated regularly among all the professionals involved in the teaching–learning process.
3. Understanding people’s psychological functioning is essential for successful learning. It is necessary to go beyond behaviour and understand the way people feel and understand the world, as well as the way they construct learning and social development.
4. The starting point should be a close knowledge of the person, through known tasks organised in small sections of gradual difficulty (step-by-step learning), taking into account their emerging capacities and potential, adapting the objectives to the changes that occur during the learning process. This methodology allows everyone to carry out adapted activities, since the activity is understood as a process, thus facilitating participation in one or another step of the process by means of reduced groupings to promote individualised attention.
5. The teaching of a new task or content, or of another step in the sequence of a process, has to be done using the errorless learning technique, establishing a small distance between the acquired skill and the skill being worked on. This strategy helps to minimise the effort of acquiring new learning and allows individuals to achieve reinforcement through small accomplishments that are a lot of work for them. In addition, the inclusion of small, gradual changes makes people's tendency to routine more flexible.
6. At the beginning of any teaching–learning process, all necessary aids should be offered. As teaching progresses, support should be gradually withdrawn, enabling the progressive acquisition of control over the activity and, therefore, greater independence. In this way, each teaching–learning process is adapted to the support needs of the individual.
7. The introduction of alternative communication systems develops communication in people without verbal language or with great communication difficulties. The expressive possibilities of each person are assessed and an intervention programme adapted to the person is carried out, making use of all possible means of communication.

8. It is effective to use meaningful and active experiences, through which they can learn to function in a natural way. The principle of functionality and meaningful learning should be used as a starting point when carrying out different activities and, as far as possible, using real materials worked on in natural contexts or selecting learning objectives that are useful in the environments where the person develops. It is also important to maximise, through a variety of support options and formulas, the participation, enjoyment and meaningful learning of people for their inclusion in the community.
9. The adaptation to age in terms of direct treatment, materials and activities, derived from considering users as adults with their own rights and duties, makes it necessary to constantly design and elaborate materials adapted to the evolutionary period of the person. The participation of the person him/herself in their production makes it easier for them to acquire full meaning and for them to learn how to use them better.
10. The creation of a predictable environment will facilitate the perception of contingencies through the control of stimuli, responses, material or space, so that the person knows where he/she is and what is expected of him/her and can, at the same time, exercise some control over the environment and manage within it. This entails the need to anticipate, either visually or verbally, all relevant information in order for the person to understand each situation, especially when it comes to changes and unexpected events.
11. The use of behavioural techniques based on Positive Behavioural Support, the construction of prevention spaces and materials, and the substitution of maladaptive behaviours with communicative or adaptive behaviours that fulfil the same function for the person [72] is effective.
12. The teachers must assume their immersion in a process of continuous improvement that drives them to implement the most innovative techniques and principles and to carry out a constant self-evaluation that leads to the optimisation of the care and services provided, through the evaluation of the strengths and weaknesses of the intervention and its adjustment to the needs of the people.

We consider that an approach to intellectual disability from an integrated perspective is possible and necessary in order to include all the methodological principles outlined above, however, as we have seen, it would also be necessary for teachers to take into account not only the characteristics of disabled people but also their own ability to work in an interdisciplinary environment applying complex methodologies.

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## **Contributions of Integrated Education to the Learning Difficulties of People with Intellectual Disabilities**

The educational inclusion of children and young people with intellectual disabilities is a right recognised and guaranteed by the United Nations International Convention [39] as well as by education legislation. The underlying question is whether

these students are developing all their competences in the school environment, or whether, on the contrary, the formal educational model lacks specific methodologies and resources that respond to their learning peculiarities [71], in what may be one of the great social problems in the field of the education of people with intellectual disabilities [73].

In this sense, interdisciplinary education deserves to be taken into account. The cooperation of different disciplines when dealing with contents solves the difficulties for generalisation and abstraction that characterise the learning of people with intellectual disabilities, thus overcoming a fragmented vision of the world, and contributing to understand the whole as the sum of the parts and graduating the difficulty of the contents to the different levels.

The perspective of interdisciplinary education, which requires coordination between teachers, disciplines and methodologies, also contributes to the development of the competences of this type of student, enhancing their personal development and thus responding to the necessary joint organisation and planning between all the professionals involved in the teaching–learning process.

If anything characterises this educational methodology, it is contextualised learning and the connection of content with reality. It trains students in problem solving [59], developing not only knowledge but also social skills. This perspective is fully in line with the model of functioning of people with intellectual disabilities, insofar as their learning abilities are conditioned both by their intellectual abilities and by other dimensions of functioning such as adaptive skills [74]. Interdisciplinary education contributes to the principle of functionality and meaningful learning that should guide the teaching and learning process for people with intellectual disabilities [66]. The interconnection of diverse materials, with different disciplines and in flexible groupings of teachers and students contributes to the generalisation of learning, which is one of the major deficits associated with the learning of people with intellectual disabilities. The incorporation of the environment and the knowledge linked to the reality offered by the interdisciplinary perspective responds to the need to consider the impact of the context on the opportunities for inclusion of people with intellectual disabilities as defined by the social model.

In short, the deficits linked to attention, reasoning or working memory deficits of people with intellectual disabilities that condition their learning can be mitigated if teachers apply the fundamentals of interdisciplinary education that contribute to the development of learning skills [29], and of self-directed learning, which can contribute to the gradual withdrawal of supports and foster the independence of people with intellectual disabilities.

Finally, interdisciplinary education, by requiring the generation of diverse teams also from the point of view of the students, thus incorporates diversity as a key to learning. This is undoubtedly an essential contribution to fostering inclusion and to the mutual enrichment of the group of students. In short, it also enables the development of inclusion skills in groups of students, also contributing to the strategic objective of interdisciplinary education.

## Conclusion

As previously stated, we can see a clear and beneficial relationship between the characteristics of interdisciplinary education and the learning needs of people with intellectual disabilities. An adequate educational approach to this type of students, both from the formal and non-formal fields, would contribute decisively to achieve progress towards a true social model and rights of people with intellectual disabilities. Integrating the interdisciplinary perspective means placing the education of people with disabilities in a transformative dimension, capable of responding to many of the demands not only educational but also social. In any case, there are obstacles that hinder teaching from an interdisciplinary perspective such as, for example, the fact that the training of teachers is disciplinary, so they must break a training paradigm when facing a new way of structuring their activity and interacting with other knowledge in which they are not specialists; the usual lack of experience in interdisciplinary work or the shortage of teachers in Special Needs Education.

International and supranational bodies are promoting the visibility of the most vulnerable groups, including people with disabilities, from a perspective based on the development of skills and, in educational terms, access to a system that until recently was not adapted to their needs. For example, in the Sustainable Development Goals (SDGs) of the 2030 Agenda [75] there are direct references to persons with disabilities in five SDGs. From the European institutions we find multiple references both to persons with disabilities and to their right to education. Thus, in the European Education Area by 2025 [76], it is stated that Education Systems at all levels should comply with the CRPD and it addresses six dimensions among which inclusive education and lifelong learning for all stand out. Interdisciplinary education has a place, therefore, not only in the formal systems but also in the organisations working with people with intellectual disabilities where there is a great field of action in which to combine contents, methodologies and forms of intervention that result in a greater autonomy through meaningful and active experiences linked to them.

Moreover, the European Skills Agenda [77] states learning is not limited to a single, specific phase in life and happens in different contexts, over the course of a lifetime and openly exposes the need to ensure social fairness, putting into practice the first principle of the European Pillar of Social Rights [78]: access to education, training and lifelong learning for everybody, everywhere in the EU.

On the other hand, the New European Agenda for Adult Learning [79] explains that a balanced allocation of resources for adult learning in education and training is needed, especially with regard to adult target groups which are from disadvantaged background, have disabilities or are affected by other factors that may cause exclusion. We cannot limit our attention to people with disabilities to formal education and the years of compulsory schooling, we have to claim the role of interdisciplinary or integrated education in all areas of life as it has been shown to develop critical thinking, self-learning skills, deep learning and problem-solving skills [59].

Finally, we come to the Strategy for the rights of persons with disabilities 2021–2030 [80] which states that education creates the foundations for combating poverty and for creating fully inclusive societies. Persons with disabilities have the right to participate in all educational levels and forms. A very interesting element is also included as it talks about the possibility of establishing an effective bridge to the mainstream educational system, continued training or to the labour market. The European approach to micro-credentials, through flexible and modular learning pathways, can positively impact employability and the lifelong learning process of persons with disabilities [81]. Education and training systems will find solutions to deliver more learner-centred, accessible and inclusive learning to a more diverse student body and also for recognition and accreditation. The Action Plan on Educational Support and Inclusive Education [82] proposes an adaptation of curricula to the needs of learners with disabilities, for example, through alternative leaving certificates allowing for continuation of education, training courses for teacher to develop competences to manage diversity in the classroom, etc. These proposals and the initiatives they entail are closely related to interdisciplinary teaching in the sense that they favour the development of interesting actions that are adapted to the needs of the individual, the market and the education systems.

There is still a long way to go in this respect, however, the issue of disability is already on all agendas and in the medium term, if all plans are implemented and move from the theoretical level to practical reality, educational opportunities for people with disabilities will open up. For its part, interdisciplinary education can be a strategy on which to anchor the foundations for a personalised, participatory and competency-based education. It could focus on the key competences for lifelong learning adopted in May 2018 [83] which are at the heart of the European Education Area. Finally, competences become relevant if they can be assessed and validated and thus made meaningful and in the near future probably, as stated before, this will become a reality for all and, of course for persons with disabilities.

In this sense, through this proposal of joining disability and integrated teaching, which is not only educational but also social in nature, equal opportunities are sought in access to different educational actions that contribute to the development of relevant skills, both in terms of personal fulfilment and employment, that have an impact on the well-being of all those who take part, generate social participation and social cohesion in their community

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