

# The psychological empowerment of adaptive competencies in individuals with Intellectual Disability: Literature-based rationale and guidelines for best training practices

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## Abstract

*Background: The Erasmus+ project “U4Inclusion” is a European program aimed at creating a common University curriculum for young individuals with intellectual disability (ID) to help them acquire psychological and behavioral competencies that can foster their social inclusion. The program is intended to provide ID individuals with adaptive personal, interpersonal, and professional competencies focusing on relevant life domains. Methodology: The method of the project was based on dignity, diversity, universal design and accessibility, autonomy, security, and self-determination. Results: One of the most relevant intellectual outputs, which the project was based on, consisted of structuring the practical guidelines, which could allow the implementation of best practices to train ID individuals to obtain and keep a job. The guidelines were focused on different aspects of these individuals’ needs, such as personal skills, interpersonal relationships, decision-making autonomy, community life, and assistive technology.*

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*Conclusions: The efficacy of the training framework outlined by the European partners of the project was based on a rational integration of the various inclusion cultures that are present in different European countries. The guidelines for best training practices outlined in this project were structured on evidence-based scientific literature and can contribute to the employment inclusion and social integration of individuals with ID.*

**Keywords:** Intellectual Disability; Psychological empowerment; Inclusive education; Adaptive competencies; Social inclusion.

## 1. Introduction

The Erasmus+ project “U4Inclusion” (Erasmus+ Grant Agreement number: 2019-1-ES01-KA201-064661) is a European program aimed at structuring a common educational curriculum for young adults with mild intellectual disability (hereinafter, ID), which can enhance their opportunities to find and maintain an inclusive job. The training framework created by the project partners – the University of Calabria (Italy), KVeLoce and the Miguel Hernández University (Spain), the Institute for Inclusive Education (Germany), and the Thomas More University of Applied Sciences (Belgium) – consists of a 2-year University curriculum for youth diagnosed with ID. The “U4Inclusion” project, which began in September 2019 and ended in August 2022 (thus lasting 3 years), was intended to enhance adaptive (personal and interpersonal) and professional skills in ID individuals who had concluded their school years and were able to perform adequate social activities in their daily life. The goal of the project was achieved by promoting cognitive, emotional, and psychophysical skills of ID individuals, as well as improving their social and interpersonal skills, focusing in particular on the specific factors influencing their professional tasks.

In particular, environmental barriers often limit the freedom of ID individuals to promote their autonomy and social integration (Hammel, Jones, Smith, Sanford, Bodine, & Johnson, 2008). The present program was based on the premise that mutual and meaningful relationships must be facilitated for these individuals, for whom a positive environmental atmosphere should be achieved. The training methods were aimed at providing support to enhance the educational learning processes based on the person’s needs and abilities. Mentoring and assistance processes were used together with support tools to promote the goals of their learning processes. As far as the present work is concerned, one of the most significant intellectual outputs of the “U4Inclusion” project consisted in writing the practical guidelines that can and should be used to more effectively improve the personal, interpersonal, and professional skills of individuals with ID in order to favor their employment inclusion and social integration.

### *1.1. Promoting the employment inclusion of ID individuals. A theoretical premise*

Adaptive skills (i.e., the capabilities needed to function autonomously in society) represent one of the most important competencies to be enhanced in ID individuals (Tassé, Schalock, Balboni, Bersani, Borthwick-Duffy, Spreat *et al.*, 2012; Jonker, Didden, Goedhard, Korzilius, & Nijman, 2021). Even though ID impacts all stages of life, and requires high health and societal costs, it has been underrepresented in health care and research, and in several countries the number of services for ID individuals does not meet their special needs (Salvador-Carulla & Saxena, 2009). Unfortunately, little scientific knowledge exists on training and education for healthcare professionals caring for people with ID in Europe (Salvador-Carulla, Martínez-Leal, Heyler, Alvarez-Galvez, Veenstra, García-Ibáñez *et al.*, 2015).

The opportunity to find and keep a job is one of the fundamental goals for the social inclusion of young individuals with ID (Gomes-Machado, Santos, Schoen, & Chiari, 2016). In this regard, the significance of adaptive skills appears to consist in modulating the relationship between ID individuals and their sociocultural environment (American Association on Intellectual and Developmental Disabilities – AAIDD, 2010). According to the AAIDD (2010) definition of ID, the community environment in which the individual lives should be taken into account when assessing and addressing ID. Consequently, in addition to the ID condition itself, professionals must also consider linguistic and cultural differences, which affect the way people communicate and behave. It is also crucial to recognize that limitations often accompany strengths (Buntinx & Schalock, 2010). Therefore, personalized support should be provided over time for these individuals to improve their self-awareness and thus their life functioning (Luckasson & Schalock, 2013).

ID individuals are often limited by environmental and psychological barriers, which can either be individual (e.g., lack of self-confidence), support-related (e.g., lack of support and training), technological (lack of digital tools), or socio-political (e.g., lack of adequate tools for social inclusion) (Chadwick, Ågren, Caton, Chiner, Danker, Gómez-Puerta *et al.*, 2022). Based on this premise, the aim of the “U4Inclusion” project was to strengthen the psychological empowerment of these individuals, improving their personal, emotional, adaptive, communication, and professional competencies, which could help them in finding and keeping a job after

school. The main goal was to improve the inclusion and social participation of these people, allowing them to be more aware of their needs and to acquire adequate abilities to take care of themselves. It is precisely because the environment can make a critical difference to the person with ID that guidelines, such as those outlined in this work, are so important and can be so effective. Furthermore, it has been demonstrated that creative abilities are also associated with cognitive and emotional skills, together with the autonomy of daily life for the person with ID (Vanutelli, Cortinovic, & Lucchiari, 2022). This suggests that creativity is yet another domain to foster in this population.

The “U4Inclusion” project was born from the intention of bringing together the various cultures of inclusion present in Europe, which are currently very different from country to country (Kefallinou, Symeonidou, & Meijer, 2020). More specifically, in Italy, Greece, Portugal, Sweden, Iceland, Norway, Malta and Cyprus a “one-track approach” can be found for pupils with special needs, which includes policy and practices geared towards the inclusion of almost all pupils within mainstream education. In contrast, in Spain, Denmark, France, Ireland, Luxembourg, Austria, Finland, the United Kingdom, Latvia, Liechtenstein, the Czech Republic, Estonia, Lithuania, Poland, Slovakia, and Slovenia a “multi-track approach” is applied to pupils with special needs, which offers a variety of services between the mainstream and special education systems. Finally, a “two-track approach”, with two distinct and disconnected education systems, can be found in Belgium, The Netherlands, Germany, and Switzerland, although The Netherlands and Germany are progressively moving towards a multi-track system. The “U4Inclusion” project can thus be very ambitious as, by gathering partners in different European countries, it is aimed to create a common European curriculum for the employment inclusion of young individuals with ID.

## 2. Methodology

In terms of the methodological construct, on which the “U4Inclusion” project is based, the guidelines that we outline here are based on the practical value of psychological empowerment in its various dimensions. Psychological empowerment has been variously defined as the set of actions aimed at improving the potential for controlling one’s life (Rappaport, 1987), as a person’s trust in the possibility of acting on personal and environmental barriers to achieve one’s goals (Zimmerman, 1995), as the

feeling of being able to shape one's own role and context (Spreitzer, 2007), or as the belief in the relationship between one's action and subsequent outcomes (Wehmeyer, 2004). Therefore, "*as a belief that goals can be achieved through the commitment and awareness about resources and factors that enhance or hinder one's efforts to achieve those goals*" (Di Maggio, Santilli, Nota, & Ginevra, 2019, p. 198), psychological empowerment is closely associated with work outcomes, among other factors. In relation to self-determination, psychological empowerment is also related to life satisfaction and well-being in people with disabilities (Shogren & Wehmeyer, 2016). Therefore, psychological empowerment is to be considered an extremely valuable resource for ID individuals to achieve a self-determined life.

The methodology specifically followed by the "U4Inclusion" project was based on: 1) dignity: respect for people with ID must prevail over any other consideration in order to overcome their invisibility in society and recognize their rights; 2) diversity: all students are different from each other but have the same rights, and it is important to take care of their specificity individually; 3) universal design and accessibility: it is important to meet the needs of all students taking into account the potential of each person; consequently, services must be designed for everyone and be accessible to everyone; 4) autonomy: students' commitment should be fostered and their personal autonomy facilitated; 5) security: the safety of all students must be guaranteed; finally, 6) self-determination: all individuals must be provided with tailor-made opportunities so that they can exercise their own skills – both those already present and those newly acquired.

Based on our intention to create practical guidelines that can guide learning activities aimed at job inclusion of young individuals with ID, we delved into the literature to find evidence-based findings that could help us achieve this goal. Thus, the rationale for these guidelines was based on the contemporary scientific literature addressing the best practices that need to be adopted for people with ID to be equipped to learn, work, and better perform activities of daily living. Below, these guidelines are outlined. In each section, we first present the literature-based scientific rationale of our discourse, and then the practical tasks that contemporary ID research suggests for enhancing meaningful competencies in ID individuals.

These guidelines were specifically meant to address different aspects of the aforementioned common European curriculum intended to foster the employment inclusion of young individuals with ID. We thus structured the following sections according to five main domains, thus covering the main

areas of the life of ID individuals. Namely, we focused on: interpersonal competencies, self-concept, decision-making skills, community-oriented skills, and capacities to use assistive technology.

### 3. Promoting employment inclusion of ID individuals. Literature-based rationale and guidelines for best training practices

#### *3.1. Enhancing interpersonal competencies in individuals with ID*

##### *3.1.1. Literature-based rationale*

It has been argued that all definitions of ID ultimately point to the relevance of social and interpersonal skills in defining this diagnosis (Gül, 2016). In fact, individuals with ID tend to experience social difficulties and often struggle to learn social skills or to use previously acquired ones in new environments. These social difficulties can be explained by environmental factors (e.g., too onerous demands), behavioral components, and/or cognitive difficulties (Embregts, 2003).

However, these individuals can overcome their social difficulties positively through specific training programs that consider the difficulties they often encounter in the surrounding environment. Since adult adjustment is thought to be crucially influenced by previous social interactions and the quality of interpersonal relationships (Margalit, 1995), social difficulties at a young age can lead to future poor interactions, which can, in turn, compromise the development of social relationships and intersubjective skills. ID is known to have a significant impact on the potential for achieving effective social and interpersonal competencies. This occurs in different domains of social life, such as community environments, intersubjectively shared activities, and ordinary daily life. Training programs aimed at ID individuals should focus not only on the retrieval of interpersonal competencies, but also – and most importantly – on “generative” social skills, defined as the ability to consistently create and execute skillful types of behavior in various contexts (Gumpel, 1994).

##### *3.1.2. Guidelines for best training practices*

Training programs aimed at ID individuals should consider the relevant role that social and interpersonal skills play in their adaptation and integration into their social environments. As these individuals often experience social difficulties, training programs should aim at enhancing

their interpersonal abilities by making use of different types of methods, such as direct teaching, social reinforcement and feedback, cooperative learning, video modeling, and social stories. Furthermore, since social difficulties, in turn, hinder the development of social skills, training programs aimed at improving the social adjustment of these individuals should strengthen social interactions and interpersonal relationships. Finally, lifestyle planning skills, as well as life activities other than work (e.g., leisure and recreation), should be considered when helping people with ID in promoting the interpersonal competencies necessary for their social integration.

### *3.2. Enhancing positive self-concept in individuals with ID*

#### *3.2.1. Literature-based rationale*

Each person obtains their identity through interpersonal interactions. Therefore, the construct of “personal identity” cannot be separated from “social identity” (Deaux, 1992). Some individuals can and often receive a label of ID from others when they differ significantly from a culturally accepted idea of “normal” intellectual functioning (Manion & Bersani, 1987). The diagnosis of ID is often assumed to be permanent and hard to leave behind (Harris, 1995). As Beart, Hardy, and Buchan (2005) stated, “Having intellectual disabilities is not a peripheral or neutral social identity but is a powerful and often dominant identifying label as well as a stigmatizing one” (p. 49). In fact, the social status of ID individuals is such that all other identities (e.g., gender, ethnicity, sexual orientation, religious beliefs, etc.) tend to be overshadowed. For example, the minority status of both ID and LGBT individuals leads them to greater risks of experiencing discrimination and prejudice when compared to non-ID and non-LGBT people (Tallentire, Smith, David, Roberts, Morrow, Withers *et al.*, 2016). Overall, social inclusion is impaired for those with both ID and an LGBT identity due to homo- or transphobia, which can be internalized and, in turn, lead to greater suffering (Smith, Zirnsak, Power, Lyons, & Bigby, 2022). Indeed, ID individuals who also identify as LGBT+ tend to face various barriers to inclusion in the community environment, including disability services (Ramamany, Rillotta, & Alexander, 2021). Almost like LGBT+ (and especially transgender) youth, who suffer from health inequalities due to social stigma and discrimination (Scandurra, Carbone, Baiocco, Mezzalira, Maldonato, & Bochicchio, 2021; Mezzalira, Scandurra, Mezza, Miscioscia, Innamorati, & Bochicchio, 2022), it is known that people with



ID also suffer from significant disparities in terms of accessing and using tailored services.

Individuals with ID are also seen as individuals with cognitive difficulties that outweigh all other emotional problems, which are often viewed as consequences of their condition (Reiss, Levitan, & McNally, 1982). As a result, their segregation brings to fewer job opportunities, less chances to get married, and poorer social relationships if compared to people without ID. Notably, a diagnosis of ID can represent a severely stigmatizing label and is often associated with low perceived status resulting from a devalued social identity (O'Byrne & Muldoon, 2017). Stigma can be the consequence of the direct experience of rejection or fear of finding hostile social contexts and the perception of stigma can have a strong impact on the ID person's well-being and quality of life, which can be regarded as ranging from a social and interpersonal well-being (promoted by interpersonal relationships and social integration), to an emotional well-being (related to the opportunities to express and share one's feelings and emotions) and to the maintenance of a dynamic life balance (Chadwick, Wesson, & Fullwood, 2013).

Different strategies are implemented to deal with any stigmatizing experiences, based on personal characteristics, level of functioning, and the severity of one's disability. In this regard, Festinger (1954) argued that everyone engages in strategies of social comparison as a tool for self-assessment. In this perspective, social comparisons are seen as social cognitive mechanisms through which a person can define and validate one or more aspects of themselves. As such, social comparisons affect self-evaluation and, therefore, self-concept, as well as the perception of who one is.

There appears to be an association between high perception of stigma, negative social comparisons, and low self-esteem in individuals with ID (Paterson, McKenzie, & Lindsay, 2012). Consistently, ID individuals tend to have low self-esteem and face more adverse interpersonal experiences than the general population (Davies, Randle-Phillips, Russell, & Delaney, 2021). Larkin and colleagues (Larkin, Jahoda, MacMahon, & Pert, 2012) showed that young adults with ID tend to be more likely to be (and feel) victimized than their non-disabled peers. Interpersonal conflicts can also lead to worse mental health outcomes in ID individuals (Emerson, 2010). ID individuals appear to use downward social comparison processes when comparing themselves to peers with ID (Jahoda & Markova, 2004), perhaps because they may feel more competent when comparing with similar disabled peers than other typically developing individuals (Dijkstra, Kuyper, van der Werf,

Buunk, & van der Zee, 2008). Far from being passive in addressing their social status, individuals with ID can play an active role in creating and maintaining a positive identity. Provided they tend to engage in socially creative comparison processes to protect their identity, their experience of stigma does not always translate into a poorer self-concept (O’Byrne & Muldoon, 2017). However, the greater vulnerability of some groups of individuals (e.g., women with ID or, as mentioned above, people with ID who also identify as LGBT+) require additional support to meet the needs of these people.

A handful of studies has investigated the role that gender plays in self-concept and perception of stigma in people with ID (Umb-Carlsson & Sonnander, 2006). O’Byrne and Muldoon (2017) found that men tend to report more positive social comparisons with others than women, who, in turn, tend to report a greater experience of stigmatization. Precisely because individuals with ID do not represent a homogeneous group (Quinn & Chaudoir, 2009), individual variations in responses to perceived stigma must also be considered without using a simplistic one-size-fits-all approach.

### *3.2.2. Guidelines for best training practices*

Given the pervasive role that a diagnosis of ID represents for the person, particular attention must be paid to the “minority” status of individuals with ID, so that they are not segregated but, in contrast, find opportunities for social inclusion. Since ID represents a highly stigmatizing label, every effort should be made to give ID individuals the opportunity to focus more on their strengths than on the barriers they face. Fostering identity awareness in individuals with ID can improve their ability to take care of themselves, also favoring the social comparison processes they put in place.

## *3.3. Empowering decision-making skills in individuals with ID*

### *3.3.1. Literature-based rationale*

Decision-making skills and problem-solving strategies figure among the barriers ID individuals encounter in their daily lives (Wehmeyer & Kelchner, 1994). These skills are important for these individuals to be successful in professional, personal, and social contexts. Self-determination is central to decision-making, which significantly influences effective social adjustment, interpersonal competencies, employment, and self-management (Khemka, 2000). In this regard, ID individuals tend to have difficulties in interpersonal decision-making processes, which could represent an obstacle

to their self-protection, especially in situations involving potential abuse. Critical to decision-making performance are not only problem-solving skills, but also non-cognitive factors, such as the person's motivation, level of confidence, and beliefs about one's personal agency potential (Cacioppo & Petty, 1982).

Self-determined decision-making is associated with the perception of the person's control and influence over the environment (Wehmeyer, 2004), as well as with the individual's selection of outcomes that correspond to personally evaluated goals, the evaluation and achievability of which are crucial to decision-making processes (Ford, 1992). Khemka (2000) showed that decision-making can be improved through training programs focused on the use of cognitive strategies for alternative choice generation and consequential thinking. Therefore, not only the cognitive components, but also the motivational aspects of the decision-making process are crucial for the self-determination of these people (García-Alba, Rubio-Valdehita, Sánchez, García, Esteba-Castillo, & Gómez-Camirero, 2022).

### *3.3.2. Guidelines for best training practices*

Since effective decision-making skills and problem-solving strategies are often considered difficult for ID individuals to achieve, special attention should be paid to these skills. These represent a valuable tool for making these people more aware of their agency potential and more motivated in their choices. Self-determination in decision-making processes can actually help ID individuals gain a greater perception of control over their surroundings, which, in turn, can improve their well-being and autonomy.

## *3.4. Empowering community-oriented competencies in individuals with ID*

### *3.4.1. Literature-based rationale*

In many countries, institutional care for ID individuals is progressively being replaced by community settings (Overmars-Marx, Thomése, Verdonschot, & Meininger, 2014). This process, called "deinstitutionalization" of care (Mansell, 2006), has also been promoted by the United Nations Convention on the Rights of Persons with Disabilities (CRPD; United Nations, 2006). However, the shift towards an approach to care based on respect for the fundamental rights of this population does not seem to have brought the desired effect (Cobigo & Stuart, 2010). This is also due to the processes of stigmatization and discrimination that these people face on a daily basis.

Although difficult to define, social inclusion has been characterized as the intertwining of interpersonal relationships and community participation, and involves individual, interpersonal, organizational, community, and socio-political factors (Simplican, Leader, Kosciulek, & Leahy, 2015). Interpersonal skills that need to be fostered in individuals with ID include quality human relationships, self-confidence, and practical skills, such as self-care. Social inclusion takes place in the intertwining of environmental factors, social opportunities, and personal skills (Cobigo, Ouellette-Kuntz, Lysaght, & Martin, 2012), and represents a multidimensional, dynamic and relational process. Ultimately, overcoming exclusion is about tackling disadvantages – and facilitating inclusion is about creating new opportunities (Owuor, Larkan, & MacLachlan, 2017).

#### *3.4.2. Guidelines for best training practices*

When training ID individuals to improve their social skills, it is of paramount importance that they are considered as active agents. They must learn to internalize the processes that can lead them to implement certain types of behavior, thus allowing their generalization in different contexts. Therefore, it is important to pay attention to internalization processes related to specific types of behavior, so that ID individuals can generalize them in their daily life. Indeed, the well-being of ID individuals is crucially influenced by the ability to effectively use interpersonal skills, which are necessary for a successful integration into society.

### *3.5. Empowering the abilities of ID individuals to use assistive technology*

#### *3.5.1. Literature-based rationale*

The technological advances observed in recent years can be used to facilitate the exploration of new inclusive approaches targeting people with ID (Owuor *et al.*, 2017). The use of computer-assisted tools to improve the training and education of individuals with ID has shown promising results in recent years (Torrado, Gomez, & Montoro, 2020). The use of digital tools aimed specifically at these individuals indicates an increased need for education professionals to be able to identify and use appropriate digital tools (Ayres, Mechling, & Sansosti, 2013).

Indeed, the use of contemporary technology, as a didactic foundation for education, is becoming progressively more common in both general and special education. The outbreak of the COVID-19 pandemic has forced the world-wide population to use digital platforms to perform activities that

were previously done face-to-face (e.g., attending school, working, making purchases, and contacting others). During the pandemic, information and communication technologies (ICTs) have become more integrated than ever in most people's lives (Larsson-Lund & Nyman, 2020). For example, digital skills are important for gaining access to higher education and the labor market, as well as for benefiting from various social services. While people with ID have increased their use of technology to connect with mental health providers during the COVID-19 pandemic, they have also reported increased levels of anxiety related to lack of access to up-to-date information and easily understandable information related to COVID-19 (Lake, Jachyra, Volpe, Lunsy, Magnacca, Marcinkiewicz *et al.*, 2021). This situation worsened the overall anxiety already perceived by ID individuals due to the sudden shift to online provision (Zaagsma, Volkens, Swart, Schippers, & Van Hove, 2020; Zingale, Città, Belfiore, Carrubba, Elia, Mascali *et al.*, 2020).

However, existing technological devices only partially meet the needs of ID individuals (Borblik, Shabalina, Kultsova, Pidoprigora, & Romanenko, 2015). Indeed, much remains to be done to provide them with adequate technology that can help them achieve full social integration (Cuascota, Guevara, Cueva, Tapia, & Guerrero, 2019). Technology can play an important role in facilitating inclusive education, especially when it is easy to use and when it is located where the class group receives its lessons. On the other hand, its placement in dedicated environments, outside the classroom, can hinder the interaction between students and prevent the daily use of the tool to support teaching.

Despite its potential benefits, Assistive Technology (AT) – when access to it is inadequate – can represent an additional environmental barrier for people with ID, further hindering social inclusion and community participation (Owuor, Larkan, Kayabu, Fitzgerald, Sheaf, Dinsmore *et al.*, 2018). The need for good practice in this sense points to the exploration of the interplay between AT, community life, and social integration. For instance, Virtual Reality is an interactive multimedia environment in which the user becomes a computer participant in a “real virtual” world (Pantelidis, 1993). Consequently, interactive computer programs can be beneficial to people with ID by encouraging active involvement in learning processes, thus providing users with the experience of control over those processes (Standen, Brown, & Cromby, 2002).

Additionally, Video Modeling has been shown to be effective in teaching individuals with ID to perform social skills, such as offering assistance,

responding appropriately to feedback, and verbally asking for clarification (Park, Bouck, & Duenas, 2020). Virtual Reality offers several advantages to the learning processes of people with ID (Cromby, Standen, & Brown, 1996). First, they offer them the opportunity to learn how to perform different tasks by making mistakes without suffering the consequences of those mistakes. Second, virtual worlds can be manipulated in ways that the real world cannot. Finally, virtual environments present objects that can be understood in their presence without the use of symbolic systems.

Research has suggested that virtual reality can enhance the acquisition of life skills as well as their application in the real world (Standen *et al.*, 2002). Virtual Reality has a relevant rehabilitative potential for individuals with ID, because it provides a safer environment than the real world, where practicing new skills might be too risky (Standen & Brown, 2005). More specifically, virtual environments can facilitate the acquisition of important skills in ID individuals, as they provide them with the possibility to acquire skills that can reduce the impact of their daily life difficulties (Standen & Brown, 2006).

Computer-assisted technological tools have been shown to be effective in teaching various personal, professional, and intersubjective skills to people with ID (Mezzalira, Scandurra, Pergola, Maldonato, Montero, & Bohicchio, 2021). In this regard, Tardif-Williams and colleagues (Tardif-Williams, Owen, Feldman, Tarulli, Griffiths, Sales, *et al.* 2007) found that interactive video-based training was just as effective as more traditional, classroom-based training in teaching people with ID to identify human rights violations and find possible solutions. These results indicate that computer-based interactive technology is effective in promoting human rights awareness in individuals with ID. This suggests that computer-assisted training programs have the potential to be at least as effective as (but more cost efficient than) one-on-one tutoring (Larson, Juszczak, & Engel, 2016).

The Internet allows ID individuals to be more active in their participation in society because it can reduce environmental barriers that limit their access to various life activities (Chadwick *et al.*, 2013). Faced with increased opportunities to access the Internet, however, ID individuals must acquire computer literacy skills to benefit from the information presented on the web. The risks that Internet access of ID individuals can face include excessive use, harassment on social media and access to unwanted web pages. As opposed to previous research, according to which ID individuals did not have the skills necessary to access the Internet (Li-Tsang, Yeung,

Chan, & Hui-Chan, 2005), recent literature has instead suggested that this population can learn how to cope effectively with some Internet resources (Molin, Sorbring, & Lofgren-Mårtenson, 2017).

Despite their tendency to have a positive perception of the potential that Internet has for its users, individuals with ID also show that they are aware of the dangers their interaction with non-ID individuals can have for their virtual and real lives. For this reason, Delgado, Ávila, Fajardo, and Salmerón (2019) showed that education programs are effective in teaching students with ID how to critically read information on the Internet. Improving decision-making skills in everyday life can thus positively influence the self-determination of ID individuals (Shogren & Wehmeyer, 2016).

Despite the reported findings, which collectively point to the potential benefits of assistive technology for improving coping skills in people with ID, it is worth noting that digital tools, when used for work-, play-, or pleasure-related purposes, can also have harmful effects on the mental and/or physical health of the person (Bochicchio, Maldonato, Valerio, Vitelli, dell'Orco, & Scandurra, 2018; Bochicchio, Keith, Montero, Scandurra, & Winsler, 2022; Ghislieri, Sanseverino, Addabbo, Bochicchio, Musumeci, Picardi *et al.*, 2022). Furthermore, using a critical approach, digital tools should be accompanied by real-life relationships, both with other humans and with pets and animals (Scandurra, Santaniello, Cristiano, Mezza, Garzillo, Pizzo *et al.*, 2021; Mezzalira, Scandurra, Santaniello, Mezza, Saturnino, Cristiano *et al.*, 2022). This is all the more important in order not to lose sight of concrete intersubjectivity, which is very important not only to enhance the adaptive skills of the person with ID, but also to foster their affective and relational skills.

### *3.5.2. Guidelines for best training practices*

Given the rapid increase in the use of technological tools in both mainstream and special education, it is of paramount importance to establish and use new technological tools to help people with ID in their learning processes, as well as in achieving a positive image of oneself (Chansomdee, Cheausuwantavee, & Sirirungruang, 2022). A responsible use of these devices is also highly significant to the well-being of the ID population. Since Virtual Reality can foster the acquisition and implementation of new skills, it is very important to encourage the ID individuals' skillful use of digital devices, so that they can also benefit from contemporary technology to better navigate their environment. It is thus crucial to create training

programs for ID individuals that can help them acquire skills (e.g., responsibility and self-protection) that can be demonstrated to be useful in interpersonal exchanges with other ID and non-ID individuals. Last but not least, critical reading on the Internet can enable ID individuals to make important choices that can benefit their well-being and social inclusion.

#### 4. Discussion

Training programs aimed at people with ID should consider the relevant role that social, adaptive, and interpersonal skills play in their inclusion and integration into society. Training programs that help this population foster these skills should use various methods, such as direct teaching, social reinforcement and feedback, cooperative learning, video modeling, and social stories. Training programs aimed at improving social adjustment should strengthen social interactions and interpersonal relationships, including lifestyle planning skills, as well as other life activities besides work, such as leisure and recreation. Additionally, specific attention should be paid to the “minority” status of some ID individuals, such as those who also identify as LGBT+.

A training program aimed at promoting the work inclusion of people with ID should foster their self-awareness, so that they are able to take care of themselves. Particular attention must be paid to decision-making skills, as an important tool for people to become more consciously aware of their agency power, as well as to make them feel more motivated in their personal and relational choices. Self-determined decision-making skills may further help people with ID gain a better sense of control over their environment, which often presents barriers to their freedom of movement. The goal is to help people with ID learn to internalize the processes of some types of behavior, also allowing their generalization in different environmental contexts.

It is also important to create and use contemporary technological devices to help people with ID use digital tools responsibly to improve their well-being in activities of daily living. Therefore, it is very important to foster the skillful use of digital devices by these individuals, so that they can better navigate their ordinary life. Finally, it is of great importance to create programs for ID individuals that can help them acquire new personal and interpersonal skills (e.g., responsibility and self-protection).

In particular, the skills, abilities, and competencies acquired through the learning program of the “U4Inclusion” project allows for their implementation in real and daily life, even outside the learning spaces. In



addition, even if the learning activities are specifically designed for people with ID, this does not segregate them in the university context. In fact, the autonomy they can acquire through the program can be transferred outside the classroom, as students are encouraged to make greater use of community and university services, such as canteens, sports facilities, and libraries, thus becoming active students. Thus, the university context allows for a deep integration of ID individuals into the general student population. Since environmental variables can make a critical difference to the person with ID, these guidelines can be effective in creating a more inclusive educational environment.

Finally, it is worth noting that the European project “U4Inclusion” also benefits from a Europass recognition. Europass is a set of online tools aimed at managing a person’s learning experience and career, thus facilitating their mobility in Europe. This way, studying and working while moving around Europe would be easier for people with ID. At the moment it is not possible to have a curriculum recognized at a European level. Nonetheless, Europass tools can be used to gain greater recognition within educational institutions in other European countries that may be interested in implementing it. People with ID can take some steps to get their curriculum recognized on a European basis: 1) contact the national Europass agency and get informed about the steps needed to involve the tool in the project; 2) get the curriculum implemented in the country’s university, and 3) use the Europass tools to view the curriculum.

## 5. Conclusions

One of the main goals of our work is to create paths for personalization, individualization, and differentiation of educational and training processes, which are outlined and activated by the learning environment on the basis of the specific characteristics of the student. Therefore, professionals should be very careful when providing programs and support that are supposed to meet the learning needs of ID individuals. Indeed, the acquisition of social and adaptive skills can help these people improve their self-image and social integration.

Ultimately, personal, social, interpersonal, and professional skills can help ID individuals be more aware of their needs and find more effective ways to be and feel integrated into society by obtaining and keeping a job. The overarching goal of the present guidelines, which represent one of the main results of the European project “U4Inclusion”, is to enhance

competency-oriented skills in ID individuals, through a training program that – following these literature- and evidence-based practical guidelines – can promote the adaptive skills needed by this population to find and keep a job, thus being and feeling more positively integrated into society.

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