



Inclusion at university, transition to employment and employability of graduates with disabilities: A systematic review[☆]

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ABSTRACT

This systematic review explores what has been studied about graduates with disabilities and their academic university and work experience. In the study, 18 articles were analysed and the voices of a total of 664 graduates with disabilities from different international contexts were considered. The results were organised around the research questions that guided the review: the characteristics of the studies in terms of country, participant profile, methodology, and the topics investigated on graduates and higher education (university inclusion, transition to employment and labour market insertion). This systematic review shows that there are a number of factors that enable graduates to continue and successfully complete their studies and facilitate their integration into the world of work. The conclusions show the important role that universities play in helping graduates to face the barriers they encounter in their academic careers. Furthermore, they claim to guide and prepare graduates with disabilities during their professional experiences.

1. Introduction

In recent years, universities have faced the challenge of moving toward inclusion and promoting a transformation of teaching practices. The policies and strategies adopted are resulting on an increasing number of students with disabilities accessing the university (Carballo et al., 2021; Villouta and Villarreal, 2022). However, in addition to access, it is necessary to facilitate permanence and promote the success of students with disabilities, their participation into the inclusive community, their graduation and their integration into the labour market.

In Spain, the number of students entering the university system is higher than the European Union average, although the university dropout rate is double the EU average (European Commission, 2018). Therefore, in recent years, universities have tried to respond to the needs of their students by offering services and tools to ensure the success of persons with disabilities in their university careers and to facilitate the transition to working life.

International reports, such as the UNESCO (2020), denounce that people with disabilities are less than half as likely to be employed as

people without disabilities. Specifically in Spain, in 2018, the last year for which official data are available (INE, 2020), their activity rate was 34.5%, which is more than 43 points lower than that of the non-disabled population. The unemployment rate was more than 10 points higher than that of the non-disabled population (25.2% compared to 15.1%).

These data are revealing and show that, despite the progress made in access to higher education and the effort to develop strategies to promote integration into the world of work, inequality continues to exist. However, there is evidence to support that the greater the education level of a person, the better the job opportunities he/she will have (Moriña, 2017). Therefore, accessing and graduating from university can be an opportunity for persons with disabilities to improve their lives, empower themselves, obtain employment and enjoy an independent life (Rodríguez et al., 2021).

Therefore, the purpose of this systematic review was to analyse what has been studied on graduates with disabilities. The aim was, on the one hand, to investigate the factors that have influenced their academic trajectories and have enabled them to successfully complete their studies. On the other hand, the present study delved into issues related

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to employment, addressing the challenges faced by graduates with disabilities in their transition and integration into the world of work.

2. A university of all and for all

Moving toward an inclusive university requires transformations and alternatives to the services that are currently offered. Therefore, educational institutions must offer resources, personalised support and equal learning opportunities for all students (Ho Mok and Marginson, 2021; Krumpelman and Hord, 2021; López-Gavira et al., 2021). Persons with disabilities are a particularly vulnerable group, as throughout their life trajectories they have had to overcome a series of obstacles that have led them to invest more time and effort to achieve their goals (Mullins and Preyde, 2013). Indeed, more and more voices of students are calling for a learning context in which everyone can learn, participate and belong (Carballo et al., 2022; Shpigelman et al., 2021; Taneja-Johansson, 2021). However, the international literature highlights that both barriers and supports can be found at university. This shows that there is still a long way to go before inclusive education becomes a reality (Moriña et al., 2020).

In fact, despite the advances that have been made, university students with disabilities identify barriers in their university careers, such as: lack of faculty training, insufficiently adapted curricula, teaching materials and inaccessible infrastructures (Batchelor et al., 2020; Edwards et al., 2022).

However, personal and contextual factors have also been found to contribute to the retention and academic success of students with disabilities (Moriña and Biagiotti, 2021). Among the personal factors, most studies identify self-determination, self-advocacy, self-awareness, self-discipline, self-esteem and executive functions (Gow et al., 2020). In terms of external factors, graduates with disabilities recognise family and friends as fundamental support (Russak and Hellwing, 2019). In addition, at university, administrative staff and faculty are key to success, providing support and guidance to students during their studies (Biggeri et al., 2020).

2.1. Universities: Key pieces to the transition to employment

In recent years, universities are under great pressure to demonstrate the ability and potential of their graduates to find a job (Andrewartha and Harvey, 2017). In the specific case of disability, university institutions try to address this issue by offering disability services, curricular internships and reference figures to guide and accompany students during their internships (Pillay et al., 2021). The aim is to bring students closer to the world of work, which requires establishing strong links between the university and the surrounding companies.

Therefore, in the academic context, there has been an increase in programmes to promote the integration of persons with disabilities into the labour market (Gatto et al., 2021). In this sense, the aim is to provide students with useful resources to successfully overcome the obstacles they may find in the world of work.

In addition to the advances that are intended to be achieved by offering programmes for labour market integration, the study by Markel and Barclay (2009) underlines the importance of increasing the participation of graduates with disabilities in the labour market, promoting a network of collaboration between universities and companies. This collaboration would consist in jointly planning the work and organising, on the one hand, the specific training of company employees and, on the other hand, the university-company-student triangulation. The latter would include the management of links with disability services and provide ongoing support for the recruitment of persons with disabilities and job coaches available to students. The study by Brendle et al. (2019) notes that some companies have offered these professionals, so that students with disabilities could receive support and training on the tasks to be carried out at work placements. With these measures, graduates with disabilities would be much more likely to be employed (Jurado and

Soler, 2016).

2.2. The integration of people with disabilities into the labour market: a pending task

When it comes to finding employment, people with disabilities face a series of obstacles. Firstly, there are architectural barriers that, in some cases, prevent access at work (e.g., lack of lifts, parking spaces and access doors that are too small) (Vornholt et al., 2018). Secondly, there are attitudinal barriers, due to a lack of empathy and interest toward the needs of learners with disabilities (Henly and Brucker, 2020). The negative attitude of companies and employers hinders the social and professional integration of graduates in the work environment (Vincent, 2020). Thus, in order to remove this barrier, it is necessary to invest many hours in the training of companies, with the aim of eradicating the prevailing stereotypes and prejudices that dominate society (Vornholt et al., 2018).

However, Russak and Hellwing (2015) stated that inequalities in work experiences differ significantly depending on the individual's educational background. In the mentioned study, the graduates, throughout their university trajectories, worked on aspects that were fundamental in the work placements, such as determination and ability to cope with problematic situations, proactivity and the search for effective strategies for their disability. Therefore, despite the fact that the degree obtained may increase the probability of finding employment, university education also favours the growth and development of the whole person. In fact, international literature has consistently shown that university education has positive effects on success, employment status and job satisfaction (Russak and Hellwing, 2015).

Finally, another aspect to consider in relation to employment is that, despite the barriers that people with disabilities could face, it is important to remember that finding a job is crucial for achieving independent living and participation in the community (Ellenkamp et al., 2016). Furthermore, it is also a determining factor for their personal fulfilment, providing them with confidence and satisfaction (Laborda et al., 2021).

3. Method

This systematic review, covering the last 10 years, explores what has been studied about graduates with disabilities in terms of their university academic and professional careers. Specifically, this seeks to answer two research questions:

1. What are the characteristics of the studies in terms of country, profile of participants and methodology?
2. What has been researched on graduates with disabilities in relation to their academic and professional experiences?

In order to ensure the quality of the systematic review, the literature search was based on the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement (Moher et al., 2009) (Fig. 1).

3.1. Location and selection

The databases consulted were ERIC, Scopus and JCR. These are characterised as viable, reliable and internationally known. The keywords used for the search were "graduate" and "disability" and "higher education or university or college or postsecondary". Specifically, four combinations were used in the search: 1) "graduate" and "disability" and "higher education"; 2) "graduate" and "disability" and "university"; 3) "graduate" and "disability" and "college"; and 4) "graduate" and "disability" and "postsecondary".

The search and first reading of the articles in the three databases. To ensure the validity of this work and to avoid selection bias, all articles were first reviewed individually, and then the analysis was shared and compared by the two authors of the article. In addition, the inclusion or

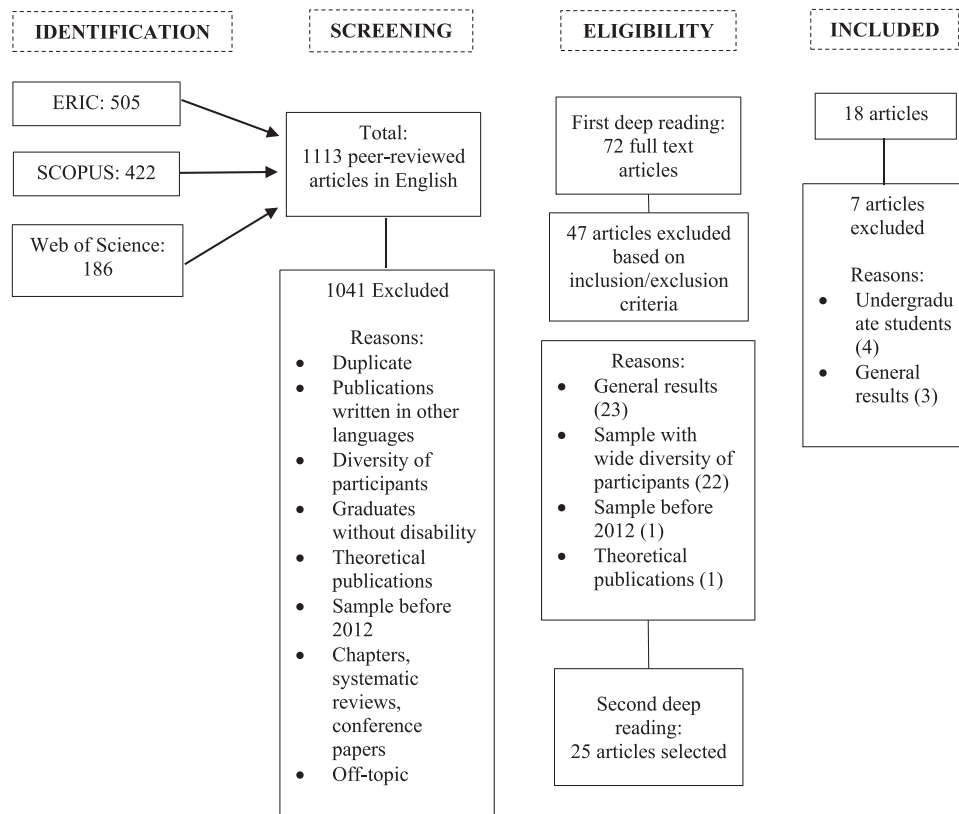


Fig. 1. Flowchart of the systematic review process.

exclusion of the studies to be included in the systematic review was discussed.

In the first phase, the title and abstract were reviewed and a first table was drawn up to help organise the selected articles by descriptor and database. The first search identified 1113 potential publications in the three databases. All abstracts were read and, based on them, 72 studies were pre-selected. In this first phase 1041 articles were excluded for the following reasons: duplicates in other databases; publications not written in English; sample with a wide diversity of participants, not only people with disabilities; articles that focused only on non-disabled graduates; theoretical papers; sample before 2012; papers that were not articles and off topic. The next step was to read these articles in detail and only those that met the inclusion and exclusion criteria were selected, i.e., a total of 25 articles. The remaining 47 were excluded for the following reasons: general results in which the results linked to people with disabilities are not differentiated; sample with a wide diversity of participants, not only people with disabilities; sample before 2012 and theoretical articles. Finally, they were re-read and 18 papers were included for analysis. Four were excluded because the sample focused on students and not on graduates, and the other three were removed because there was a diversity of participants and it was not possible to appreciate the part of the findings related to graduates with disabilities.

3.2. Inclusion and exclusion criteria

Different search criteria were established to select the articles. The inclusion criteria were as follows: 1) primary research articles; 2) peer-reviewed studies; 3) articles published in English; 4) university graduates with disabilities; 5) time restriction limited to the last 10 years; and 6) study sample between 2012 and 2021. On the other hand, the exclusion criteria were: 1) other scientific publications such as books, chapters, conference papers, and systematic and theoretical reviews; and 2) sample with a wide diversity of participants, not only people with

disabilities, and very general results in which the results linked to people with disabilities are not differentiated.

3.3. Data extraction and analysis

For data extraction and analysis, a system of categories and codes was generated to assist in the cross-sectional analysis of the studies. This allowed the review of the publications to be systematised and facilitated the comparison between the publications, thus allowing differences and similarities to be identified and examined. The theoretical model of data analysis on which we based our analysis was that of Miles and Huberman (1984).

Firstly, a table was drawn up, in which, for each of the articles, the research objectives, sample (number, type of disability, field of study), country, methodology and results were specified (see Appendix). This allowed for a detailed analysis and comparison of the publications to identify common themes. Secondly, a system of categories and codes was developed to analyse descriptive and thematic data for each paper (Table 1). The different headings that appear in the findings section have been created from the following system of categories and codes.

4. Findings

4.1. What are the characteristics of the studies in terms of country, participant profile and methodology?

Most of the research was conducted in the United States. Specifically, six studies were carried out in the USA (35%), three in Ghana (17%) and three in UK (17%), two in Canada (11%), one in Israel (5%), one in Cambodia (5%), one in Ireland (5%) and finally one study involved four countries (Finland, France, the Netherlands and the UK) (5%).

The different contexts of the countries in which the studies have been carried out may influence research on these topics. For instance, in the case of the United States, which is the country in which most research

Table 1
Category and code system.

CATEGORIES	CODES	DESCRIPTION
1. DESCRIPTIVE DATA	1.1 Country	United States, Canada, England, Ireland, Africa, Asia, United Kingdom, Israel.
	1.2 Participants	7,12, 182, 31, 2, 231, 15, 8,59, 6, 22,15, 14, 27, 4, 13, 8, 8 = 664
	1.3 Type of disability	Mental disability (115)
		Physical disability (75)
		Visual disability (51)
Hearing impairment (15)		
1.4 Field of study	ADHD (15)	
	Autistic spectrum disorders (91)	
	Learning disability (143)	
	Multiple (20)	
	Unspecified (139)	
	Social Sciences 31	
	Economics 17	
	Art and History 16	
	Science 13	
	Informatics 4	
1.5 Methodology	Health Sciences 2	
	Geography 1	
	Unspecified 580	
	Qualitative 2	
	Quantitative 14	
2. INCLUSION AT UNIVERSITY	2.1 Supports	Mixed method 2
		Personal (self-advocacy and self-management strategies) and academic factors (curricular adaptations and qualified faculty).
2.2 Barriers	Being disabled; financial difficulties; inadequate teaching materials; not being independent in the learning process; negative attitudes of faculty; physical barriers.	
	Individualised and personalised support to ensure that students with disabilities receive equal access and employment opportunities.	
3. TRANSITION TO EMPLOYMENT	3.1 Disability and employment services	Experiences of internships carried out to facilitate the integration of students with disabilities into the world of work.
	3.2 Curricular internships	Members of the university who guide students with a disability during their work placement.
	3.3 Monitors and mentors	Needs and interests to continue with post-secondary studies in order to find new and better jobs.
	3.4 Training and employability	Restriction and difficulties in accessing workplaces. Rejection in seeking employment due to attitudes and cultures of companies.
4. EMPLOYMENT EXPERIENCIES	4.1 Accessibility	Negative experiences in the workplace due to a feeling of loneliness and isolation.
	4.2 Sense of isolation	The process of communication by which a person discloses, to others, some information about themselves by accepting their disability.
	4.3 Visible versus invisible disability	

has been done on graduates with disabilities, culturally, there is an interest in researching this topic considering that a very high percentage of people with disabilities gain access to universities (Damiani et al., 2015). With regard to the UK, research on mental health and the transition to the world of employment is a topic of particular interest, which is why the study by Cage et al. (2021) addresses it. Whereas, Canada and Israel research on that topic because it responds to a demand from society. Indeed, graduates with disabilities want to train and be inserted into the world of employment. In countries such as Finland, France, Netherlands, Ireland, there are difficulties in obtaining employment and

in developing in the world of work, recognising the need that people with disabilities may need additional support (Nolan and Gleeson, 2017). Finally, in the case of Cambodia or Ghana, people with disabilities are stigmatised and lots of studies highlight the need for social and educational inclusion (Nguon, 2015; Odame et al., 2021a).

A total of 664 graduates with different types of disabilities participated in the reviewed studies. The majority of the participants, 143 of the total 664, were people with learning difficulties, 139 graduates did not specify the type of disability, 115 identified themselves as having a mental disability, 91 had autistic spectrum disorders, 75 had a physical disability, 51 had a visual disability, 20 had multiple disabilities, 15 had a hearing disability and 15 had ADHD.

However, regardless of the type of disability, the students shared and recognised common factors and commonalities in their university, transition to employment and internship trajectories.

With regard to the studies undertaken by the graduates, although 580 graduates did not specify the branch of knowledge studied, the analysed works describe that 31 students graduated in Social Sciences, 17 in Economics, 16 in Art and History, 13 in Sciences, four in Office Automation, two in Health Sciences and one in Geography.

Finally, regarding the methodology used, of the 18 papers, the majority used a qualitative methodology, with 80% of studies ($n = 14$), compared to 10% which used a quantitative methodology ($n = 2$) and 10% which used mixed methods ($n = 2$).

4.2. What research has been done on graduates with disabilities in relation to their academic and professional careers?

The analysis carried out showed which factors influence the academic and professional careers of graduates with disabilities. In this analysis, three predominant themes were identified in the studies: inclusion in university, transition to employment and labour market insertion. Table 2 includes an analysis showing that there are common and cross-cutting factors in the reviewed studies. The most repeated codes are: 83% disability and employment services, 83% support, and 44% visible vs. invisible disability and curricular practices (Table 2).

4.3. The university generates success and inclusive spaces

In the reviewed studies, the majority of universities that participated in the research were inclusive and, thanks to the resources offered, enabled graduates to access and successfully complete their studies. Graduates identified a number of factors that enabled them to succeed at university, to remain at university and to complete their studies. In the works that addressed this issue, university success was defined as a complex, multifaceted, subjective and dynamic concept that depended on multiple factors (Russak and Hellwing, 2019). Furthermore, the work of Huber et al. (2016) and Lizotte (2018) highlighted that graduates with disabilities did not always agree on the definition of success or on the factors leading to it. While some defined it as a process of self-acceptance, recognising disability as a component of self-image rather than a limitation, others described it as dependent on external factors (Nolan and Gleeson, 2017).

Some personal skills that had been central to graduates' academic success were self-adaptation and self-advocacy. These referred to the work that the students did to advocate for themselves and seek their own academic adjustments in order to fully participate in classroom activities (Cage et al., 2021; Damiani and Harbour, 2015). In this way, students had to learn to advocate for themselves, to defend their rights and persevere (Kimball et al., 2016). As for self-awareness and self-efficacy, both helped them to understand disability as a component that allowed them to prove to themselves and others that they could succeed despite their difficulties (Fichten et al., 2016; Kiesel et al., 2018). Finally, self-perception and self-management involved discovering what and how they should progress at university (Nolan and Gleeson, 2017). These skills, developed over the course of the university degree,

Table 2
Quantitative analysis of the individual codes.

	Supports	Barriers	Disability and employment services	Internships	Monitors and mentors	Training and employability	Accessibility	Isolation	Visible versus invisible disability
Cage et al. (2021)	X		X		X	X			
Damiani and Harbour (2015)	X		X		X	X			X
Fichten et al. (2012)	X	X	X			X			
Fichten et al. (2016)	X		X					X	
Frank et al. (2014)	X	X	X				X		X
Huber et al. (2016)	X		X	X		X			
Kiesel et al. (2018)	X		X	X	X			X	X
Kim and Williams (2012)		X	X			X	X		X
Kimball et al. (2016)	X		X						
Lizotte (2018)	X			X					X
Nolan and Gleeson (2017)	X	X	X	X		X		X	X
Nguon (2015)	X								X
Odame et al. (2019)	X	X	X				X		
Odame et al. (2021a)		X	X	X			X		
Odame et al. (2021b)			X	X					
Pesonen et al. (2021)	X		X	X	X				
Remington and Pellicano (2019)	X	X		X					
Russak and Hellwing (2019)	X		X			X			X
Total	15	7	15	8	4	7	4	3	8

significantly increased students' confidence in their own knowledge and competences.

All these personal traits substantiated the concept of activism. This aspect appeared frequently during the analysis of the articles included in the systematic review. The studies by Kimball et al. (2016) and Russak and Hellwing (2019) described how activism helped students to advocate for themselves and others, and led to the dismantling of stereotypes and prejudices about disability.

In addition to these internal factors, for a university to be inclusive, it had to offer services, individualised accommodations and qualified faculty in order to meet the needs of students (Cage et al., 2021; Odame et al., 2021a). Studies by Huber et al. (2016) and Remington and Pellicano (2019) identified the most advantageous academic accommodations: extra time for exams, learning materials in different formats and assistive technology.

While a number of personal factors and institutional opportunities for the inclusion of graduates with disabilities were identified, multiple barriers that hindered and restricted their participation in university were also identified. The first obstacle is related to access and it was referred to impediments encountered in the infrastructure (Odame et al., 2019). The second obstacle pertains to didactic issues and it involved the methodologies, assessments and materials used by faculty (Fichten et al., 2012). Finally, institutional management barriers referred to inaccessible syllabi and difficulties in finding places for internships due to the lack of coordination between universities and companies (Odame et al., 2021a).

4.4. Transition from university to the labour market through work placements

Transition to employment was recognised as a key factor for the graduates in this study. Although they recognised it as a basic right, they agreed that there was no shortage of difficulties encountered (Nolan and Gleeson, 2017; Odame et al., 2021a).

Nolan and Gleeson (2017) highlighted that, in order to provide students with disabilities equal access to work and the same level of employability as that of their peers, the university must offer

individualised services and supports.

They also aimed to plan, together with students, strategies and supports to help them to manage their disability in the workplace (Odame et al., 2021b). Indeed, to facilitate integration into the world of work, university disability services included specific work-focused activities such as interview practice, CV workshops and conferences with company managers (Cage et al., 2021; Pesonen et al., 2021). In addition, the study by Huber et al. (2016) mentioned other services that could contribute to improving employability and job insertion (job search guidance, internships and awareness of disability discrimination legislation).

Most graduates agreed that work experiences, mainly curricular internships, helped them to find a job and empower their working life (Pesonen et al., 2021).

However, the work of Kiesel et al. (2018) and Remington and Pellicano (2019) provided a different view of the internship experience, as some graduates had negative experiences in the workplace. They highlighted that prejudice, attitudes and company culture negatively influenced people with disabilities and lowered their self-esteem and self-efficacy. If most graduates had to deal with stereotypes toward the concept of diversity, for those who with hearing and visual impairment it was even more difficult to find internship placements (Odame et al., 2021a). Companies were not prepared to respond to their needs. For example, they lacked assistive technologies, such as text-to-speech software. This did not allow them to communicate through conventional means of communication, which prevented them from establishing a collaborative relationship with colleagues (Odame et al., 2021a).

Key support figures in the reviewed studies were identified as monitors and mentors. Both professionals played a role in guiding, tutoring and advising students, both in the job search process and in possible useful adaptations for their job role (Kiesel et al., 2018). On the one hand, the monitor was responsible for the weekly supervision of the trainee's pathway. On the other hand, the mentor supervised the daily activities carried out in the internship and ensured that the trainee developed useful competences for future employment (Kiesel et al., 2018).

In the specific case of hidden disabilities, studies reveal that, despite

the support offered by universities, students were embarrassed to disclose their disability in the workplace. As a result, they preferred to renounce the accommodations they needed and let the disability go unnoticed (Kiesel et al., 2018).

Finally, regardless of the type of disability, the uncertainty about the future career and the difficulties encountered in the internship experiences made students feel the need for further training in order to be more likely to be employed (Russak and Hellwing, 2019). Instead of entering the world of work and seeking paid employment, graduates preferred to continue studying (Fichten et al., 2012).

4.5. Experiences of integration in the professional world

An important aspect of employment for people with disabilities was the accessibility of workplaces. Therefore, in addition to prejudices and stereotypes about the concept of disability, physical barriers and the attitude of companies also reduced the possibilities of accessing the world of work (Kim and Williams, 2012). Each participant told a story that illustrated their difficulty in accessing workplaces and, furthermore, many agreed that employers should rethink the culture and ethos of the work environment (Nolan and Gleeson, 2017). Indeed, some graduates reported that a team approach was lacking and that there was a lack of awareness of living and working with persons with disabilities. Companies should therefore orient their actions and strategies around policies that respect the rights of persons with disabilities. Institutions that promoted equality and safeguarded diversity succeeded in creating a good environment, so that all staff felt able to express their strengths. Companies that implemented disability-inclusive practices were able to tap into a wide pool of skills and talents (Cage et al., 2021).

In the same vein, the work of Odame et al. (2021a) highlighted that companies that made space for graduates and in which graduates were able to test themselves noted and recognised the effectiveness of the services offered by universities. These graduates, who demanded support from the disability offices, showed that they had good analytical and time management skills, which were necessary to perform the tasks assigned to them in the workplaces. In addition, they demonstrated teamwork competencies and a success-oriented mindset. In this sense, the graduates showed that they were aware of their disability and did not give up in the face of obstacles, struggling to overcome them.

Despite the efforts made by the graduates in the workplace, in the reviewed studies it was recurrently stated that most of the participants felt socially discriminated (Kim and Williams, 2012). Therefore, the feeling of being alone and having to organise themselves autonomously meant that the graduates learned to self-manage and seek reasonable adjustments on their own.

The students' perception of the workplace climate influenced their experiences of integration into the world of work. Feeling involved or not in the team altered the students' predisposition about whether to disclose their disability (Nguon, 2015; Kiesel et al., 2018). Thus, while people with visible disabilities tended to disclose at the job application stage or during an interview, those with invisible disabilities tended to disclose their status when they got the job or when it was necessary to do so for legal or safety reasons (Damiani and Harbour, 2015; Frank et al., 2014). Graduates were slow to expose and tell the company that they were disabled for fear of being stigmatised and discriminated against by co-workers. Despite this, most people decided to do so, as they wanted to demonstrate that they had the same skills and abilities as their peers.

5. Discussion and conclusions

This study shows that further research on graduates with disabilities is still needed. While, in recent years, international studies have been concerned with analysing the barriers and supports encountered by students with disabilities (Moriña and Biagiotti, 2021; Nguon, 2015) or inclusive practices and faculty training (Carballo et al., 2021; Frank et al., 2014), the analysis of the experiences of graduates with

disabilities has not received as much attention. In particular, few studies have been focused on the transition to employment and labour market integration (Cage et al., 2021; Kiesel et al., 2018; Pesonen et al., 2021).

This systematic review shows a number of challenges that graduates with disabilities face in their academic careers and professional experiences. Firstly, one of the challenges faced by students with disabilities in order to succeed at university is to develop a range of personal competences that enable them to cope with the many demands of university (Nolan and Gleeson, 2017). The study by Kimball et al. (2016), for example, highlights the proactive role that students must play in the teaching and learning process, in that they must be able to become self-advocates and perseverers. Moreover, authors such as Lizotte (2018) and Nolan and Gleeson (2017) concluded that self-perception, self-awareness, self-efficacy, self-esteem and self-management were also fundamental to successfully completing degrees. Thus, in order to train students with disabilities in these competences, it would be advisable for universities to plan training workshops.

A second challenge is related to academic factors. Students face the challenge of knowing how to ask for help and to cope with the barriers they encounter. Universities, in order to respond to the needs and supports requested by students, have disability services and academic adjustments (Cage et al., 2021). The reviewed studies describe which accommodations may be advantageous, such as: materials in different formats, extra time for exams, assistive technology and informing faculty members in advance about their students' needs (Fichten et al., 2012). However, although they may seem affordable, if faculty members are not positive about undertaking them, they can be a major barrier for some students (Odame et al., 2019). Therefore, it is important to have sensitised, informed and trained faculty members who know how to offer tools and strategies that facilitate academic success for all students (Huber et al., 2016; Remington and Pellicano, 2019).

The third challenge is related to the integration of people with disabilities into the world of work. Although universities have worked hard to improve the transition to employment, there are still elements that hinder access for this group. The vast majority of graduates state that, in order to become part of a company's work team, they must feel welcomed, accepted and valued (Nolan and Gleeson, 2017; Bellacicco and Pavone, 2020). It is clear that graduate engagement depends on the attitudes that companies develop toward graduates and the response to their needs.

In this respect, due to the challenges that students face, studies show the importance of further education in order to improve employability (Russak and Hellwing, 2019). Therefore, another challenge is related to the training and employability of students. University institutions respond to this demand from students by offering employment services, internship hours, mentors and monitors who could follow up students (Huber et al., 2016; Odame et al., 2021b, 2021a).

The last challenge is related to the decision of whether or not to disclose disability and, in addition, to try to eliminate discrimination toward people with disabilities. As was stated by Kiesel et al. (2018), a non-inclusive and prejudice-saturated environment leads to graduates being insecure and hesitant about disclosing their disability. They are afraid of being judged by co-workers. They want to stand out because of their competences and not because of their disability. Therefore, collaboration between universities and companies must be strengthened so that the institutions where students do their internships are trained and predisposed to work with people with disabilities.

Likewise, graduates reported the need to expose, discuss and confront, together with university services, the barriers that may be encountered in the workplace, so as not to arrive unprepared (Nolan and Gleeson, 2017).

In conclusion, this work highlights the need to further study the trajectories of graduates with disabilities in order to ensure greater inclusion in the academic and professional world. In this sense, it is essential to empower students so that they gain greater control and knowledge about themselves and are able to manage obstacles and

difficult situations. Graduates learn through their experiences, both academically and professionally, to be self-managing, independent and self-advocates. As was stated in the study by Kiesel et al. (2018), one of the aspects that has most helped graduates to take responsibility and develop problem-solving skills is curricular practices. Therefore, the university should continue to prioritise these and take care of the transition processes from the academic environment to the world of work (Bellacicco and Pavone, 2020).

Limitations and future research

This systematic review is not without limitations. Firstly, the search in the three databases involved finding a large number of articles with a sample that included students and graduates. Therefore, in some cases it was difficult to differentiate the results, and thus we had to exclude those papers that did not deal exclusively with graduates in their results.

Another limitation refers to the fact that the reviewed articles were mainly international studies carried out in the USA, as these are the ones that appeared most frequently in the three databases consulted. Therefore, it would be advisable for other countries to carry out studies on this novel research topic.

Based on the results found, future research should analyse and classify the obstacles encountered in the world of work, distinguishing them according to the type of disability. If possible, this would provide a better understanding of inequalities in the labour market.

At the same time, it would be useful to continue studying not only the way to achieve success and enhance academic performance, but also the extent to which other external aspects, such as the support received from families and friends, influence the professional development of young people with disabilities.

Finally, this systematic review raises new questions that remain unanswered: if resources and strategies are provided for students with disabilities to become involved in the world of employment, why is there still a difference in job placement rates between people with and without disabilities?; do disability type, gender and age influence the transition and the job placement process?; would promoting university-employer collaboration facilitate the process of uncovering invisible disabilities?; what remains to be done to make university and work environments inclusive?; and, what can be done to make universities and workplaces more inclusive?

Author statement

The authors certify that we have participated equally in the work to take public responsibility for the content, including participation in the analysis, writing, and revision of the manuscript.

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