Health sciences and inclusive pedagogy: a qualitative study exploring educational practices for students with disabilities at Spanish universities

Anabel Moriña* and Inmaculada Orozco

*Correspondence to: A. Moriña. E-mail: anabelm@us.es

Received on 5 June 2020; accepted on 31 March 2021; editorial decision on 31 March 2021

Abstract

The number of people with disabilities who study at university is rising. Previous studies have revealed that it is not enough simply to provide these students with access to university, it is also important to guarantee their retention and success. This article explores participants' actions and their appraisals of their teaching practice in relation to disability in campus-based education. The study was conducted with 19 Spanish faculty members from the Health Sciences who were nominated by their students with disabilities for having contributed to their inclusion. We carried out a qualitative study based on individual, in-depth, semi-structured interviews. We analysed the data progressively, using a system of categories and codes. The results section outlines the actions taken by faculty members upon learning that they were going to be teaching a student with disabilities, analysing what specific measures they took in accordance with the type of disability in question, and what they found most rewarding and most difficult or unpleasant about their experience with these students in the classroom. The study concludes that the voices of these faculty members may encourage other colleagues to rethink their actions in the classroom and engage in more inclusive practices.

Introduction

The number of people with disabilities who study at university is rising [1, 2]. This increase, which is occurring in different international contexts, has also been identified among students of health-related academic disciplines [3]. Nevertheless, previous studies have revealed that it is not enough simply to provide these students with access to university; rather, it is also important to guarantee their retention and success [4], since dropout rates among students with disabilities are higher than among the general student population [5]. These students often drop out because they do not feel supported, understood, welcome and included at university [1].

The high dropout rates reported may be linked to the fact that the majority of universities espouse a medical model of disability [6], meaning that they focus on the pathology, impairment or dysfunction itself, rather than recognizing that it is the system, which generates barriers to learning [7]. Practices linked to this medical model often result, e.g. in students preferring not to disclose their disability [8]. They renounce the support to which they are entitled because they want to have a 'normal identity', rather than be identified with a disability [9], due to either the stigma attached to this condition [9] or the negative attitude of faculty or fellow students.

Thus, another conception of disability is required in order to help retain these students and ensure their success. One alternative that emerged at the end of the 1960s was the social model of disability, which posits that it is higher education (HE) that must adapt to students, not the other way round; i.e. it is the class that must be altered [6, 10, 11]. In fact, at present, some universities that are adopting the social model and, more recently, Universal Design for Learning (UDL), are contributing to learning and

participation, and therefore to the permanence and academic success of students with disabilities.

This social model of disability highlights the importance of a holistic approach to disability. In particular, it points out that people's limitations are the result of the barriers that society itself imposes to the provision of accessible services and to ensure that the needs of people with disabilities are taken into account (examples include an inaccessible physical environment, the absence of assistive technology, negative attitudes to disability and services, systems and policies that either do not exist or hamper participation) [7].

The majority of the research carried out to date coincides in highlighting that students encounter more barriers than aids during their time at university [12]. Studies on medicine [13] or nursing support [14] also underline this general finding. The trajectories of students with disabilities are far from easy and they have to overcome a number of different institutional and classroom-related obstacles [15]. Institutional barriers include policies that are simply not applied, slow bureaucratic processes and hostile, non-adapted physical spaces [8, 16]. Barriers in the classroom itself include rigid, inflexible syllabuses, negative attitudes by faculty and classmates and a lack of information and training among faculty [17–19]. The main barriers are not physical or linked to the absence of resources [5]. Rather, they are associated with a narrow attitudinal and cultural understanding of disability in HE.

Nevertheless, some studies have identified certain enabling factors for learning [20]. For example, in one study carried out with physiotherapy students, the authors positively valued the reasonable adjustments made by faculty, the accessible learning materials available and the extra time granted for completing examination papers [11]. Other authors highlight the help provided by disability support offices, classmates and families [5, 21].

There can be no doubt that faculty play a key role in ensuring student inclusion [22]. Although in some cases they may feel insecure due to a lack of information or training [20], in others, they can make a vital contribution to the learning and participation of students with disabilities [23]. Moreover, some studies have concluded that having students with disabilities in the classroom is an opportunity for faculty members, since it forces them to improve their teaching and serves as an example of students' effort and will to overcome [24]. Other studies highlight the fact that students with disabilities are highly motivated to study at university [25]. There are also authors who argue that, in order to foster inclusion, a close, trust-based relationship must be established between students and faculty, and there must be on-going feedback and personal tutoring that enables faculty to individually monitor students' progress [26, 27].

What seems clear is that for students with disabilities to have a successful university experience, HE must acknowledge that respecting the human rights of this particular segment of the population is a fundamental duty of any democratic society [11, 28]. It is therefore necessary for HE to be both accessible and inclusive [29, 30]. In the context of the Health Sciences [31], as well as in other areas of knowledge [32, 33], UDL has been shown to eliminate barriers to learning and participation, helping to establish a learning environment in which all students have an equal chance of succeeding. Moreover, UDL has been found to benefit all students, not just those with disabilities [29, 34]. Thus, faculty members who engage in inclusive practices benefit all students [35]. HE must develop and foster inclusive pedagogy that takes into account the existing diversity of interests and needs, values all students and works proactively to facilitate learning [36]. The background to the inclusive pedagogy approach can be found in works focussing on previous educational stages, such as primary and secondary education [37]. Florian and Linklater are leading international figures in this field who, together with other experts in the university stage [36], have shown how this concept means that faculty members must be capable of generating proactive strategies that allow the inclusion of all students, while at the same time ensuring that no student is excluded simply because they are considered different.

This study focuses on the disability-related practices of faculty members from the Health Sciences who engage in inclusive pedagogy. The successful

education and training of students with disabilities can be an opportunity to rethink university culture and enable these students and their peers to provide more sensitive and empathetic care to their future patients with disabilities. In order to contribute to this challenge, in this article, we aim to answer three research questions: (i) what strategies are employed by faculty members to facilitate the learning and participation of students with disabilities? (ii) Do teaching strategies differ in accordance with the type of disability in question? And if so, how? (iii) How do faculty members value their experience teaching students with disabilities?

Materials and methods

This study forms part of a broader research project entitled 'Inclusive pedagogy at university: Faculty members narratives', involving faculty engaging in inclusive pedagogy in all areas of knowledge. The overarching purpose of this project is to determine what faculty members who engage in inclusive pedagogy in relation to students with disabilities do, and how and why they do it. In this study, our aim was to explore the strategies employed by faculty members to ensure the inclusion of students with disabilities, determine whether these strategies differ in relation to the type of disability in question [physical, visual, learning difficulties (LD) and hearing] and understand how faculty value their experiences teaching these students.

In this article, we only analyse the experiences of faculty working in Health Sciences. The reason for conducting a separate analysis of faculty from the Health Sciences was that the number of students with disabilities accessing degree courses in this field in Spanish universities is increasing. Other results of the project can be consulted [15].

Disability in the context of Spanish universities and the health sciences

Spain, like all United Nations Member States, is committed to the 17 Sustainable Development Goals proposed by the 2030 Agenda. The fourth goal, which focuses on education, recognizes that quality HE is essential to achieve universal access [38]. Similarly, Spanish legislation establishes that everyone with a disability has the right to an inclusive education throughout their life and on an equal footing with others [39].

Spanish universities have disability support offices. These offices are responsible for informing faculty by email of the presence of a student with a disability in one of their classes and for telling them about the accommodations they must make to enable said student to access the curriculum. However, this cannot be done until the student initiates a request for support from this service.

In Spain, over 21 000 people with disabilities study at university. Of the different knowledge areas, Health Sciences has the second highest number of students, accounting for 21.7% of the entire student population [40].

Universities also offer in-service training for faculty, but this is not compulsory. The most frequent training programmes on offer focus on methodological teaching strategies. Training in disability and inclusive education is more limited and even when it is offered, it tends to be in the form of workshops lasting only a few hours.

Participants

Participants were selected by students with disabilities, who nominated those faculty members they felt had contributed to their inclusion at university. We contacted the disability support offices at 10 Spanish universities, which in turn informed students of the project aims. At the same time, we also used the snowball sampling technique [41], initially contacting the students with disabilities ($n=5$) known to the research team from previous research projects. We used the two sampling techniques simultaneously to access a larger number of participants. Students recruited through both techniques wrote an email to the first author of the article informing her of the nominated faculty.

To facilitate nominations, we provided students with a description of an inclusive faculty member: 'they believe all students have potential; they use methods designed to foster activity and

Table I. *Participants' profile*

Participant	Fields	Age	Years of teaching experience	Type of disability of students	Length of each participant's interview
P1	Pharmacy	40	15	Hearing, visual, physical, poor health conditions and learning difficulties (LD)	1 h 15 min
P2	Pharmacy	48	15	Hearing, visual and physical	1 h 22 min
P3	Nursing	60	20	Physical and psychological disorders	1 h 28 min
P4	Nursing	57	28	Visual, psychological disorders and poor health conditions	1 h 17 min
P5	Nursing	55	22	Physical	1 h 23 min
P6	Nursing	42	13	Physical and psychological disorders	1 h 21 min
P7	Physiotherapy	32	4	Hearing, visual and physical	1 h 30 min
P8	Physiotherapy	37	16	Visual, physical, psychological disorders and LD	1 h 25 min
P9	Medicine	56	27	Hearing and visual	1 h 27 min
P10	Medicine	57	33	Physical and psychological disorders	1 h 23 min
P11	Medicine	64	40	Physical, visual, psychological disorders, poor health conditions and LD	1 h 19 min
P12	Medicine	58	28	Hearing, psychological disorders and LD	1 h 21 min
P13	Medicine	67	5	Physical and psychological disorders	1 h 28 min
P14	Nursing	48	16	Physical and psychological disorders	1 h 30 min
P15	Nursing	40	10	Physical and poor health conditions	1 h 29 min
P16	Nursing	55	31	Visual, physical, psychological disorders and LD	1 h 17 min
P17	Medicine	43	15	Visual, physical and psychological disorders	1 h 24 min
P18	Medicine	47	17	Visual, psychological disorders, poor health conditions and LD	1 h 26 min
P19	Nursing	62	38	Visual	1 h 22 min

participation; they are concerned about ensuring that all their students learn; they are flexible and willing to help; they motivate their students; they establish close relationships with them, and/or they make their students feel part of the class'.

Next, we contacted the nominated faculty members by email and/or telephone in order to request their participation in the study. There were 27 nominees in the field of Health Sciences, of which 19 from four different universities agreed to participate (Table I). We finished the sampling once no new information was received and it started to become redundant (saturation criterion).

Data collection instruments

The study is divided into two phases. In the first phase, we conducted individual and semi-structured interviews with faculty members. In the second phase, which is currently underway, we are accessing their classes and carrying out observations and interviews with their students. In this article, we use only the data from the faculty interviews. This was because we wanted to present the analysis of faculty narratives in detail without exceeding the word limit.

The interview script was based on the theoretical framework of inclusive pedagogy that includes the social model of disability and UDL. The interviews focussed on practices designed to ensure the inclusion of students with disabilities. Also, in line with the precepts of UDL and inclusive pedagogy, we were aware of the need to consider the benefits of these practices for all students when exploring, analysing, understanding and presenting the data. The interview script was previously piloted with faculty from the Health Sciences who were not participating in the study but who nevertheless had experience teaching students with disabilities. As a result of this
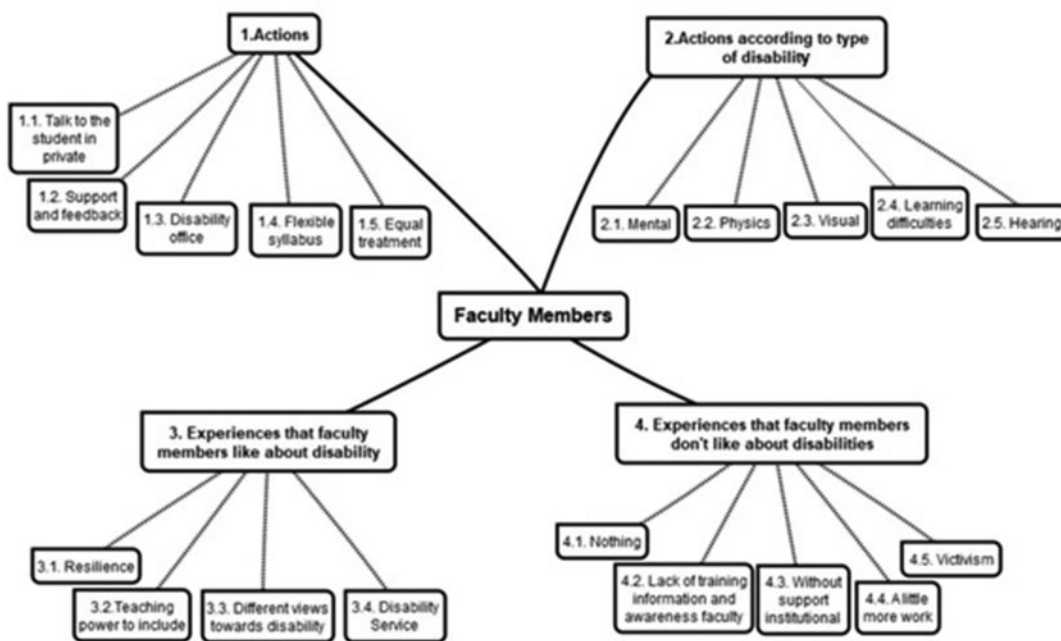
Fig. 1. Category and code system.

pilot, we identified some questions as confusing and rephrased them accordingly. On average, interviews lasted between 1 h 15 min and 1 h 30 min. They were structured around questions such as: upon learning that there will be a student with a disability in your class, what measures do you put in place? What steps do you take? Could you describe your experience in relation to students with disabilities? What did you find most rewarding? And what did you find most difficult or unpleasant?

Data analysis

Based on a phenomenological approach that emphasizes the individual and their experience in understanding other people's reality and point of view [42], we conducted a qualitative analysis of all the information gathered during the interviews, using a mixed system of categories and codes (Fig. 1) created inductively [43]. The analysis was carried out in three stages. The first step in the coding process was to develop a generic deductive category system (we were coding only for explicit answers to the research questions). The second stage was inductive in nature, with new subcodes pertaining to key topics and ideas being established. Finally, we analysed each of these subcodes in depth for possible blending or merging with other codes. In order to ensure the reliability of the coded data, we discussed any verbatims that were difficult to categorize. As a research team, we have extensive experience in qualitative studies and in conducting interview-based data analyses.

We met via Skype at two moments in the process: firstly, we met to make decisions on how to organize the analysis; and subsequently, we met once again to share their findings and agree on the final coding system and results of the analysis. The MaxQDA 12 qualitative analysis software package was used to facilitate information processing and we encoded the transcripts previously encoded on paper into the programme. We used this software rather than any of the other options available because we had used it in previous studies.

Rigour

To guarantee the rigour and trustworthiness of the study [44], we used a member checking process. We sent each participant a written transcript of their interview by email to enable them to review the information and make any changes they considered necessary. Most participants approved the transcripts immediately and only in two cases did they make any changes. In addition to the audio recording of the interviews, we also took notes during the interview process.

Ethical considerations

Faculty signed an informed consent document that outlined the aim of the research project and guaranteed their anonymity (P1–P19), the voluntary nature of their participation and their right to withdraw from the study at any time. Each participant was sent a written transcript of their interview by email to enable them to review the information and make any changes they considered necessary. Ethical approval was obtained from the Spanish Ministry of the Economy and Competitiveness.

<div align="center">

Results

</div>

What strategies are employed by faculty members to facilitate the learning and participation of students with disabilities?

Faculty reacted to the news that there would be a student with a disability in their class by setting in motion five principal strategies, all of which were related to each other: (i) speaking in private with the student in order to understand their needs; (ii) ensuring individual monitoring and giving on-going feedback; (iii) seeking help and information from the disability support office and other colleagues; (iv) being flexible in relation to the syllabus; and (v) treating the student as just another member of class.

Speaking in private with the student in order to understand their needs

Faculty said they tried to be approachable and invited the student to come and speak to them in private in order to fully understand their needs and what help they required. They always respected the student's privacy and tried not to treat them differently during meetings. They made an effort to understand the student's real needs in order to make reasonable accommodations and ensure the accessibility of the course material:

> I respect their privacy and always ask them to tell me exactly how I can help them. I think you have to be there to help, but you shouldn't victimise or stigmatise them. (P17)

Ensuring individual monitoring and giving feedback

Another strategy was to arrange frequent meetings with the student. In order to ensure that they were doing their job properly and to provide support, motivation and understanding, faculty held regular tutorials or gave the student their email address so as to demonstrate their availability:

> We arranged lots of personal interviews and tutorials about the subject, but those tutorials usually ended up becoming an opportunity to provide more general support. (P2)

Seeking support and information from the disability support office and other colleagues

Many faculty members coincided in mentioning the support they received from other colleagues and the coordination services provided by the disability support office. This was considered useful because the advice received enabled faculty to design their syllabus in such a way as to make it accessible right from the start. Moreover, it helped them remain alert in class and make themselves available to satisfy any needs the student may have had as the course developed:

> There's one really good thing about the university today, and that's that they tell you when you are going to have a student with a disability in your class, providing the student gives their consent, of course. (P10)

Flexibility in the syllabus

Another step the majority of the faculty members interviewed took was to make reasonable accommodations in their teaching materials, class atmosphere, resources and any another element deemed necessary. These accommodations were not only beneficial to students with disabilities, they were also positive for all students.

For example, faculty gave everyone more time in exams and provided materials prior to the class in which they were to be covered in order to enable students to familiarize themselves with the content. They also provided materials in Word format, so that students could make any changes required in the documents.

Treating students with disabilities as just another member of class

The final strategy faculty said they used was to treat the student as just another member of class, without singling them out. The aim was to render their condition normal, to address their needs, ensure their autonomy and provide them with the help they deserved:

> Students with disabilities are just the same as any other student. It's really no different from when you have an exceptionally tall student in class. You have to make sure they have a chair that's more comfortable for them when they are looking into the microscope, for example. (P11)

Do teaching strategies differ in accordance with the type of disability in question?

Faculty explained how they acted in accordance with the type of disability in question. In relation to students with psychological disorders, faculty tried to ensure the student's wellbeing and contacted the university's psychological support staff. They also spoke in private with the student, tried to establish trust, helped them individually with some tasks and incorporated their situation as part of the course content in order to raise awareness among their classmates:

> In my class on mental health I focus a lot on prejudice, stereotypes, stigmas and working with mental health patients and their families. (P5)

In the case of physical disability, faculty highlighted the physical barriers encountered by students with reduced mobility in the university environment. They also tried to render the situation normal, ensure that the student sat in the front row, made a point of asking them about their needs and let them make audio recordings of their classes:

> I had a student who couldn't write, so I let him record my classes. If that means he has access to the information, then he should be allowed to do it. (P14)

In the case of visual disability, faculty often made sure all materials were written with a larger font size and were handed out to students before the class in which they were scheduled to be covered. They also provided resources that could be adjusted and used assistive technologies in their classes. When setting an exam, they also paid attention to font size and ensured a Braille transcription. They gave students more time to complete examination papers and also offered them the chance of sitting them orally. They took time to listen to their needs by arranging tutorials with oral explanations and strove to raise awareness among the rest of the class and to normalize their presence (e.g. by reserving a seat for them in the front row).

In relation to LD, faculty pointed out that these are often invisible disabilities in university classrooms. In order to respond to students' needs, faculty tried to continually motivate students, asking them what they needed and how they could help them. They also approached them often during class to speak to them, generate trust and encourage them not to be afraid of participating.

Finally, as regards students with hearing disabilities, faculty claimed that their inclusion was fairly straightforward and all they had to do was be approachable and try to look in the student's direction when speaking in class. They also said they tried to

speak slowly, listen to their needs and ensure that they sat in the front row:

> All I have to do is make sure I speak slowly, look at them when I'm speaking or not speak when I'm writing on the board; but I do this automatically now. (P7)

How do faculty members value their experience teaching students with disabilities?

Faculty said that what they found most rewarding was the students' resilience, their own ability to ensure their inclusion and the fact that the experience helped change their outlook.

Many faculty members described students with disabilities as being extremely resilient. They said they were surprised and impressed by their engagement, effort and motivation to learn, each and every day. The experience helped them to understand that people with disabilities have no limits and can achieve whatever they set their mind to.

Most participants mentioned the power of faculty to have a positive impact on the learning, participation and success of students with disabilities. They highlighted the fact that one of the most rewarding things about the experience was when they felt they were no longer a barrier to students, but rather someone who accompanied them and made things easier for them:

> Seeing how they feel that you've smoothed the way for them. This makes you feel important, because you've managed to lighten their load a little. (P8)

Other participants explained that the experience had changed their outlook on disability and were thankful for it. They said that if it had not been for these students, they would never have learned or felt curious about different perspectives:

> It gives you a different outlook on things. You gain a broader perspective than you would with, let's say, other students without disabilities, right? (P6)

Although many faculty claimed not to have had any negative experiences, some said that what they had liked least was the lack of training, information and awareness, all of which are required in order to intervene in time and foster self-confidence. They also mentioned the fear and insecurity they felt due to not knowing how to act appropriately with the student with disability in their class:

> They don't have very (or even slightly) adapted material to enable them to study human anatomy like their classmates. Or if this material exists, I'm certainly not aware of it. (P9)

The thing other faculty members found hardest was when they became aware of the lack of institutional support for these students, the barriers, which exist in the university environment and the lack of resources available:

> I don't think the bathrooms in this faculty have been adapted at all; they are not suitable. (P10)

Only a few faculty members mentioned the extra effort they had had to make in their job in order to ensure the participation of students with disabilities. However, they also said that it depended on the type of disability in question, and that the effort required was not excessive, but rather reasonable:

> It requires a little extra effort from you, but the work I've had to do hasn't been excessive or anything. (P1)

Finally, a few participants highlighted that what they found most difficult or unpleasant about the experience was the fact that some students played the victim in order to demand more leniency or to request measures that were not stipulated in the regulations:

> What I find hardest is when, sometimes, they play the victim in order to ask you to expect less of them. (P12)

Discussion and conclusions

The results of this study highlight the fact that university faculty take many different actions to foster the inclusion of students with disabilities, although all are focussed on being approachable, guaranteeing fair treatment, seeking resources and ensuring that they are accessible and available to students.

As regards their experiences teaching these students, the majority were positive, although some could be improved and depend on training and university culture. The main contribution made by this study is that it outlines the specific actions taken by faculty members from the Health Sciences in relation to students with disabilities they have taught. This has not previously been analysed, since the majority of studies carried out in the field of Health Sciences have focussed on exploring the barriers and aids identified by students with disabilities in the university environment [6, 8, 10], the learning experiences of students with visual disabilities [11], the support offered by faculty members [28] and medical students' attitudes towards disability [13]. However, it should be noted that faculty attitudes towards disability and their willingness to make accommodations have been studied previously, although without focussing exclusively on the Health Sciences [45].

The actions taken by faculty show that the first step towards including students with disabilities is to understand their needs and establish relationships based on trust and confidence [25]. In this study, the results suggest that it is the institution and the people who make it up that should adapt to the student, not the other way round [11]. Thus, each faculty member should make an effort to plan their syllabus and arrange friendly meetings with students, and should also strive to ensure cohesive group dynamics in class. This will enable them to be proactive, break down prejudices about disability and be aware, as they are teaching that each individual student has a unique set of needs and concerns.

Another action taken by faculty was to coordinate with their disability support office. These offices are of great help to faculty and work effectively to respond to diversity because the offices inform faculty of the presence of a student with a disability in their class and help them understand how to act and how to make reasonable accommodations in their subjects [5, 21]. In this sense, it would be better if more periodic meetings were arranged between disability support office staff, faculty and students with disabilities.

Another inclusive action is linked to flexibility in relation to the syllabus. Rigid syllabuses may become a barrier to the learning and participation of students with disabilities [19]. Faculty participating in our study made reasonable accommodations in the class dynamics, allowing more time for completing examination papers and providing a copy of the contents to be covered in class beforehand and in different formats—something which benefits all students [17, 23]. In this sense, according to the principles of UDL, accommodations are shared and designed to improve the learning experience of all students [29, 34]. Another action taken was to render disability something natural and to treat the student as just another member of class. In our study, faculty members also pointed out that ensuring the inclusion of students with disabilities in class does not require a 'special' effort, just a fair and reasonable one [28]. It is simply a matter of respecting everyone's rights and offering them the support they require in accordance with the type of disability in question. It also means that, before labelling them and acting in accordance with their disability, it is important to talk to them in private about their specific needs.

In relation to participants' experiences with students with disabilities, the positive ones mentioned highlight the importance of paying attention to feelings and emotions in class. Students with disabilities are characterized by their strong will to overcome adversity and their high level of motivation to succeed in their studies [14, 24]. Consequently, faculty and disability support office staff should join forces to encourage and accompany students throughout their time at university, and should reflect jointly on how their attitudes and practices may affect them. In this sense, students with disabilities are resilient because they are highly motivated to learn despite all

the barriers they encounter in the university environment, and have developed personal strategies to enable them to overcome said obstacles [24].

The experiences that faculty found most difficult or unpleasant were related to the lack of training and information [17, 18]. This finding is consistent with that observed in one study in which some faculty said they did not know how to act appropriately due to a lack of training and information [20]. It is also consistent with that reported by other authors, who highlight the lack of institutional support for fostering the inclusion of students with disabilities [8, 16]. It is therefore necessary for universities to provide training to faculty on UDL, educational inclusion and the strategies required to make them possible. For example, seminars could be held, led by small groups of expert faculty members who could help guide and orient their colleagues. Another option would be for the disability support offices to gain a greater degree of visibility in their corresponding faculties by organizing workshops and training courses designed to foster inclusion.

In sum, the results of this study reveal that faculty members' experiences with students with disabilities made them more sensitive, helped them understand that these students are just like any other, and that making reasonable accommodations in a subject is not 'extra work', but rather forms part of their professional duties and obligations [11, 28].

Limitations and future research

This study has a number of limitations, which should be taken into consideration. The process of accessing the sample was slow and, despite using several different pathways, student response was low and not all faculty nominated were willing or available to participate.

Another limitation was the fact that in-depth interviews were the only data collection instrument used. Nevertheless, in a second phase of this research project, we are conducting classroom observations and interviews with students, with the aim of publishing, in the future, studies about best practices in relation to disability at university that contemplate other voices also.

Future research may wish to focus on the design, development and evaluation of faculty training programmes oriented towards ensuring an inclusive response to students with disabilities. Other studies could also address the experiences of students with disabilities in clinical practice, analysing, e.g. the barriers and aids encountered.

In sum, this study reveals how it is possible for university students with disabilities to learn, participate and succeed, providing they have sensitive and committed faculty members who are well trained in inclusion, universal accessibility and diversity. However, unequal structures, marginalizing practices and cultures of exclusion continue to exist in certain institutions [5]. The actions and experiences outlined here may help encourage other colleagues to rethink their practices in the classroom and engage in more inclusive education.

Conflict of interest statement

None declared.

Funding

References

1. De los Santos SB, Kupczynsk L, Mundy MA. Determining academic success in students with disabilities in higher education. *Int J High Educ* 2019; **8**: 16–38.
2. Padilla MT, Martínez-García I, Herrera D. Just facilitating access or dealing with diversity? Nontraditional students' demands at a Spanish university. *RELA* 2019; **11**: 219–33.
3. Gibson S, Leinster S. How do students with dyslexia perform in extended matching questions, short answer questions and observed structured clinical examinations? *Adv Health Sci Educ* 2011; **16**: 395–404.
4. Gibson S. When rights are not enough: what is? Moving towards new pedagogy for inclusive education within UK universities. *Int J Incl Educ* 2015; **19**: 875–86.
5. Rooney C. Listening to other voices: building inclusion of higher education students with disability from the ground up. *ISWP* 2019; **6**: 33–47.

6. Cook V, Griffin A, Hayden S *et al*. Supporting students with disability and health issues: lowering the social barriers. *Med Educ* 2012; **46**: 564–74.

7. Oliver M. The social and political context of educational policy: the case of special needs. In: L Barton (ed). *The Politics of Special Educational Needs*. London: Falmer Press, 1988, 13–31.

8. Meeks LM, Herzer K, Jain NR. Removing barriers and facilitating access: increasing the number of physicians with disabilities. *Acad Med* 2018; **93**: 540–3.

9. Grimes S, Southgate E, Scevak J, Buchanan R. University student perspectives on institutional non-disclosure of disability and learning challenges: reasons for staying invisible. *Int J Incl Educ* 2019; **23**: 639–55.

10. Bril-Barniv S, Moran GS, Naaman A *et al*. A qualitative study examining experiences and dilemmas in concealment and disclosure of people living with werious mental illness. *Qual Health Res* 2017; **27**: 573–83.

11. Frank H, McLinden M, Douglas G. Accessing the curriculum; university based learning experiences of visually impaired physiotherapy students. *Nurse Educ Pract* 2020; **42**: 102620.

12. Adefila A, Broughan C, Phimister D *et al*. Developing an autonomous-support culture in Higher Education for disabled students. *Disabil Health J* 2020; **13**: 100890.

13. Miller S, Ross S, Cleland J. Medical students attitudes towards disability and support for disability in medicine. *Med Teach* 2009; **31**: e272–7.

14. Tee S, Cowen M. Supporting students with disabilities – promoting understanding amongst mentors in practice. *Nurse Educ Pract* 2012; **12**: 6–10.

15. Moriña A, Molina V. M., Cortés-Vega, D. Voices from Spanish students with disabilities: willpower and effort to survive university. *J Spec Needs Educ* 2018; **33**: 481–94.

16. Yusof Y, Chan CC, Hillaluddin AH *et al*. Improving inclusion of students with disabilities in Malaysian higher education. *Disabil Soc* 2020; **35**: 1145–70.

17. Carballo R, Morgado B, Cortés-Vega MD. Transforming faculty conceptions of disability and inclusive education through a training programme. *Int J Incl Educ* 2019; 1–17.

18. Kreider CM, Bendixen RM, Lutz B. Holistic needs of university students with invisible disabilities: a qualitative study. *Phys Occup Ther Pediatr* 2015; **35**: 426–41.

19. Helena Martins M, Borges ML, Gonçalves T. Attitudes towards inclusion in Higher Education in a Portuguese University. *Int J Incl Educ* 2018; **22**: 527–42.

20. Biggeri M, Di Masi D, Bellacicco R. Disability and higher education: assessing students' capabilities in two Italian universities using structured focus group discussions. *Stud High Educ* 2020; **45**: 909–24.

21. Francis GL, Chiu C. The way to ultimate wisdom: an exploratory qualitative study on Taiwanese students with disabilities attending college. *Int J Dev Disabil* 2020; **66**: 270–81.

22. Minkler M, Fadem P, Perry M *et al*. Ethical dilemmas in participatory action research: a case study from the disability community. *Health Educ Behav* 2002; **29**: 14–29.

23. Zhang Y, Rosen S, Cheng L, Li J. Inclusive higher education for students with disabilities in China: what do the university teachers think? *High Educ Stud* 2018; **8**: 104–15.

24. Carballo R, Cotán A, Spínola Y. An inclusive pedagogy in Arts and Humanities university classrooms: what faculty members do. *Art Humanit High Educ* 2021; **20**: 21–41.

25. Burgstahler S, Doe T. Improving postsecondary outcomes for students with disabilities: designing professional development for faculty. *JPED* 2006; **18**: 135–47.

26. Thomas L. Developing inclusive learning to improve the engagement, belonging, retention, and success of students from diverse groups. In: M Shah, A Bennett, E Southgate (eds). *Widening Higher Education Participation. A Global Perspective*. Oxford: Elsevier, 2016, 135–59.

27. Bergström H, Elinder LS, Wihlman U. Barriers and facilitators in health education for adults with intellectual disabilities - a qualitative study. *Health Educ Res* 2014; **29**: 259–71.

28. Liasidou A, Mavrou K. Disability rights in Higher Education Programs: the case of medical schools and other health-related disciplines. *Soc Sci Med* 2017; **191**: 143–50.

29. Bunbury S. Disability in higher education – do reasonable adjustments contribute to an inclusive curriculum? *Int J Incl Educ* 2020; **24**: 964–79.

30. Deering K, Williams J. Social justice, capabilities and learning support provided by lecturers: a phenomenological-hermeneutic study. *Nurse Educ Pract* 2019; **37**: 153–8.

31. Kumar L, Wideman M. Accessible by design: applying UDL principles in a first year undergraduate course. *Can J High Educ* 2014; **44**: 125–47.

32. Hromalik CD, Myhill WN, Carr NR. "ALL Faculty Should Take this": a universal design for learning training for community college faculty. *Tech Trends* 2019; **64**: 1–14.

33. CAST. Universal Design for Learning Guidelines version 2.2. 2018. Wakefield, MA. Available at: http://udlguidelines. cast.org. Accessed: 15 May 2020.

34. Burgstahler S. Preface. In: S Burgstahler (ed). *Universal Design in Higher Education: Promising Practices*. Seattle: DO-IT, University of Washington, 2013. Available at: www. uw.edu/doit/UDHE-promisingpractices/preface.html.

35. Cunningham S. Teaching a diverse student body - a proposed tool for lecturers to self-evaluate their approach to inclusive teaching. *PESTLHE* 2013; **8**: 3–27.

36. Gale T, Mills M. Creating spaces in higher education for marginalised Australians: principles for socially inclusive pedagogies. *Enhanc Learn Soc Sci* 2013; **5**: 7–19.

37. Florian L, Linklater H. Preparing teachers for inclusive education: using inclusive pedagogy to enhance teaching and learning for all. *Camb J Educ* 2010; **40**: 369–86.

38. United Nations. Transforming Our World: the 2030 Agenda for Sustainable Development. 2015. Available at: https:// www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/ 1&Lang=E. Accessed: 15 May 2020.

39. *Royal Legislative Decree 1/2013, of 29 November, approving the Revised Text of the General Law on the Rights of Persons with Disabilities and their Social Inclusion*. Available at: https://www.boe.es/buscar/doc.php?id=BOE-A-2013-12632. Accessed: 15 May 2020.

40. Universia Foundation. University and Disability. IV Study on the inclusivity of the Spanish university system with respect to the reality of disability [Universidad y Discapacidad. IV Estudio sobre el grado de inclusión del sistema universitario español respecto de la realidad de la discapacidad].

Madrid: CERMI, 2018. Available at: http://xurl.es/31170. Accessed: 15 May 2020.

41. Cohen L, Manion L, Morrison K. *Research Methods in Education*. London: Routledge/Falmer, 2002.

42. Moustakas C. *Fhenomenological Research Methods*. Thousand Oaks: Sage, 1994.

43. Miles M, Huberman AM. *Qualitative Data Analysis*. Thousand Oaks, CA: Sage Publications, 2014.

44. Denzin NK, Lincoln YS. *The Landscape of Qualitative Research*. New Delhi: Sage Publications,1998.

45. Lombardi A, Dallas BK. University faculty attitudes toward disability and inclusive instruction: comparing two institution. *JPED* 2013; **26**: 221–32.