University students with disabilities in Spain: faculty beliefs, practices and support in providing reasonable adjustments.

Introduction

Nowadays, the profile of university students in many countries is characterised for being very diverse (social origin, ethnic minorities, disability, etc.) (Clarke and Nelson, 2014; Hitch, Macfarlane, and Nihill, 2015; Shah, Bennett, and Southgate, 2015). In fact, one of the emerging groups in the last decades, and currently growing, is that of students with disabilities (Seale, Geogerson, Mamas, and Swain, 2015). Thus, universities are facing the challenge of responding and attending to all university students, supporting an inclusive higher education that offers a quality education for everyone. A proof of this are the different initiatives that have been implemented in recent years, as well as political actions (e.g., the 2030 UN agenda for sustainable development, 2015).

In Spain, Organic Law 4/2007 for universities establishes that the principles of equality of opportunities and non-discrimination based on disability must be ensured, and that the university infrastructure and facilities must be accessible to everyone. In this sense, compliance with the rights of people with disabilities has been largely conditioned due to the degree of accessibility of educational environments, which has led to actions targeted to remove or reduce physical or access barriers to the syllabus.

Therefore, once physical accessibility is guaranteed, sometimes additional support or reasonable adjustments are required to attend to the needs, desires, interests and motivations of students with disabilities in order to facilitate their accessibility to the syllabus. In this sense, the Convention on the Rights of Persons with Disabilities (United Nations, 2006) defines reasonable adjustments as "the necessary and adequate modifications and adaptations that do not pose a disproportionate or undue load, when required in a particular case, to guarantee all the human rights and fundamental freedoms for people with disabilities in equal conditions" (art. 2 of the Convention). Recently, the report of the committee on the rights of people with disabilities on equality and non-discrimination (CRPD/C/GC/6) includes specific examples of what making reasonable adjustments implies:

Reasonable adjustments is an intrinsic part of the immediately applicable duty of non-discrimination in the context of disability. Examples of reasonable accommodations include making existing facilities and information accessible to the individual with a disability; modifying equipment; reorganizing activities; rescheduling work; adjusting curricula learning materials and teaching strategies; adjusting medical procedures; or enabling access to support personnel without disproportionate or undue burden (art. 5 (3) on reasonable accommodation) (United Nations, 2018).

All this requires university institutions to be proactive and to make adjustments continuously. Thus, universities would be dynamic environments which would not only make occasional adjustments, but also adapt constantly and provide the reasonable adjustments required to attend to the needs of each student.

In some cases, these adjustments are provided reactively or "a posteriori", which helps to reduce some barriers, although they can also lead to the creation of new difficulties for students (Hughes, Corcoran, and Slee, 2015; Moriña, López Gavira, and Molina, 2015). According to Hockings (2010), providing an inclusive education in any educational stage requires an "anticipatory approach of the curricular design" (page 4), in order for the syllabus to include, a strategy for academic assessment and activities that satisfy the learning needs of every student and help to fight against exclusion and promote the social and educational participation of all students (Bunbury, 2018). All this poses a challenge to faculty members, since they are a key element towards achieving inclusive education in the framework of higher education (Kaynardag, 2017; Veitch, Strehlow, and Boyd, 2018; Zhan, Rosen, and Li, 2019). Therefore, faculty members are currently facing the challenge of responding to the diversity of students, aware that they play an important role in the success of all students, including those with disabilities.

Designing a classroom environment in which the participants avoid homogeneity involves relevant didactic and teaching implications. Therefore, we must focus on the pedagogical strategies and learning approaches provided in universities to support the inclusion of all students without exceptions (Gale and Mills, 2013; O'Shea, Lysaght, Roberts, and Harwood, 2016). In this line, implementing the principles of Universal Design for Learning (UDL) would guarantee that the needs of all students would be covered without the need for later adjustments. However, according to the reviewed literature, faculty members in general are not trained in inclusive education

and UDL (Moriña & Carballo, 2017) . For this reason, in some cases it is necessary to make adjustments to the contents, to the teaching ways and to the classroom environment (Morgan and Houghton, 2011). Other cases require modifications in the teaching methodology, with this being an essential factor for the success or failure of students, especially those with disabilities (Gale, Mills, and Cross, 2017; Lombardi, Murray, and Gerdes, 2011; Moriña, Perera, and Melero, 2019). However, another element to consider in the adjustments is student academic assessment itself, since it is an aspect that requires urgent attention (Madriaga, Hanson, Heaton, Kay, Newitt, and Walker, 2010). In fact, these considerations would allow universities and their staff not not only to comply with the legal requirements, but also to approach matters such as equality, diversity and quality in the scope of higher education (Hanafin, Shevlin, Kenny, and McNeela, 2007).

Making adjustments is an essential step (and a legal imperative), although the decision on the best way to provide them and how faculty members should implement them still requires further evidence and development. In this sense, some studies have focused on determining the propriety of adjustments from the experiences of students with disabilities, specifically regarding their efficiency in promoting the inclusion and participation of all students in the university (Barnard-Brak, Lechtenberg, and Lan 2010; Fossey, Chaffey, Venville, Ennals, Douglas, and Bigby, 2017).

Furthermore, this topic has been tackled in other studies from the perspective of faculty members, both in face-to-face teaching (Bunbury, 2018; Kendall, 2018; Moriña, Perera, and Melero, 2019; Zhang, LandMark, Reber, Hsu, Kwok, Benz, 2010) and distance learning (Phillips, Terras, Swinney, and Schneweis, 2012), with special emphasis on the difficulties of the faculty when making reasonable adjustments due to their lack of knowledge, awareness or professional training.

In the literature review about reasonable adjustments in the university, we found that faculty members show a certain concern, mainly based on two aspects. Firstly, they consider that making adjustments can reduce the academic standard (Cook, Rumrill and Tan Kerseley, 2009). Secondly, they think that making adjustments may imply a favourable treatment for some students, which they perceive as unfair to students without disabilities (Vasek, 2005).

In this sense, authors such as Florian and Black Hawkins (2011) pointed out that this could be due to the fact that faculty members respond to human differences with individualised approaches that mainly consist in providing students with something additional or different. Gale and Mills (2013) proposed three principles that support an inclusive pedagogy: a) the belief that all students give value to the learning environment, b) the design of a pedagogy that values differences, and c) implementing actions that involve the students rather than imposing predetermined actions. Therefore, the present study approaches these considerations by asking faculty members about the importance of the design of an inclusive curriculum and about making reasonable adjustments in their subjects to respond to the diversity of students, especially regarding students with disabilities.

The aim of this qualitative study was to discover and analyse the beliefs, knowledge, designs and actions that faculty members implement in the framework of inclusive pedagogy. Specifically, the objective was to determine the beliefs and knowledge of faculty members about reasonable adjustments; to analyse the different types of adjustments that they make in their subjects to attend to the needs of students with different types of disabilities; to know the implications for faculty members to make reasonable adjustments and what support they have to implement them.

Method and participants

This study is part of a larger project funded by the Ministry of Economy and Competitiveness of Spain, entitled *'title and reference omitted for anonymous revision'* (2017-2020) (eg. Carballo, Cotán & Spínola; Moriña, 2019). The aim of this research was to discover the beliefs and knowledge of faculty members who develop inclusive educational practices about disability, how they contemplate this reality in their teaching projects and what actions they carry out in the classroom to facilitate inclusion.

The sample of the study was recruited through university students with different types of impairments (visible and non-visible). These students were accessed through two different ways. We contacted the services for students with disabilities of the 10 universities that participated in the study. These services gave students with disabilities information about the project and asked for their collaboration. Separately, the participants were accessed through the snowball technique (Dusek, Yurova, and Ruppel,

2015). Specifically, different members of the university community (faculty members, students and other agents) were asked to disseminate the project among students with disabilities.

The students were asked to select, based on their experience as university students, those faculty members who had supported their educational inclusion. With the aim of making this task easier for them, they were given a list of possible characteristics of an inclusive faculty member: *Believes in the possibilities of every student; facilitates the learning processes; their teaching is active, using different teaching methodological strategies; cares for the learning of their students; is flexible, with a predisposition to help; motivates the students; keeps close relationships and favours interactions among students; and makes the students feel as an important part of the classroom..*

We contacted a total of 164 faculty members, of whom 39 did not reply to the proposal, and 6 refused to participate due to personal and work-related reasons. Thus, we obtained a final sample of 119 faculty members of 10 Spanish public universities from different fields of knowledge.

Twenty-four faculty members were from the field of Arts and Humanities (20.16%), 14 from STEM (Science, Technical, Engineering and Mathematics) (11.76%), 16 from Health Sciences (13.45%), 25 from Social and Legal Sciences (21.01%), and 40 from Education Science (33.62%). With respect to gender, 50 were women (41.67%) and 69 were men (58.33%). Regarding age, most of the participants (87.8%) were between 36 and 60 years old, only 7 were 35 years old or younger (7.78%) and 4 were over 60 years (4.42%). With regard to teaching experience, most of the participants were experienced faculty members. Specifically, 89 had more than 10 years of experience (68.35%), 24 had between 5 and 10 years of experience (25.4%) and only 6 faculty members (6.25%) had less than 5 years of experience.

Data gathering instruments

For the gathering of data, a semi-structured interview protocol was designed ad-hoc for this study. Prior to its application, this instrument was validated using by different faculty members who did not participate in this study; all their considerations and recommendations were incorporated in the instrument. This interview was based on the four analytical dimensions of inclusive pedagogy proposed by Gale and Mills

(2013) and Florian (2014): knowledge, beliefs, designs and actions. Most of the interviews were conducted face-to-face by members of the research team (n=89). By request of the participants, some of them were held through video conference (n=18) or via telephone (n=12). The average length of these interviews ranged between 60 and 120 minutes. All the interviews were recorded in audio and transcribed for subsequent analysis.

Data analysis

The gathered data were treated through a qualitative progressive analysis. Such analysis was carried out in two stages. In the first stage, two researchers of the team conducted a structural analysis using the MaxQDA14 software, from which an inductive system of categories and codes was created, following the guidelines of Miles, Huberman, and Saldaña (2014). In the second stage, the research team gathered to debate and reach an agreement on the analysis of those uncertain fragments or concepts.

Ethical matters of the study

An informed consent document was created with the aim of preserving the rights of the participants. The document was signed prior to each interview and described the main characteristics of the study and the commitments of the research team in this regard. In this way, the confidential treatment of the data was guaranteed. Likewise, the participants were offered the possibility to modify any piece of information provided in the interviews whenever they wished to do so. In order to ensure the anonymity of the participants, the information provided in the interviews was anonymised before it was analysed.

Results

In this study, all the faculty members shared their commitment to offer an inclusive educational response to students with disabilities, since the sample was intentionally related to this fact. The results are structured in three parts: beliefs and knowledge of the faculty members regarding reasonable adjustments; types of adjustments that they implemented in their subjects; and, lastly, implications that affected the faculty members derived from making adjustments and whether they had support to achieve this.

Beliefs and knowledge of faculty members about reasonable adjustments in the university

Firstly, it is necessary to point out that the participants showed a lack of knowledge regarding the concept of "reasonable adjustments". Many of them openly admitted that they did not know exactly what the concept meant and some of them defined it in an unclear or imprecise manner.

Despite their degree of expertise, most of the faculty members agreed on making adjustments to attend to the needs of their students with disabilities, since they considered it a necessary action to guarantee equal opportunities.

> If we must change the methodology, some question of the assessment or the way in which we evaluate, then we do it. The aim is to ensure that they have equal conditions (faculty member 24).

In spite of their good will to make the necessary adjustments, the participants reported on some restrictions or determinants to achieve such modifications. Some faculty members located such restrictions in the university system itself. Specifically, they mentioned the high ratio in the classrooms and the scarce support they had for the implementation of these adjustments. In this sense, they stated that they did not have previous counselling service reports and records of previous educational attainment that would endorse the need to make such adjustments. They asserted that, in some cases, universities showed a poor commitment to facilitate the mechanisms that allowed making the necessary changes, and that the decision on whether or not such adjustments had to be made   was left to the faculty member's judgement.

> I think some mechanism should be implemented from the university itself, where those adaptations could be made, and avoid leaving it in the hands of the faculty member, since each faculty member could do whatever they think is right *(faculty member 57)*.

Other participants claimed to support the making of pertinent adjustments, as long as they did not affect the contents of the subject. Some faculty members admitted that they had had doubts about how they had to make the adjustments (e.g., in technical subjects) and about what type of adjustments they could make to guarantee the learning of all the curriculum content.

Sometimes I am worried, as I want to help and support them, but then I need to know where the limit is for the other students, since not everyone learns at the same pace, and they may need more time. Thus, I must see in each case what I do, check the classroom atmosphere, see how the other students are, observe how the students with disabilities react..., etc. I cannot exceed the limits, since, after all, we are in the university and we must demand a certain level of academic performance (faculty member 3).

Regarding the way in which the adjustments were perceived, a certain concern emerged in many cases about how to give a response to the needs of students with disabilities without this being favourable treatment compared to the rest of the students. In this way, making adjustments in their subjects to attend to this group of students posed a dilemma to the participants about how to respond to their needs without disadvantaging the rest of the students. Thus, they considered it necessary to make such adjustments with great care.

It is really difficult because, who and how determines how to make such adaptations to ensure that they have the same opportunities? In the end, we have to try and make sure that the opportunities are symmetric, and avoid giving advantages to anybody. Honestly, I would not be capable of deciding that "this person needs more time, or a different exam...". That could be dangerous, since the faculty member ensures that all students face the subject equally and show the same level of knowledge acquisition. A positive discrimination must be carried out very carefully, right? (faculty member 68).

Types of reasonable adjustments implemented by faculty members

Most of the participants reported that they had made adjustments in their subjects to attend to the needs of students with disabilities. Others stated that, to date, they did not have the need to make adjustments, although they pointed out that they would apply them in the future if required.

To date, I did not make any changes because I did not think it was necessary, although if I see that some aspect of the subject needs to be modified, I would do so (faculty member 81).

Some participants stated that, when the subject was designed considering all students, that is, from an inclusive perspective, it was not necessary to adjust or modify anything. In fact, the programmes comprised different types of activities, materials and academic assessment systems that demonstrated their attention to diversity.

Normally I would not, since, if the design already considers that from an inclusive approach, it is not necessary to make changes … (faculty member 9).

For instance, regarding the academic assessment, some faculty members contemplated in the programme of their subjects a very broad assessment system with different options, which allowed each student to choose the one that best suited them.

I have different types of academic assessments for different types of students... those who can attend the lectures and those who cannot. Among the ones who can attend, there is a different type of academic assessment for those who choose to take a traditional exam and those who choose to carry out the activities. Last year, I even gave them the option of answering the questions orally, whereas others could take the written exam in the traditional way or using the computer. Within the face-to-face option, if they take the exam, the questions of the final exam are different from the initial questions I give them at the beginning of the course. Moreover, they decide their assessment system. As I said, to me it is important that they take into account the individual and group assessment (faculty member 91).

As was already mentioned, most of the participants had made adjustments to attend to the needs of their students with disabilities. These changes were very diverse. Thus, some faculty members pointed out that the adjustments they had made were related to the organization of the physical space and adaptation of the furniture or infrastructure of the classroom. Specifically, these faculty members stated that, in some cases, the response consisted in leaving enough spaces or seats in the first row for those students. In other cases, these changes consisted in incorporating adapted furniture in the classroom. Moreover, some participants pointed out that, when they gave the lectures, they made sure they were in a suitable spot, usually in front of those students with disabilities, in order to facilitate the communication.

Indeed, at the beginning it was hard for me because the communication was different, since I had to position myself in a strategic place. However, this was only at the beginning, as later on the motivation came by itself. They were really eager to improve themselves and learn, and they had a greater working capacity than the rest (faculty member 6).

Other adjustments made by many participants were related to the teaching methodology. In this sense, some faculty members pointed out that they had made

efforts to make all the information of the subject accessible to these students. To guarantee the accessibility, they had allowed them to record their lectures, kept constant contact with them through e-mail and provided all the information and material of the subject in the digital platform. In fact, some faculty members stated that, when it was necessary, they had given the material of the subject in advance.

> In many cases, I recorded myself giving the lectures in audio. These audios, along with the notes, can be very useful to them. I started doing this because a student of mine who could not attend the lectures asked me to do so (faculty member 100).

Apart from facilitating the accessibility, the faculty members had made adjustments to the guidelines and materials of their subjects. Specifically, they reported that they had made adaptations in the materials (video clips with audio, font size, colours, etc.), that they had made use of different types of materials and that they had presented these in different ways. The participants pointed out that they made these adjustments with the aim of helping all students, and not only those with disabilities.

> I give the materials in different formats, such as PDF for instance, so that they can read them in the computer, with a larger font size or with more images, and the images and videos are subtitled... Sometimes, I try this modification to be helpful to every student (faculty member 44).

Other faculty members stated that they had implemented strategies to explain the learning content in different ways, that they had changed the order of the contents to facilitate the learning, and that they even had offered the possibility to carry out other activities that differed from the ones initially proposed.

> We changed the activities. We went on a trip to the hill and we got all the students to walk up to the top, whereas two asthmatic students were driven up in the car, so that they could also enjoy the views and the place. We adapted the spaces. The workshop was in a farm school of the 17th century and the building was from the 17th century; thus, some rooms had very small doors through which one student could not enter because of her wheelchair. So, we adapted the lower part, which was the most accessible one, to allow her to enter all the rooms, and we also brought the materials down so that she could reach them (faculty member 82).

The participants reported that they had made use of different types of resources, such as incorporating in the classroom the role of the *student collaborator* or classmates

who helped students with disabilities to take notes, buy materials from the stationery store, work in groups, check the marks in the boards, etc. Likewise, other faculty members stated that they had used technological resources, such as digital blackboards, since these helped them to resolve the classroom activities more easily.

> Well, I would never use a normal blackboard again. For instance, in a lecture with numerical calculation activities, I have everything ready and structured so that I can show it sequentially using the digital blackboard. I might need to modify some aspects, since, on the one hand, those students who need to have the information in advance will have it, even the solution to the problem, and, on the other hand, a lot of issues are prevented for those students with problems related with vision (faculty member 26).

Many participants pointed out adjustments related to their attitude and to the way in which they interacted with students with disabilities. Specifically, they asserted that they had tried to be friendly approachable and flexible. Likewise, they stated that the tutorials were one of the most used tools, through which they could show their closeness.

> With this group of students, what we did was to simply provide availability, that is, keeping a close relationship with them. With this availability and presence, in the end the students open up, get close and show their needs; then, within our range of possibilities, we help them to satisfy such needs. As faculty members, we are but mere guides in the learning process, and as guides or tutors in that path, we must provide those tools to them whenever they need that kind of help or adaptation (faculty member 42).

Lastly, in addition to the previously mentioned adjustments, many participants stated that they had made adaptations to the assessment of their subjects.

> When designing my teaching methodology, I try to take into account that diversity, combining different types of working methodologies, in which the students have an active, participatory and autonomous role, with my tutoring and assessment system. Sometimes, an alternative plan must be developed, with different assessment systems (faculty member 108).

Most of the faculty members stated that they had made different types of adjustments in the assessment of their subjects. They had made changes related to the format of the exams (larger font size, adapted language, etc.), offered more time and

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allowed the use of the computer to take the exams. Other adjustments were targeted to offer the possibility of taking the exam in a quieter place, generally in the office of the faculty member, orally, or even taking shorter exams.

Some of the participants also stated that they had been flexible during the exams, allowing their students, for instance, to take breaks and go to the toilet. Regarding the deadlines, in some cases they had changed the dates for submitting the assignments or taking the exams. Likewise, sometimes these students had had to take the exam accompanied by a support person (e.g., an interpreter). Moreover, some of the faculty members had planned alternative assessment strategies that would allow them to adapt to the needs of all students.

> We have two assessment itineraries, so that the students can choose the one that best suits them. I have had cases of students with disabilities who have changed the itinerary because they saw that it worked better for them compared to the other one. Thus, in my opinion, it is more important to pay attention to the possibility of generating diverse itineraries to pass the subject, regarding the people who may have special educational needs (faculty member 51).

Many faculty members highlighted that the adjustments that they had made for students with disabilities benefited all their students.

> They favour all the students, since, in that specific case, I did not even tell X that she had more time; I said "you all have one hour to take the exam" (faculty member 73).

Implications of making adjustments for the faculty members and the support they receive

In general, the participants reported that they did not find it difficult to make the adjustments, and that they understood that making them was part of their duty as faculty members.

> Making adaptations does not pose a problem to me. It is part of my profession, my job and my role as a faculty member to make everybody feel well in the classroom, and to ensure that all the students access the same curriculum and learn. This is something I do with great passion (faculty member 102).

Most of the participants agreed that making adjustments involved more dedication, time and work from the faculty member. They understood that making the necessary adjustments for their students required them to keep an open mind to change, to think and to improve the subjects constantly. All that was a professional challenge for them, which, in turn, provided them with new learning and a greater satisfaction as educators.

> In my opinion, it involves more effort; however, on the other hand, there is a personal satisfaction in seeing how something that seemed like a mountain turns into a totally manageable situation, along with the exceptional gratitude of this group of students. Thus, to me that is fundamental. There is the extra effort, but also a great compensation (faculty member 62).

In this sense, many of the faculty members agreed that the adjustments had to be made in the context of the classroom, that is, targeted to all students and not only to those with disabilities.

> Well, in that sense I am very open, but to all types of students, not only those with disabilities. There are other students with working needs, others with professional needs... (faculty member 21).

The participants highlighted the fact that, in order to be able to make adjustments, the curriculum had to be designed in a flexible manner from the beginning. This would allow faculty members to plan and make changes later on during the course of the subject. To this end, they considered it necessary to allocate time, from the beginning, to the search for resources and materials that were accessible to all students.

> Well, fortunately, I have planned my subject in a way that it would allow me to have time to give different types of exams: written, oral, multiple-choice..., etc. Furthermore, the resources I have are accessible enough to everyone (faculty member 56).

In this sense, many faculty members emphasized the idea that it is necessary to act proactively in order to be able to provide the necessary responses and adjustments. They stated that, in most cases, the response was reactive and improvised, depending on the day-to-day needs. Some participants even stated that they had made adjustments on the go, as they did not know the situation of their students.

In many cases, the faculty member must be clever enough to see that and adapt it during the first weeks, on the go (faculty member 16).

However, other participants based their adjustments on the demands of their students, as they considered it important to involve them in the adaptation process and in the changes offered in order to attend to their needs. In this sense, some of the faculty members pointed out that, during the first lectures, they informed their students that the subject programme was flexible, and that if any students had a special need they could tell them, in order to make the necessary adjustments.

> During the first lectures, I always ask my students if anyone has any special needs; I tell them to let me know and then they either come to me in the classroom or contact me in private during the tutorials and they explain their particular needs to me. Then, I consider changing my teaching methodology, since the project itself, in its general line, does not change; or perhaps I have not faced a situation in which I had to modify the project, because the contents are the same, and the assessment methods are similar, although these are adapted to the special needs that may emerge in the classroom (faculty member 55).

On the other hand, many of the faculty members asserted that, in some cases, they preferred to make adjustments without them being very explicit. In this way, they prevented the emergence of marked differences between students that could be perceived as a favourable treatment toward students with special needs or as an arbitrary teaching methodology.

> We cannot be unfair. I cannot have a student telling me "you allowed him, and forbade me". Well, I allowed him for a reason, so, he will have to ask. In this case, the student took a written exam, in which I was present, and that person took longer to complete it, obviously. He was physically and mentally disabled, so, I gave him more time. I granted this possibility to other students who asked for it (faculty member 72).

Regarding the support received to make the adjustments, a large proportion of the participants stated that they would have liked to get specific recommendations or guidance. In fact, those who reported to receiving support to make adjustments pointed out that this always came from the services for students with disabilities of the respective universities. However, in some cases, these faculty members considered that

such support was insufficient or inadequate, since the technical staff did not know the content of the subjects and how some students worked in the context of the classroom.

> No. As I said, the only support I received was that e-mail at the beginning of the course, in which they told me "you have a student with a disability" (faculty member 70).

Some participants claimed to have received help from their colleagues to make the adjustments. They stated that such help, in most cases, was very valuable and effective.

> The help I received from my colleagues was positive, because a feedback is always useful. Moreover, our department is well-connected. Thus, whenever we ask for suggestions, someone says "ah, yes, I had this girl..." (faculty member 109).

Lastly, a considerable part of the faculty members stated that, since they did not receive support from the university environment, they requested it themselves from other services, such as the ONCE (Spanish Organization for Blind People), the counselling service of their universities or the services of audiovisual resources. They all agreed that the support they had received from these services had been effective and very useful.

Discussion and Conclusions

This study provided a closer view of a topic that has been poorly explored to date: how inclusive faculty members attend to the needs of university students with disabilities. Specifically, this study provides information of their beliefs and knowledge about the concept of disability and reasonable adjustments; the types of adjustments they make in their subjects to attend to the needs of students with disabilities; the implications of making adjustments, and the support they receive to that end.

Inclusive pedagogy in higher education is a topic to which researchers have paid little attention until now. Some studies have focused on analysing the need for making adjustments to attend to students with disabilities in the university (Bunbury, 2018; Knott and Taylor, 2014; Madriaga, 2007; Morgan and Houghton, 2011; Zhang, Landmark, Reber, Hsu, Kwok and Benz, 2010). However, the present work goes beyond what faculty members think about the pertinence of making adjustments. The results also allowed for exploring the type of adjustment that inclusive faculty members carry out in their subjects, how they perform them, which elements they take into account when making such adjustment and what support they receive to implement

them. This is the main focus of the present work, since it can be considered as an element of analysis, not only about the role of the faculty member, but also about the role that universities play in it.

The first conclusion of this study is that faculty members have a favourable attitude toward the need to make adjustments that support the learning of all students. This result was evidenced by previous studies, such as the one conducted by Lombardi, Murray, and Gerdes (2011). Moreover, such adjustments are considered as an essential legal element to reach a fairer context, since, according to the participants, making adjustments is a way of guaranteeing equal opportunities for all students. However, it is worth highlighting the fact that the faculty members of this study were aware they had to avoid giving the impression of favourable treatment with respect to other students, since, in some cases, they believed that these adjustments could stigmatise some students and promote exclusion.

Secondly, most of the faculty members stated that they made adjustments to meet the needs of students with different types of impairments (visible and non-visible). These adjustments involved some physical changes (location of the student) in the classroom and other adjustments targeted to improve the teaching methodology, facilitate the accessibility of the information, make use of materials of different types and formats, adjustments related to human resources (student collaborator) and technology (facilitating material and information through the digital platform, using computers, etc.), as well as being flexible with the time or type of test for the academic assessment. In disagreement with the results of other studies (Moswela and Mukhopadhyay, 2011), the participants did not show reticence towards making modifications in the academic assessment of their subjects.

As observed by Moriña, Perera and Melero (2019), the data obtained in this study reveal the importance of tutorials, since these allow for a more individualised attention to students with disabilities, negotiating the adjustments and keeping a closer relationship with them.

Likewise, the results are in line with those found by Burgstahler and Doe (2006) and Martins, Borges and Gonçalves (2017), who showed that faculty members felt prepared to make basic changes (e.g., strategies, flexibility in the time for the academic assessment , etc.), although they did not feel ready or were more reluctant toward

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making major adjustments, which could cause unfair situations (Vasek, 2005) or reduce the academic standards. The latter idea is linked to the third conclusion of this study; although the faculty members showed predisposition and a favourable attitude toward making adjustments, they stated that the university system itself did not favour their actual implementation. This is due to elements such as the high ratio in the classrooms and the lack of specialized support for faculty members.

Moreover, the fourth conclusion drawn from this study is related to the lack of training of faculty members about meeting the needs of students with disabilities. Some of the participants had received advice from the service for students with disabilities about how to attend to the needs of the students. However, the results show that faculty members have numerous doubts about how to make adjustments and, in many cases, they need more support than they receive to carry them out. Several studies have demonstrated this fact, since many faculty members have been found to have very little information about disabilities (Kendall, 2017; Love et al., 2015), and especially about how to make adjustments depending on the particular needs of their students (Black, Weinberg, and Brodwin, 2014; Collins, Azmat, and Rentschler, 2018; Leyser et al., 2000). In this sense, universities play a fundamental role, since they must review their training policies in order to provide faculty members with the necessary knowledge, strategies and tools to carry out a real inclusive pedagogy. This is the only way to have faculty members with greater support and confidence, who will consequently improve the quality of education and pursue a truly inclusive education in the university (Moriña, Perera, and Melero, 2019). In fact, as stated by Hong, Haefner and Slekar (2011), faculty members are a key element in guaranteeing the rights of students, especially those seen as vulnerable.

Thus, as long as faculty members know the needs of their students and the adjustments that they can make to satisfy them, they will feel more prepared and confident to design their subjects from the strategies of inclusive education and UDL. From this approach, it is worth highlighting some implications of UDL, such as: (a) offering several options benefits all students, since they can choose the one that best suits them, regardless of whether or not they have a disability; (b) the needs of people are not permanent, since they can be isolated and/or temporary; and (c) the focus of the disability shifts from the person to the environment (Alba, Sánchez, and Zubillaga, 2014). Designing all the subjects from this approach would allow promoting the

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participation and success of all students (Bunbury, 2018; Veitch, Strehlow, and Boyd, 2018) without the need to make major adjustments to attend to specific needs (Lombardi, Murray, and Dallas, 2013). In this line, Griful-Freixenet Struyven, Verstichele and Andries (2017) and Ule (2017) state that faculty members must know how to implement UDL in a flexible way, rather than receiving specific training on the concrete needs of each type of disability.

As a general and final conclusion, this work suggests that, as long as faculty members have knowledge about disabilities and the corresponding attention strategies, this will be reflected in their professional beliefs and in their actions in the classroom. In fact, only through the training and sensitization of faculty members is it possible to initiate processes of change and transformation that promote real inclusive university contexts.

Limitations and future research

Among the limitations of this work, it is worth considering the fact that the students were contacted through the services for students with disabilities, and that their performance as intermediaries between the research team and the students delayed the sample recruitment process up to one year. The second limitation is related to the availability of the participants. The overload of work of faculty members left them with little time to participate, and it was difficult to schedule the time and place for the gathering of the data. Another limitation to consider is that we did not conduct an analysis of the data by field of knowledge, since that was not the purpose of the study and the resulting data did not show significant differences based on that. However, one of the strengths of this study is its innovative nature and the fact that it fills a gap in the research on higher education and disability. Another implication of this study is that the results obtained reveal examples of good practices about the adjustments that inclusive faculty members carry out to attend to the different needs of students with disabilities. In this sense, the faculty itself can be a source of inspiration and a model for the training of other professionals, both in undergraduate and post-graduate studies, since they have implemented the adjustments in the different fields of knowledge (arts, technology, sciences, ...). As soon as faculty members learn about examples of good practices in meeting the needs of students with disabilities, we will be advancing toward a more inclusive model of higher education. Thus, it becomes especially important to develop

educational policies that foster teacher training in attention to diversity, inclusive education and UDL. All this would benefit all students, and not only those with disabilities (Powney, 2002).

In future works, the study could be expanded with classroom observations to detect strategies and reasonable adjustments described by the faculty members in the interviews. Likewise, this information could be complemented with interviews with students with disabilities about those adjustments that were most effective in their learning and participation in the university.

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