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Proposals for the improvement of university classrooms: the perspective of students with disabilities

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Abstract

This paper examines the proposals for the improvement of university classrooms from the perspective of Spanish students with disabilities. Using the biographic-narrative methodology, data was collected and analysed applying a system of categories and codes. The following instruments were used: group and individual interviews, lifelines, self-reporting, photographs, a day in their lives and interviews with key people for the life of the students.

These are the most important characteristics of an ideal classroom for the participating students: physical accessibility for everyone, participative teaching methodologies and the use of the many technological resources, positive attitudes on behalf of faculty regarding disability and specific academic-training in disability and new technologies. The conclusions section includes a series of suggestions to design accessible university classrooms for everyone. The proposals for improving the university environment as provided by the students are precisely the main contribution of this paper beyond previous research, which focused exclusively on analyzing barriers and resources as identified by students with disabilities.

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1. Introduction

Currently, one of the great challenges for higher education is moving towards a university model based on the principles of inclusive education. It is important to emphasize that the reality of today's classrooms is very different to that which existed just a decade ago. Changes in technological platforms for the teaching – learning process, changes in the ratio of classrooms, teaching approaches more focused on students, changes in the type of students, among other aspects, explain the changes that have occurred. However, a common feature in today's university systems is that every time there is a greater diversity among students or, as Thomas (2016) states, participation in college is wider, due to the progressive incorporation of groups that traditionally were outside of higher education.

The fact that students with disabilities access Higher Education (HE) is an ever-growing reality (Liasidou, 2014; Seale, Geogerson, Mamas, & Swan, 2015). In the specific case of Spain, the number of disabled students enrolled in the course 2014/2015 reached almost 22,000 (Universia Foundation, 2014), compared, for example, to the 18,418 students in the academic year 2011/2012. The approval of declarations and regulations aiming at promoting inclusion over recent years has influenced this increase. For example, the Convention on the Rights of Persons with Disabilities (United Nations, 2006), established the obligation to ensure that persons with disabilities have access - without discrimination and on equal terms to rest- to higher education, vocational training, adult education and learning throughout life. Moreover, the European Union is committed to inclusive education in the context of higher education. For this purpose, it proposes the creation of support schemes and university services that improve access and educational inclusion of non-traditional students, including students with disabilities (European Commission, 2010).

Accessing Higher Education is a legal right in Spain as stated in Royal Decree 1/2013, which regulates the rights of people with disabilities and their social inclusion. In the case of HE, the current Organic Law 4/2007 for Universities, specifically mentions the inclusion of people with disabilities and guarantees equal opportunity and non-discrimination.

Such legislation is particularly relevant to guarantee that students have the right to access HE. Nevertheless, having such laws is not enough; it is also appropriate to have practical mechanisms that guarantee that these students continue enrolled at the classroom. This fact is extremely important when the dropout rate is highest among these students (Moriña et al., 2015). When considering that a number of studies state that HE is a vehicle to improve the quality of life of all students (Wehman, 2006), then these aspects become even more relevant. Similarly, several studies indicate that studying at the university is a true opportunity for students with disabilities.

Moreover, the creation of specific services in universities to support the educational needs of this group, the incorporation of new technologies, or the implementation of inclusive educational practices are factors that also contribute to explaining above-mentioned statistics. In fact, a significant number of countries have implemented measures to make universities more accessible to people with disabilities, becoming progressively more committed to the processes of inclusion (Jacklin, Robinson, O'Meara, & Harris, 2007).

However, statements and regulations are insufficient to ensure the right of these students to quality education without discrimination and based on the principles of inclusive education. Recent work (Gibson, 2015; Quinn, 2013; Thomas, 2016) conclude that it is not enough to ensure access to diverse students, because according to investigation (Mamiseishvili & Koch, 2011; Quinn, 2013) students with disabilities are at increased risk of prematurely abandoning college compared to students without disabilities. Therefore, it is necessary to design policies and strategies to support that these students remain at college and complete their studies successfully.

On the other hand, we agree with the premise that the presence of students with disabilities contributes to building a better university (Cerrillo, Izuzquiza, & Egido, 2013, Riddell et al., 2005; Shaw, 2009). It has also been investigated that the changes introduced for disabled university students benefit the rest (Powney, 2002; Shaw, 2009; Warren 2002). That is to say, as recognized by Ferni and Henning (2006), that good teaching principles are relevant to all.

The inclusive education model helps to explain the need for a quality educational response to all students, increasing the practices that lead to inclusion and removing the barriers that generate exclusion, in a framework based on the principles of justice and equity (Echeita, Simon Lopez & Urbina, 2013).

In this sense, there are several authors like Doughty and Allan (2008), Fuller, Bradley, and Healey (2004) or Hardy and Woodcock (2015), calling for the need for learning at college to be inclusive, with university being

responsible for meeting the needs of all students. Inclusion in education is recognized as a basic human right and as the foundation for a fairer and more equitable society (European Agency for Development in Special Needs Education, 2012). As Gairín and Suarez (2014) conclude, quality universities are what they are supposed to be if they are also inclusive.

The university students face a number of hurdles, including institutional barriers, a lack of information and attention towards those with disabilities as well as excessive and slow bureaucracy. Other barriers appear in the actual university classroom. On the one hand, there are ergonomic barriers (acoustics, furniture, etc.). However, there are also other hindrances that refer to the faculty, such as the teaching methodology, faculty's attitude towards disability, adapting the curriculum or the need for training in the field of disability awareness. It is precisely classroom-related barriers that are contemplated in this article; students with disabilities offer a number of recommendations to address such barriers to build an all-inclusive classroom.

Concerning classroom design, numerous studies point out accessibility issues and physical barriers in Higher Education; such hindrances directly affect students with disabilities (Fuller, Healey, Bradley, & Hall, 2004). From the practical point of view, there continue to be policies and actions that are typically found in the rehabilitating model, which proposes that people with disabilities adapt to society.

On the topic of faculty-related barriers, these could vary to include methodologies, limited use of new technologies, negative attitudes towards disabilities or a lack of training in the field of disability. Along these lines, a number of studies have found that students with disability generally run into problems when adapting and coping with the transition from high school to university. All of this stems from a lack of information about the course material, faculty attitudes toward these students and an evaluation system that fails to adapt to their needs.

In the light of the difficulties and methodological barriers that students with disabilities face, a variety of studies have found the information and communication technologies could be elements that favor their inclusion into the university system. More specifically, it has been stated that learning with new technologies overcomes physical, transitory and cognitive barriers. Some authors such as Hockings, Brett, and Terentjevs (2012) or Pearson and Koppi (2006) established that introducing e-learning in the classroom was beneficial for students with disabilities.

In recent years, distance learning has been in great demand (Roberts, Crittenden, & Crittenden, 2011). Indeed, it is generally accepted that the use of information technologies could eliminate barriers by promoting the inclusive education of university students (Seale et al., 2015). More specifically, students with disabilities could find themselves at a disadvantage when they fail to have the adequate technologies (Draffan, 2009); examples of such disadvantages include university web sites with accessibility problems or teaching materials that are not available on line (Kurt, 2011).

Another critical factor for the success of students with disabilities is the attitude and willingness of the academic staff to implement changes and adapt their curriculum to the needs of these students (Moriña et al., 2015). Another question that appears in most HE and disability research is the need to train the faculty in the specific needs of those with disabilities (Murray, Lombardi, & Wren, 2011). This is why Zhang et al. (2010) pointed out that universities must implement mechanisms that guarantee programmed training for both professors and administrative staff.

Lastly, in this scenario, priority must be given to the voices of the people with disabilities (Liasidou, 2014). Their opinions are especially relevant voices for the development and application of institutional policies, programs and decisions that will affect their quality of life. In short, these students need to be actively committed in such developments and practices (Barton, 2010). From this perspective, this study seeks to understand what the ideal university classroom should be so that it becomes inclusive, but always in the voice of and from the viewpoint of students with disabilities.

In short, although some students have had to face a difficult college career, the truth is that for people with disabilities university is an opportunity, an experience of empowerment and regarded as a vehicle for improving their quality of life (Fuller, Bradley, & Headley, 2004; Moswela & Mukhopadhyay, 2011; Shaw, 2009; Wehman, 2006).

The objective of this paper is to analyze how students with disabilities would design their ideal university classroom. This investigation is one of the few research projects on the international scene that uses the biographic-narrative methodology, as it is ideal to provide vulnerable groups with a voice.

2. Research method

The results presented in this article come from a more in depth research project financed by Spain's Ministry of Economy and Competitiveness titled "Barriers and aid that students with disabilities identify at the University,"(Ref. EDU 2010-16264). This 4-year study (2011-2014) was undertaken by a research team with expert knowledge in a variety of fields and areas of study (Educational Sciences, Economics, Health Sciences, Experimental Sciences and Humanities).

This work seeks to analyze how students with disabilities would design their ideal university classroom. To this end, they propose a series of recommendations that would contribute to this objective.

Forty-four students with some type of disability participated in this study. All of them were contacted during the 2009/2010 academic year through the University of Seville Office for Students with Disabilities. During that specific academic year, there were 445 students registered at the University with a disability.

A biographic-narrative methodology was used. Finally, the analysis was done from a double perspective. On the one hand, what is called a narrative analysis in the literature, in the sense proposed by Goodley, Lawthom, Clough, and Moore (2004), was done for each history. In collaboration with the person whose story was being told, all the information collected was organized so it would make sense, but without including it in any system of pre-set categories. Each story was approached individually and the narrative itself was the central axis of the analysis.

On the other hand, a structural analysis (Riessman, 2008) was performed using the classification and coding system described by Miles and Huberman (1994). This type of analysis comprised a process by which "sense was made" of the data. Sense became apparent in what had been learned by organizing what had been seen, heard and read. By analysing the data, an attempt was made to find meaning in the information collected. The research team, in group meetings, inductively coded all the information.

The value of this double analysis is the dual viewpoint of the data collected. On the one hand, the first type of analysis made an etic perspective possible. This way, a strict analysis was made of the narrative by thinking *about* their stories (Sparkes, 2015). On the other hand, the other type of analysis deals with thinking *with* the stories (emic perspective). For this purpose, it was necessary to evoke creative stories where there was involvement from within and not an analysis from outside.

The MaxQDA10 data analysis programme was used for comparative analysis of the information collected for all participants and techniques. This software made it possible to manage the large amount of information available in the study and was used exclusively for this function

All participants provided informed, written consent to participate in the study. Participants were guaranteed anonymity and confidentiality of all information provided.

3. Results

The narrations concerning what the ideal university classroom should be, as provided by the participating students are divided into a variety of topics such as: accessible facilities for all, participative teaching methodology and the use of technological resources, positive attitudes towards disability on behalf of faculty and specific disability awareness, in addition to insight into new technologies.

Students emphasized that to favor their inclusion, it would be essential to solve a series of architectural barriers found in many university classrooms. They pointed out that university classrooms should be accessible to everyone, with wide doorways and no stairs or platforms.

In addition to classroom accessibility, most of the students pointed out the importance of physical organization of the classroom. Classrooms should be spacious, with wide aisles, adequate lighting and acoustics, with sufficient plugs and computers[†] with the corresponding software. In summary, ideally, classrooms need to be accessible and physically well organized.

From the viewpoint of the disabled university student and to attain an inclusive education, a number of

[†]The University of Seville has an IT loan service that will provide computers upon request

adjustments need to be made in the teaching methodology. Among other aspects, for these students, it is important that classes be participative, active and contemplate the possibility of working individually and/or in groups.

According to these students, teaching needs to be designed to take into consideration student characteristics. Specifically, they underlined the importance of activities carried within the framework of subjects from an inclusive prism, which contemplates the characteristics of the target student body.

Most participants stressed that the learning content needed to be accessible to all. Specifically, students with disabilities identified the need for online contents.

Daily university life for students with disabilities is conditioned, but not limited to institutional policies, by multiple and varied factors, including relationships with other members of the University community and the resources available for their inclusion. It is in this context that the faculty becomes the central axis in the university experience of these students. Ultimately, the faculty becomes a key reference in the teaching and learning process.

This is why the students participating in this research stressed the need for a change of mentality among faculty members. This change would mean taking on an active and committed role with a view oriented toward full inclusion of students with disabilities at the university. In the participants' opinion, this change would be with an open attitude towards students. To this end, it would be positive to promote a relationship of mutual confidence so that students are in a position to share their needs.

Faculty members, as with any qualified professional, need to have sufficient training to adequately perform their job. As such, the participants in this study stated that in many cases, it is not a matter of the faculty not wanting to help them. Rather, it is a case in which they did not know or were unable to help because they lacked the training. It was not that the faculty did not want to help, but rather, he or she simply did not know what to do.

4. Conclusions and discussion

Included herein are a series of recommendations to design accessible university classrooms for all. This is precisely the main contribution of this work, as previous research has focused exclusively on analyzing barriers and resources as identified by students with disabilities rather than proposals to improve the university environment as provided by these students (Riddell & Weedon, 2014). A further contribution is the methodological focus from which the study was conducted, as previously - with the exception of the study by Hopkins (2011) - biographical-narrative research has not been made use of.

First of all, to have all-inclusive classrooms, students with disabilities believe that these must be fully accessible, with no physical barriers of any type. In this context, it is crucial that spaces be built based on the universal design (Watchorn, Larkin, Ang & Hitch, 2013). It is a matter of designing products and environments that are usable and accessible to all, with no need for adaptation or a specific design. However, as its name suggests, it is not just a design approach for disabled students, but for all students. Definitively, it is interesting to recognize that many of the barriers and supports identified by students with disabilities are also common to other students (Adams & Holland, 2006; Healey, Bradley Fuller, & Hall, 2006; Madriaga, Hanson, Heaton, Kay Newitt, & Walker, 2010; Waterfield & West, 2006). However, for people with disabilities those issues may be more complex and may take them longer to solve.

Another important point for improvement is the teaching methodologies and the usage of technological resources. Students favoured participative and active classes. Similarly, they pointed out that it would be good to consider individual student characteristics so that everyone is included in the classroom. The importance of the classroom teaching methodology used has been greatly demonstrated (Bain, 2004) to affect the quality of students' acquired learning.

At the same time, it would be advisable to plan the teaching and learning process using the principles of the universal design for learning as the foundation (Thousand, Villa, & Nevin, 2007). This process involves adopting a diverse repertoire of teaching methods, including the use of technology to reveal new information, while incorporating approaches and theoretical perspectives.

Yet another matter to consider when improving classrooms refers to the need for a positive attitude on behalf of the faculty. This is characterized by maintaining confidence and an empathetic attitude by putting one's self in the position of the students in general and more specifically, those with a disability. An open and warm attitude is also

positive for the rest of the student body. In the case of the analyzed university, it is proper to point out that all these issues are strongly conditioned by the high number of students, especially in certain degrees in which there is a ratio of about 100 students per class.

Within this open and inclusive concept in the light of disability, it is essential to have help and personalized attention. The implementation of office hours takes on special importance, with enough appointments and adjusted to their students' needs. For the students participating in this study, it was equally important to have adaptations of the teaching projects that take into consideration the various disabilities. It would be important to boost orientation and mentoring at the various university centers, both in general and by individual teaching staff, with the necessary support for the students to guarantee maximum academic progress (Gairín & Suárez, 2014).

The results obtained highlight the fact that on many an occasion, the faculty fails to adequately attend the diversity found in the classroom, due to a lack of specific, awareness training. Currently, there are proposals to train the faculty in disability concerns (Teachability, 2002), but more must be contemplated and sufficient resources supplied to develop such programs.

Additionally, for these students, it is vital that emphasis be placed on disability training—all but inexistent at the university studied—and in the use of new technologies. Nevertheless, it must be stated that at the University of Seville, major efforts and advances have been made. However, in keeping with the results presented in this article, it is essential to analyze how these efforts have been developed, what mechanisms have failed, who has benefited from such training and assess whether or not the training received has been put to use.

Definitely, if Higher Education honestly strives to be a reference of excellence, it is decisive that policies based on an inclusive educational model be implemented. The same holds true for the construction of a university where its maximum goal is quality learning, the feeling of belonging and the participation of all students.

Finally, we would like to emphasize that thanks to the impact of this work realized within the global project, several actions have been implemented as a result, such as courses and seminars on barriers and aids for students with disabilities or training programs on disability designed for academics, among others.

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