ELABORATION OF TEACHING MATERIAL FOR STUDENTS WITH SPECIAL NEEDS


University of Granada. Faculty of Pharmacy, Department of Physiology (SPAIN)

Abstract

Quality and equity are fundamental principles in the European Higher Education Area (EHEA), which postulates the recognition of diversity, allowing the decentralization of the educational system and addressing the individual, social, cultural and learning differences of the students. The concept of "inclusive education" is a new and expanded perspective for university education that leads university centers to be more effective in providing equitable responses to the diversity of students that learn and connects with studies in a more effective way. The purpose of this study is to identify how university professors address the educational needs of students with disabilities, assess their attitudes, curricular adaptations, development of tutorial action, changes in teaching practices and how they can contribute to the inclusion of students in the University. Technological innovation in information and communication technologies (ICTs) have allowed us to create new communicative and expressive environments that open the possibility of developing new formative, expressive and educational experiences, enabling the realization of different activities. One of the most significant contributions of new ICTs to teaching processes is the elimination of space-time barriers to which university education has been conditioned. The teaching-learning process through ICTs enables the possibility of adapting information to the needs and characteristics of users. In this sense, the use of these technologies has allowed us to create a series of audio-written notes (using PowerPoint and Flash Player software) and with easier visual environments (adapting fonts types and sizes and background colours) for students with visual and auditory deficits. In general, in the current study, the students have valued very positively that the professor does not limit the teaching to giving a master class and that they use different teaching resources in their classes, give examples, encourage participation and try to get the knowledge to the students in different ways. In addition, they also value as highly positive the teaching material supplied (audio-written notes and slides with easier visual environments. Nevertheless, as already mentioned above, the positive references of this group to the development of teaching, on many occasions have not kept a direct relationship with their disability. In this sense, they have reported the positive impact that professors have to update and adapt the contents of their subjects, that practices are close to reality or that examples are used to illustrate the explanations.

Keywords: Students with special needs, multimedia resources, learning, teaching, information and communication technologies (ICT).

1 INTRODUCTION

Both quality and equity are fundamental principles in the European Higher Education Area (EHEA), which postulates the recognition of diversity, allowing the decentralization of the educational system and addressing the individual, social, cultural and learning differences of the students. Faced with this recognition of diversity, students integration has a key role in the University, which consists of the process that enables the student to develop a life as a social being, in which the University provides the means and conditions to participate in the set of training and social activities (Blanco, 1999). Although University integration appears as an approach that is closer to an educational model for diversity, it presents problems in its operation basically to be perceived as a system that benefits only students with special educational needs and that only brings changes and enrichment in the social field. University integration, develops effectively implies profound changes in the curriculum, methodology and organization of Universities, breaking with the traditional educational scheme that considers that all students are equal and therefore all have to do the same at the same time.

The concept of "inclusive education" is a new and expanded perspective for university education that leads university centers to be more effective in providing equitable responses to the diversity of students that learn and connects with studies in a more effective way. At the World Conference on "Special Educational Needs, Access and Quality"(UNESCO, 1994), mentioned the need to modify the orientation...
of our educational systems in terms of their ability to respond with equity to the diversity of students who have the right to quality higher education, without discrimination or exclusions.

The inclusion of students with disabilities in the University can be seen as an opportunity or as a problem. Shaw (2009) argues that it can be valued that students can learn from others, enriching both the classroom and the University institution. In fact, studies such as Higbee, Siaka and Bruch (2007) show that disability in the University is recognized by students as an enriching educational experience. However, in order to achieve an inclusive education, it is not enough for all the students to share a space and a schedule, therefore changes in current learning and teaching practices are necessary. This can be difficult to achieve, since it could be thought that the curriculum will be reduced or excellence will not be achieved. From this point of view, disability can be understood as a problem (Hopkins, 2011). The University sometimes is not sufficiently prepared to include students with disabilities. Although there are laws that regulate the right of these students to receive quality education and equal opportunities, with the necessary curricular adaptations, the measures and methods of assessment performed are often reactive and not proactive (Riddell, Tinklin and Wilson, 2005). In addition, Borland and James (1999) have identified significant barriers that restrict students' participation, progress and success in University. These barriers are mainly attitudinal, structural and related to resources (Moswela and Mukhopadhyay, 2011).

The purpose of this study is to identify how university professors address the educational needs of students with disabilities, assess their attitudes, curricular adaptations, development of tutorial action, changes in teaching practices and how they can contribute to the inclusion of students in the University.

2 OBJECTIVES

In the current study we encourage students with disabilities to motivate the active participation in the Cellular and Human Physiology.

In addition to the main objective, we also aim to get these specific objectives:

- Identify, describe and explain the barriers and aids that students with disabilities perceive in their access, trajectory and academic results in the Cellular and Human Physiology subject.
- Design specific teaching material to assist in the teaching-learning process of students with disabilities.

3 MATERIAL AND METHODS

The development of the teaching material was made for students of the Degree in Pharmacy with special needs (visual and auditory disabilities). Within the techniques for the collection of information, participant observation was used, in contexts such as: classrooms and professor meetings. Another technique that was used to complement the observation was the in-depth interview with students who expressed special needs at the beginning of the course, which allowed collecting data and information that could not be directly observed and access to a deeper level.

So far a total of 4 students with special needs have participated. The criteria used to select these students were: availability to participate, university career marked by barriers to inclusion and hearing or visual impairment. Specific teaching material has been designed in order to equip these students with tools that allow them to give a specific and adequate response to the disability.

Technological innovation in information and communication technologies (ICTs) have allowed us to create new communicative and expressive environments that open the possibility of developing new formative, expressive and educational experiences, enabling the realization of different activities. One of the most significant contributions of new ICTs to teaching processes is the elimination of space-time barriers to which university education has been conditioned. The teaching-learning process through ICTs enables the possibility of adapting information to the needs and characteristics of users. In this sense, the use of these technologies has allowed us to create a series of audio-written notes (using PowerPoint and Flash Player software) and with easier visual environments (adapting fonts types and sizes and background colors) for students with visual and auditory deficits.
4 RESULTS AND DISCUSSION

Although these students have identified more barriers than aids in regard to the attitude of the teaching staff, it is also true that when the professor's attitude is positive and becomes an aid, it is given greater value and emphasis. With regard to attitudes that are perceived negatively by this group, some students commented that when they talk with professors to introduce themselves and make their disabilities known, they do not react naturally. However, the main barrier expressed by students in this sense has been the attitude of certain professors who explicitly disregard their problems. Some participants explain that professors, once they are exposed to their situation and needs, they tell that they cannot make exceptions and that they should be treated as just another student, or simply ignore their problems and needs.

Although most of the university students with disabilities have expressed their desire to be treated, as far as possible, as a regular student, they also recognize that they have some special needs, and the lack of response from professors to them, becomes an especially difficult barrier to overcome. However, as previously mentioned, the attitude of professors towards students with disabilities is not always negative, and in fact, some of them report that their experience in dealing with professors has been very positive. However, the negative attitudes towards students with disabilities that have been reported, as previously mentioned, have been punctual and much less numerous than the positive ones. However, the emphasis that this group puts on describing their positive experiences is much greater, and they usually comment that, the fact of meeting teachers who have understood them is very rewarding.

A generalized comment among this group has been the misuse or even the abuse that some professors make of tools such as Power Point. They have commented that many professors use slides, and that the information they contain is insufficient, especially for these students, making difficult to follow the explanations. This barrier has gained special relevance to certain types of disabilities, such as visual or even auditory disabilities, since students have not been able to obtain all the information that is being offered to them. On the other hand, they have also added that, on numerous occasions, professors have not been predisposed to facilitate, in advance, the teaching material they will use in their classes. In particular, they have considered that it is very important to adequately follow the professor’s explanations, have in advance the slides, graphs, images, diagrams, etc. that have allowed them to prepare the classes and thus assimilate all the information that is featured during the limited time that the class lasts.

With regard to the development of teaching, the inadequate use of some teaching tools such as slides or videos are important barriers, and professors, in many cases refuse to provide the teaching materials that have been used in class. Fuller et al. (2004), Holloway (2001) and Tinklin et al. (2005) have also agreed that students with disabilities demanded access to professor notes in advance and in digital format. However, this did not happen. However, in the specific case of this group of students it is especially important to have all the possible teaching material, since in many cases they devote a greater amount of time both for the study and for the preparation of the classes.

The students state that their disability can limit their performance in situations that are crucial for the development of the subject (such as exams, practical lectures or losing contents that are basic to understanding the subject in question). To solve this barrier they have proposed that classes can be recorded. Although they have explained that the recording contributes in cases in which students cannot take notes in an appropriate way, however, on the other hand, they have recognized that the response by professors to this type of suggestions has been negative in all the cases, not collaborating in this sense. However, this is not a new result, since in other studies, such as Borland and James (1999), Castellana and Sala (2006), Fuller, Bradley and Healey (2004) or Tinklin and Hall (1999), similar conclusions have been reported.

The students, although they have recognized the work overload involving team work, identify this as one of the methodological strategies that mostly help them, as they believe that it has facilitated their learning processes. The majority of students have stressed that on other occasions, although not as often as they would like, the competences to be developed in the subjects have been addressed through practical cases, debates, research projects and meetings. They have considered that in this way the theoretical contents have come closer to reality and they have felt a greater motivation in their study since they appreciate its practical usefulness. These students have commented that through these activities they acquire experiences that are hard to find in a book.

In general, in the current study, the students have valued very positively that the professor does not limit the teaching to giving a master class and that they use different teaching resources in their classes, give examples, encourage participation and try to get the knowledge to the students in different ways. In
addition, they also valuate as highly positive the teaching material supplied (audio-written notes and slides with easier visual environments. Nevertheless, as already mentioned above, the positive references of this group to the development of teaching, on many occasions have not kept a direct relationship with their disability. In this sense, they have reported the positive impact that professors have to update and adapting the contents of their subjects, that practices are close to reality or that examples are used to illustrate the explanations.

5 CONCLUSION

In conclusion, many of the barriers described are not exclusive to people with disabilities (excessive content, inappropriate methodologies, etc.). However, for these students, these issues can be more complex, taking more time to achieve some tasks and being exposed to situations of greater vulnerability. While it is true that the design of inclusive processes is essential to respond to the needs of students with disabilities, we also think that this transformation of teaching practices will ultimately revert to improving the learning of all students. In this sense, attention to disability implies an opportunity to improve university institutions, so that the responses to be adopted should be proactive and not reactive.

ACKNOWLEDGEMENTS

The authors are grateful to the Unidad de Calidad, Innovación y Prospectiva of the University of Granada for their competent technical assistance and support for the provided teaching innovation Project "INTEGRA-2: CREACIÓN DE MATERIAL DIDÁCTICO ADAPTADO A ESTUDIANTES CON NECESIDADES DOCENTES VISUALES Y AUDITIVAS ESPECIALES" (Ref. 250).

REFERENCES


