
What role do university support services play in promoting UDL?

Abstract

Access for students with disabilities in universities is insufficient to guarantee their inclusion. There is a need to implement Universal Design for Learning to facilitate the participation and learning of these students. However, its application in the university is still a challenge and, therefore, the work of support services is essential. This paper explores what support services know about this paradigm and how they promote it in the university. From a qualitative approach, semi-structured interviews were carried out in 14 Spanish university services and analyzed employing a content analysis. The results show that most of them have ideas about UDL but do not know how to put its principles into practice. In addition, there is resistance among faculty to introduce improvements from the UDL due to a lack of knowledge or work overload. In conclusion, there is a growing interest in applying this paradigm. However, it is necessary to change the culture of disability and articulate the necessary policies to promote it so that it becomes something shared by all.

Keywords

Support services, higher education, disability, Universal Design for Learning, university.

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1. Introduction¹

In recent years, higher education institutions have been welcoming a more diverse and inclusive range of students. There is a growing interest -and responsibility- to guarantee equal access for all and to offer a quality education that promotes participation and learning and allows the professional development of all students satisfactorily (CRUE, 2021). This horizon has allowed many students, particularly those who have historically been marginalised, such as students with disabilities, to access this historically elitist stage of education to gain access to this traditionally elitist stage of education. Indeed, the latest study on the inclusion of people with disabilities in the Spanish university system has revealed a notable increase in the presence of this group in these institutions, with over twenty-two thousand registered (Fundación Universia, 2023). This underscores the necessity for universities to assume responsibility for providing accessible and rigorous learning environments for these students and to implement the requisite mechanisms to achieve this.

Despite the obligation of these institutions to ensure this, there are still instances of students with disabilities who have been compelled to withdraw from higher education (Fabri et al., 2022). A review of the literature from both national and international research reveals a consistent pattern of obstacles encountered by these students in higher education. This has prompted universities to pursue a sustained commitment to developing responses that address existing inequalities. One of the principal entities responsible for this is the services for people with disabilities (hereinafter, SAPDU). These services represent a crucial support system for students with disabilities and specific needs, as they are responsible for providing comprehensive assistance throughout their university studies. Additionally, they collaborate closely with teaching staff to ensure they are equipped with the necessary knowledge and guidance to effectively support these students. Their primary objective is to remove any potential barriers that might impede the participation and learning of these students in university life. Nevertheless, achieving a more inclusive university education is a complex process that cannot be solely attributed to the efforts of these services.

The teaching staff at universities also exert a substantial influence on the lives of students with disabilities (Aguirre et al., 2021). It has been frequently highlighted that inadequate teaching practices could generate barriers for this group (Barrera & Moliner García, 2023). In this regard, evidence indicates that practices aligned with the principles of Universal Design for Learning (UDL) not only facilitate the professional growth of faculty but also enhance the learning outcomes of students with and without disabilities (Díez & Sánchez-Fuentes, 2015; Moríña & Orozco, 2023). Nevertheless, it remains essential to provide training for faculty in the deliberate integration of UDL. To this end, it is advisable to offer the requisite support to guide faculty through this process. It is therefore important to investigate, from the perspective of the services provided to support teaching staff on diversity issues, their knowledge of UDL and the ways in which they promote it at the university.

¹ We thank all the SAPDU staff for their collaboration in this study and their valuable testimonies about the great challenges involved in moving towards a more inclusive institution. Without this staff, the journey would be even more difficult.

1.1. Support services and the implementation of UDL in universities

Despite an increase in the number of students with disabilities in higher education, access to universities is not sufficient to ensure the full development of these students. Several studies have identified the various obstacles faced by this group daily. Some of these barriers are academic, pertaining to the acquisition and demonstration of knowledge. However, it is important not to overlook the social and emotional barriers, given the complex relationships with peers and the elevated stress and anxiety levels associated with navigating such a challenging environment (Moriña et al., 2017; Palomero Sierra & Díez Villoria, 2022). It is therefore of the highest importance that SAPDUs are present in universities.

The requirement to establish these services is set forth in *Royal Decree 822/2021 of 28 September, which establishes the organisation of university education and the procedure for quality assurance*. The decree stipulates that these institutions must implement the services to guarantee adequate support and counselling for students with disabilities or specific needs. Some research has indicated that the establishment of SAPDUs in higher education institutions is a crucial step towards the advancement of inclusive education practices. These services engage with the university community on matters pertaining to diversity, thereby fostering a more inclusive environment (Aguirre et al., 2021; Moriña et al., 2017). The staff of the services perform a variety of functions, including direct intervention with students with specific needs or disabilities, coordination with the teaching staff of these students to guide them on the measures to be taken for certain students, and even awareness-raising and training for the entire university community (Moliner García et al., 2019). However, it should be noted that there is also considerable heterogeneity between each service, not only in the nomenclature adopted by each university, but also in the number of members of staff, the programmes offered and the organisational structure in which they are located. These factors influence the type of support provided to each individual and its quality (Moriña et al., 2017).

Despite the laudable efforts of these services to contribute to the development of a more inclusive institution, they are confronted with a multitude of challenges that render this a challenging and arduous task. Firstly, there is a refusal among faculty to make reasonable accommodations, which is driven by a biased perception that comparative grievances are generated (Palomero Sierra & Díez Villoria, 2022; Sandoval et al., 2019). Conversely, the persistent and criticised dearth of resources to meet the diverse needs of students ultimately overloads support services, thereby reducing their capacity to respond to the demands placed upon them (López-Gavira et al., 2021). This also has implications for faculty, who perceive diversity as a significant additional workload (Cotán Fernández, 2017; Palomero Sierra & Díez Villoria, 2022). Consequently, there is a notable resistance to the integration of more flexible curricula and methodologies tailored to the considerable diversity of students (Márquez et al., 2021; Sánchez Díaz, 2021). The prevailing approach remains reactive, focusing on disability rather than on the creation of heterogeneous environments capable of accommodating the wide variety of students. Universities must therefore review their cultures, policies and practices to incorporate mechanisms that seek to remove all those barriers that generate exclusion and move towards a more social model (Booth & Ainscow, 2002).

In this sense, it can be observed that there is a gradual shift in perspective regarding student diversity, which can be attributed, at least in part, to the increasing influence of the philosophy of Universal Design for Learning (UDL) within the university context. This paradigm seeks to respond to the heterogeneous nature of the student population by offering flexible and diverse options, thereby enabling all individuals to select the option that aligns with their preferences or needs (Alba-Pastor, 2022). The UDL breaks with the traditional and deep-rooted dichotomous view that considers students with disabilities on the one hand, and the rest

on the other. In this way, it is understood that all students are diverse and have different characteristics and previous experiences, and therefore, it is essential to facilitate their development as expert learners (Sánchez-Fuentes, 2023). Consequently, the notion of an average student is rejected, and the concept of diversity is considered from a more expansive viewpoint. Accordingly, the UDL emphasises the importance of engaging students in their learning, the presentation of information and the demonstration of learning outcomes as fundamental elements in the generation of meaningful and authentic learning experiences. These ideas align with the three fundamental principles for implementation as outlined by CAST (2024). Despite the growing interest in this paradigm and its notable presence in different educational contexts, further research is required to ascertain how it is effectively implemented and to identify the benefits it offers to students and faculty (Díez & Sánchez-Fuentes, 2015).

A review of the existing literature on UDL in the university context reveals research exploring student learning preferences and their alignment with UDL principles (Black et al., 2015; Griful-Freixenet et al., 2017). Others concentrate on teaching practices to ascertain the extent to which UDL is implemented in university classrooms and to identify its advantages for both students and teaching (Kennette & Wilson, 2019; Sullivan, 2023). Furthermore, it is acknowledged that UDL-based teaching practices can facilitate reflection and improvement and are beneficial for the participation and learning of university students with disabilities (Sandoval et al., 2019; Waisman et al., 2023). It is also noteworthy that some studies, despite focusing on the perspective of students with disabilities, have concluded that the implementation of this paradigm is beneficial for students with disabilities to the same extent as for others (Carrington et al., 2020; Li et al., 2020). These findings reinforce the argument that the adoption of UDL in universities facilitates professional development and a more inclusive response to the diverse context present in universities.

Nevertheless, the implementation of inclusive teaching practices based on UDL remains a significant challenge, largely due to the insufficient preparation of faculty members (Barrera & Moliner García, 2023). It is therefore evident that faculty members require effective support in the planning, development and evaluation of these practices (Timuş et al., 2024; Yphantides, 2022). It is at this stage that SAPDU staff become involved, liaising with teaching staff to provide guidance and assistance in the implementation of measures designed to facilitate the comprehensive development of students (López-Gavira, 2021). They display considerable expertise in the field of disability, demonstrating a comprehensive understanding of strategies and tools for barrier removal. However, there is a need to ascertain their perspectives on the UDL and the extent to which they promote it within the university system. Nevertheless, research that captures the voice of support services is scarce, and even less so when it relates to this paradigm. At the national level, some studies have been conducted that examine the strategies developed by SAPDUs to promote inclusion in higher education, while others analyse their perceptions of the cultures, policies and practices concerning student and faculty support (Moliner García et al., 2019; Moríña et al., 2017). Conversely, the obstacles encountered by these services in guaranteeing comprehensive inclusion in these academic institutions are examined (Ferreira Villa et al., 2014; López-Gavira et al., 2021). At the international level, the predominant focus of existing research on this topic is the exploration of the accommodations and procedures employed by these services to facilitate the inclusion of university students (Fossey et al., 2017; Koca-Atabey, 2017; Tamjeed et al., 2021). Others examine the perspectives of students and staff on the work of these services, noting that they can often create barriers for students (Burgstahler & Moore, 2009; Kalivoda & Totty, 2004). Considering these findings, the aforementioned authors highlight the necessity for these services to integrate universal design principles into their functions, with the aim of overcoming the barriers identified.

It is notable that there is a lack of research focusing on the UDL approach from the perspective of university support services. This paper aims to address this gap in the literature and contribute to the advancement of knowledge on this issue. The main objective of this study is to detect how much Universal Design for Learning is known and promoted by the diversity services in different Spanish universities. To achieve this objective, two research questions were formulated.

- What is the current level of awareness among SAPDUs regarding UDL?
- How are SAPDUs involved in promoting UDL at the university?

2. Methodology

The methodological approach employed in this study aligns with the qualitative paradigm, which aims to examine individuals' perceptions and generate knowledge through their experiences (Miles & Huberman, 1994). This descriptive study collects the voices of staff members from support services for people with disabilities in 14 Spanish universities regarding their knowledge of Universal Design for Learning and the promotion of this approach within their respective universities.

2.1. Context and participants

The participants were selected employing non-probabilistic and intentional sampling method in the search for a specific profile that could respond to the research objectives. Specifically, contact was established with the active staff of these services in the different Spanish universities, both public and private, given their work in the field of attention to diversity in the university. To this end, an e-mail was initially sent through the SAPDU network, a working group that brings together technicians from the services of 64 universities to promote coordination between them, exchange good practices and promote improvements in the university context. The email detailed the objectives of the research project and provided contact information for queries. It was requested that the coordination of this network forward the email to all the universities to ensure that it arrived from a suitable channel and without errors. Furthermore, the email requested a response within a maximum period of two weeks, addressed to the principal investigator, to specify the conditions of participation or to resolve any doubts in this regard. A total of 14 universities participated in the study, representing eight different autonomous communities and reflecting the diversity of geographical areas within Spain, from the north to the centre and south (see table 1). Regarding the technical staff, 17 professionals (14 women and 3 men) with diverse profiles and functions (technicians, those responsible for inclusive policies and coordinators) participated. Following the receipt of responses, data collection sessions were scheduled with those who had expressed an interest in participating.

Table 1. Universities that have participated in the research

Universities	Autonomous Community	Ownership
University of Cadiz (UCA) Pablo Olavide University (UPO)	Andalusia	Public Public
University of Oviedo (UNIOVI)	Asturias	Public
University of Burgos (UBU)	Castilla & León	Public
University of Barcelona (UB) University of Lleida (UdL) University of Vic (UVIC)	Catalonia	Public Public Private
National University of Distance Education (UNED) University of Alcalá (UAH)	Community of Madrid	Public Public
Jaume I University (UJI) Polytechnic University of Valencia (UPV) University of Valencia (UV)	Valencian Community	Public Public Public
University of Murcia (UMU)	Murcia	Public
Public University of Navarra (UNAV)	Navarre	Public

Source: own elaboration.

2.2. Data collection

Semi-structured interviews were conducted to collect the information, as this method allows for a dialogue with participants and an exploration of the meanings they ascribe to their own experiences (Ibarra-Sáiz et al., 2023). Accordingly, a script was devised comprising questions organised into two dimensions: the first pertaining to the knowledge these services possess regarding UDL, and the second concerning their involvement in the promotion of this paradigm at the university. The script comprised eight items, distributed across two dimensions: three items in the first dimension and five items in the second. Please consult table 2 for a detailed list of the questions.

Table 2. Interview script

Dimension 1. Knowledge of UDL
<ol style="list-style-type: none"> 1. Do you know about Universal Design for Learning? 2. Have you been trained on UDL? 3. Through which channels?
Dimension 2. UDL promotion strategies
<ol style="list-style-type: none"> 4. Do you think that the UDL paradigm could facilitate more student participation and learning? 5. Do you think the university promotes the implementation of the UDL? 6. To what extent? 7. Do you collaborate in any of these strategies? 8. What would be your recommendations for the implementation of the UDL at the university?

Source: own elaboration.

The script facilitated the structuring of sessions and the exploration of the research objective, although the researcher endeavoured to adapt to the interviewees' preferences. As an illustration, some inquiries were elucidated, certain responses were shaped, and the sequence of questions was adapted to align with the other interviewee's discourse. To enhance participation, all interviews were conducted virtually. While the duration of each interview varied based on the participant, it was limited to an hour and a quarter. All interviews were conducted via the Google Meet platform, as it is a readily accessible tool with the capability of recording the sessions. The participants elected to conduct the interviews at the University of Valencia, the University Jaume I, the University of Alcalá and the University of Murcia in a group setting, as they believed that the presence of different staff from within the service would enhance the session and facilitate a more comprehensive exchange of information.

Regarding ethical issues, to ensure data confidentiality and data protection, all subjects signed an informed consent form and permission for audio and video recording for later transcription. Furthermore, the consent form outlined the voluntary nature of the research and the option for participants to withdraw from the study at any time. Following the completion of the informed consent process, either in paper format or digitally, all participants returned the signed document to the principal investigator via email prior to the interviews.

2.3. Data analysis

For the analysis of the data, each interview was first transcribed, and the information was then entered into a unified document. To guarantee the anonymity of the data, the information was pseudonymised using a coding system. This consisted of specifying the technique used "E" and the number of the interview according to the order in which they were conducted, for example "E_1; E_2". In cases where group interviews were conducted, the technical staff to be referred to was added to the above, e.g. "E_4_T2".

Once all the data had been organised, it was subjected to a process of content analysis. It is a highly systematic method, comprising different phases, which enables the reduction of information based on the objective set for its subsequent interpretation (Schreier, 2014). To adhere to the prescribed methodology, the most recent iteration of the Atlasti.V24 software was employed to upload the assorted documents to the digital platform, thereby initiating the analytical process. Subsequently, the transcripts were subjected to multiple readings with the objective of elucidating the import of the participants' testimonies. During this process, the units of meaning that were responsive to the research objective were selected and, in turn, grouped into different categories. A deductive approach was employed to classify the pertinent meaning units in accordance with the two research questions. The coding system was thus structured into two principal categories. The knowledge base surrounding UDL and the promotional strategies employed in its treatment. To guarantee the standards of confirmability and credibility, the transcripts were presented to the participants for their review and feedback, thus preventing any potential misinterpretations. Furthermore, the coding system was subjected to rigorous discussion and analysis among all researchers until a consensus was reached (Guba & Lincoln, 1981).

3. Results

This section presents the study's findings on SAPDUs' knowledge of UDL and their strategies for promoting it within the university.

3.1. UDL knowledge of SAPDUs

Nine of the participating services described UDL as a philosophy characterised by flexibility in teaching and learning, providing diverse options for students to select based on their preferences or needs. Staff members viewed UDL as a framework that transcends labels, aiming to support not only students with disabilities but the entire class.

It is a type of design that benefits everyone and not only students with disabilities. The fact that the content or the environment is accessible, in the end we try to make it accessible to all students without focusing on the specific deficits of each student [E_10].

Additionally, seven services highlighted that UDL is best integrated during the planning stages of teaching and learning, which helps to avoid individual adjustments that might otherwise stigmatize certain students.

Basically, the fact of planning teaching with the idea that the design favours the whole student body in order to minimise special support measures for some students [E_11].

Conversely, five of the services referred to factors pertaining to the origin of UDL and even alluded to other concepts associated with this paradigm. For instance, some of them described UDL as drawing on Tomlinson's principles of curriculum diversification. Others focused on its origins in the field of architecture, where the aim was to make all buildings and environments welcoming for all people, avoiding costly and unfeasible adaptations. They also mentioned issues of universal accessibility and design for all people not only at the architectural level but also in communication and, subsequently, in learning.

More specifically, in six of the interviews, ideas related to student engagement, understanding of information and expression of knowledge. Thus, the three UDL principles emerged. However, less reference was made to engagement in learning, even though in the most recent version of the implementation framework, it is a crucial aspect to be taken into consideration.

...it allows us to respond to this diversity so that everyone can express themselves as they feel best and that they can also be given different ways of understanding this information through different channels [E_6].

Service staff expressed varied perspectives on the UDL approach, with five staff members indicating they were unsure how to implement it in practice, which limited their ability to guide faculty in applying UDL principles. Additionally, two services viewed implementing UDL at the university level as an unrealistic goal due to institutional structures. They noted that faculty are often hesitant to adopt more inclusive practices rooted in UDL without practical, context-specific guidelines. Thus, while these services recognize the potential benefits this paradigm for all students, they are uncertain about its feasibility within the current university framework. These ideas were common to 11 of the services.

...we have to give support on how to apply UDL and so on when we are not experts either, so it's a bit big for me [E_5].

It should be very much applied to the teaching action to take into account the student with educational needs, to fulfil that great and utopian objective of adapting the system to students with educational needs, and not that they are the ones who have to adapt [E_2].

Seven services reported that their understanding of UDL largely came from self-directed learning through academic forums and dissemination platforms. Additionally, in six interviews was highlighted the value of SAPDU network meetings, which include a working group dedicated to UDL-related issues. Some staff also mentioned receiving training at the university, provided by their departments, the university's faculty training unit, or external organizations. However, some found these sessions too general, lacking practical relevance for their roles. In this context, 11 services expressed the need for more practical UDL training to effectively share this knowledge with faculty, who regularly work with students with disabilities.

...training is necessary, but for me too. I would like someone to train me because I have not received training. So, I would like to receive training so that I can then pass it on to the faculty, who are going to be the ones who really must apply this UDL [E_6].

3.2. Promotion of the UDL at the university by SAPDUs

University disability services play a critical role in promoting inclusion by acting as intermediaries among the various agents involved in this process. Understanding how these services promote the principles of UDL within universities is therefore essential.

All participants reported incorporating UDL principles into their work with students, though not always explicitly. For instance, to support student engagement, six services offered a peer volunteer program to facilitate both social and academic support. Additionally, eight services assigned a faculty tutor throughout a student's degree program to provide a consistent point of contact for any challenges that arise. Recently, five services introduced a liaison role between faculty and the disability service, aiming to streamline communication and coordination between service staff and academic programs, providing students with a designated contact. To support diverse means of representation, all services focused on ensuring accessible course materials and guiding students in organizing and managing information, such as through study technique training. In terms of action and expression, disability services frequently coordinated the provision of assistive products necessary for assessment, ensuring that all students could fully engage in evaluations.

...we need this figure that we have started to work on, the contact person for the degree programme who somehow knows what is happening and can pass it on to us because sometimes the student does not come to the unit and so this person can tell us what is happening in the classroom [E_14].

University disability services were also tasked with providing recommendations to faculty on addressing students' needs effectively. Although these recommendations aimed to incorporate UDL principles, they were generally targeted to specific groups rather than the entire class. Typically, guidance was provided on an individual basis, activated when a student consented to share their diagnosis and necessary accommodations with faculty. This approach diverges from the UDL philosophy, which emphasizes inclusive practices benefiting all students rather than tailored accommodations solely for students with disabilities.

You give faculty all the information they will need to attend to that student in class, in the exam, in tutorials in the office, but not at a global level, we do not enter globally with all the students [E_7].

While these recommendations aimed to enhance inclusive teaching practices, not all faculty members welcomed them. Of all the services, 11 reported that although they communicated the necessary support measures for certain students, some faculty members were reluctant to adopt these strategies. Reasons cited include lack of training, concern about added workload, and fears of creating perceived inequities or affecting the rigor and integrity of required competencies for degrees.

There are some faculty who tell you that they don't believe in diversity as if it were a matter of belief; There are denialists" [E_12_T1_/E_12_T2]; "There are some faculty who tell you that they don't believe in diversity [E_12_T1_/E_12_T2].

...what bothers me is being told that I'm giving them benefits. You are removing the barriers that these people have, but they are compromising their rights. They say: 'he has more time to think', of course, he needs it [E_1].

Disability services also engaged in awareness-raising and training activities for the wider university community. For instance, three services conducted awareness sessions not only for teaching staff but also for administrative and service staff (PAS) in departments, secretariats, and libraries, to improve interactions with students with disabilities. Five services created and shared online training materials specifically for university teaching staff, including publications, audiovisual resources, and guidelines on accessibility measures tailored to different disabilities. In addition, five services offered UDL-specific training sessions for faculty, often featuring professionals from relevant organizations or other universities. These services also organized specialized virtual courses on creating accessible documents, highlighted by five participants. Additionally, two services hosted faculty-led workshops to provide more customized guidance. However, participants noted that these training initiatives had seen limited engagement and success among teaching staff.

...when we have done things, the impact is very small, it is minimal. Every day it is more and more difficult to train faculty members in transversal things [E_2].

Although there was willingness to initiate these training courses, they were not frequently offered by the units responsible for professional development. Those services that had engaged with training reported infrequent collaboration with these units in designing and implementing courses for faculty on diversity and inclusion; only four services had been able to do so. Fortunately, this is beginning to change, with both services and training units starting to coordinate to create spaces that integrate diverse knowledge areas, resulting in more comprehensive training programs.

Training in the unit has always been open to the community, although for the administrative and service staff it is always very regulated, but not for the teaching and research staff. For teaching and research staff specifically, this has been the first year that we have been allowed to enter the regulated training programme [E_8].

At the policy level, these services also worked to advance university inclusion. One service, for instance, has participated in curriculum reviews to ensure that there is foundational training on disability, inclusive practices, and even harassment prevention, helping to foster equality and non-discrimination across campus. Additionally, two services were working on revising assessment regulations to ensure that students with disabilities received appropriate accommodations without facing comparative disadvantages. However, the explicit inclusion of UDL principles within institutional policies is still a work in progress and may depend significantly on the commitment of those involved in policy revisions.

The curriculum reform incorporates elements concerning attention to diversity. As I was commissioned to do it, we have given it a little phrase that hopefully will be approved, which is something like all curricula will have to incorporate universal learning design [E_1].

Discrepancies also emerged among these services concerning their functions. Four services, for example, believed that training on UDL should be the responsibility of faculty development units, not the disability support services. Another point of divergence concerned guidance for teaching staff. While some staff believed that their recommendations should carry weight due to their expertise in diversity and inclusion strategies, four services emphasized the academic freedom of individual instructors, which can limit intervention. Some felt that presenting strategies to faculty could be perceived as intrusive or prescriptive, potentially causing resistance and negatively impacting students.

We don't say to the teaching staff 'you have to assess this person only for assignments' because we are getting into a lot of circumstances at department level, at the level of the structure of the subject, at the level of the teaching guide... [E_9].

...that would be trespassing on their academic freedom. You have to be very careful if you don't want to be rejected. So, you must cautiously [E_13].

Further contradictions raised around the role of these services and UDL's principle of engagement. One service suggested that if UDL principles were fully implemented, the need for these specialized services would eventually diminish, an outcome they viewed positively, as it would signify true inclusivity. Conversely, three other services argued that reducing the role of these support services could undermine the quality of student support. The same debate applied to promoting engagement: while two services felt that recommending UDL's engagement principles to faculty was important, three others argued that engagement was a broader issue relevant to all students and therefore outside the scope of their duties.

I don't know to what extent the teaching staff should compensate for it because I think it would get away from us. They have a lot of work to do and they can't do it or they would do it badly, they would lose the quality of care, which is what we are there for [E_4].

I don't think it is possible to capture the interest of this service. That would fall outside our competencies because it would be common to all students, not only those with specific educational needs. And then that falls outside our competencies [E_6].

4. Discussion and conclusions

The increasing access of students with disabilities at university is challenging the traditional approaches to teaching and prompting a re-evaluation of current practices to promote more inclusive strategies. There is a growing emphasis on implementing enhancements in alignment with the UDL principles, a framework that has gained scientific recognition for its benefit for all students (Carrington et al., 2020; Li et al., 2020). In the process of integrating UDL into universities, SAPDUs play a pivotal role as mediators between students and faculty, providing support, resources and guidance to facilitate inclusion in these academic settings.

As evidenced by our findings, many service staff demonstrated a comprehensive understanding of UDL and its underlying principles. The participants identified the field of architecture as the origin of the paradigm, delineated related concepts, described the implementation framework, and emphasised the importance of considering the diverse needs of learners, diverging from the traditional deficit-focused approach. However, they asserted a lack of awareness regarding the practical application of its principles, a finding that aligns with faculty members (Fossey et al., 2017; López-Gavira, 2021). The dearth of knowledge regarding the implementation of UDL, coupled with the efforts of universities to advance this endeavour, has given rise to a growing interest among service staff in receiving training in UDL. Nevertheless, the participants in the study highlighted the absence of training opportunities aligned with their needs, noting that they had received minimal or no training on the paradigm. In other universities, both nationally and internationally, training courses have been developed, primarily for teaching staff on disability, support services, or UDL. However, it is notable that these courses often lack a follow-up component to assess the implementation of UDL-related improvements and evaluate their impact (Davies et al., 2013; Moriña & Carballo, 2018; Sanahuja et al., 2023). It is therefore necessary to provide further training for staff to prevent the emergence of barriers to student participation and learning (Fossey et al., 2017; López-Gavira, 2021). This places the responsibility on universities to provide solutions and meaningful, practical training opportunities that enable technical staff to enhance their actions in alignment with the principles of UDL.

Conversely, SAPDUs are, to a certain extent, engaged in the promotion of this paradigm within the university. However, different views emerged with implications for the subject. In particular, the results indicate discrepancies in the promotion of the principle of engagement. Some participants regarded it as a fundamental principle, while others expressed support for the idea without actively promoting it. Still others indicated that they did not consider it to align with their professional responsibilities. In their review of the use of technology in secondary classrooms, Bray et al. (2023) also observed a lack of promotion of this principle. This contradicts the latest version of the UDL framework -version 3.0- (CAST, 2024) where this principle has gained emphasis due to the crucial role that students' social-emotional context plays in their learning and identity. There was also disagreement about the role of faculty training in UDL. While some valued their ability to provide training and guidance for faculty members in applying UDL practices, most preferred to avoid this area. In fact, they noted that when they have encouraged faculty to adopt new measures to benefit certain students, some faculty members have reacted negatively, feeling overwhelmed or unprepared. Supporting this, research indicates that a lack of training limits teachers' self-efficacy, thereby restricting their ability to implement more flexible methodologies and curricula (Chao et al., 2017; Márquez et al., 2021). Therefore, it is essential to support faculty in enhancing their teaching practices and to address the general reluctance toward trying new strategies that accommodate student diversity (López-Gavira, 2021; Timuş et al., 2024; Yphantides, 2022). However, quality support would require more personalized assistance, mentoring in instructional design, and effective coordination between services (Benet-Gil, 2020; Moliner García et al., 2019), aspects that, within the current university system, seem more idealistic than feasible. This highlights the need for greater consensus among SAPDU staff on their roles, as well as formal recognition of coordination spaces with other services.

This is where institutional culture and policy must play a central role. Many participants have contributed to transforming the university's culture regarding disability, challenging prevailing stigmas and progressing toward a more diversity-sensitive education aligned with UDL principles (Moriña & Orozco, 2023). They emphasized that this shift relies not only on knowledge but on a shared conviction, common values and beliefs around inclusion (Booth & Ainscow, 2002). This presents significant challenges for large institutions

like universities, where current policies often lack provisions for coordination, reflection, and knowledge exchange (Benet-Gil, 2020). Thus, university policies should work to ensure that the entire community operates on firm, unwavering principles of equity and inclusion.

In conclusion, advancing inclusion in universities is a challenging task, yet with the dedicated work of SAPDUs, progress continues. This study highlights the need to further explore strategies for implementing UDL in university classrooms. The findings suggest some starting points, such as expanding training for SAPDUs to deepen their understanding of UDL, enabling them to share these practices across the university community. Additionally, greater consensus is needed on how SAPDUs view their roles in supporting students and faculty, and on the importance of collaborating with university policymakers and educators to promote inclusion. Ultimately, building a more inclusive university requires collaboration and shared knowledge—a vision that remains somewhat fragmented within these institutions.

Limitations and future lines of research

As with any research, this study has limitations. Including additional university services could have enriched the findings by revealing potential discrepancies or similarities in perspectives, helping to deepen our understanding of UDL knowledge and advocacy and drawing nationally relevant conclusions. Additionally, given the results' connections to university cultures and policies, incorporating the perspectives of faculty and policymakers would offer a broader view of their beliefs and actions regarding UDL, enhancing our understanding of how this paradigm is implemented across Spanish universities. Future research should aim for a more comprehensive scope, exploring mechanisms that integrate culture, policies, and practices, as well as incorporating diverse voices within the university community to better promote and implement UDL. For this purpose, future studies should consider thematic analysis as a methodological approach to delve more deeply into the experiences and perspectives of all stakeholders involved.

Bibliographical references

- Alba-Pastor, C. (2022). Entender la educación inclusiva con el DUA. In C. Alba-Pastor (Coord.), *Enseñar pensando en todos los estudiantes. El modelo de Diseño Universal para el Aprendizaje (DUA)* (pp. 17-21). SM.
- Aguirre, A., Carballo, R. & López-Gavira, R. (2021). Improving the academic experience of students with disabilities in higher education: faculty members of social sciences and law speak out. *Innovation. The European Journal of Social Science Research*, 34(3), 305-320. <https://doi.org/10.1080/13511610.2020.1828047>.
- Barrera, M. & Moliner García, O. (2023). 'How does universal learning design help me to learn?': students with autism spectrum disorder voices in higher education. *Studies in Higher Education*, 49(6), 899-912. <http://doi.org/10.1080/03075079.2023.2259932>.
- Benet-Gil, A. (2020). Desarrollo de políticas inclusivas en la educación superior. *Convergencia Revista de Ciencias Sociales*, 27, 1-31. <https://doi.org/10.29101/crcs.v27i82.11120>.
- Black, R. D., Weinberg, L. A. & Brodwin, M. G. (2015). Universal Design for Learning and Instruction: perspectives of students with disabilities in higher education. *Exceptionality Education International*, 25(2), 1-26. <https://doi.org/10.5206/eei.v25i2.7723>.
- Booth, T. & Ainscow, M. (2002). *Index for inclusion: developing learning and participation in schools*. Centre for Studies on Inclusive Education.
- Bray, A., Devitt, A., Banks, J., Sanchez-Fuentes, S., Sandoval, M., Riviou, K., Byrne, D., Flood, M., Reale, J. & Terrenzio, S. (2023). What next for Universal Design for Learning? A systematic literature review of technology in UDL implementations at the second level. *British Journal of Educational Technology*, 55(1), 1-26. <https://doi.org/10.1111/bjet.13328>.
- Burgstahler, S. & Moore, E. (2009). Making student services welcoming and accessible through accommodations and universal design. *Journal of Postsecondary Education and Disability*, 21(3), 155-174.
- Carrington, S., Saggars, B., Webster, A., Harper-Hill, K. & Nickerson, J. (2020). What Universal Design for Learning principles, guidelines, and checkpoints are evident in educators' descriptions of their practice when supporting students on the autism spectrum? *International Journal of Educational Research*, 102(101583). <https://doi.org/10.1016/j.ijer.2020.101583>.
- Center for Applied Special Technology- CAST (2024). *Universal Design for Learning Guidelines version 3.0* [organizador gráfico]. <https://udlguidelines.cast.org/static/udlg3-graphicorganizer-digital-numbers-a11y.pdf>.
- Chao C. N., Wing Sze, E. C., Forlin, C. & Ho, F. C. (2017). Improving teachers' self-efficacy in applying teaching and learning strategies and classroom management to students with special education needs in Hong Kong. *Teaching and Teacher Education*, 66, 360-369. <https://doi.org/10.1016/j.tate.2017.05.004>.
- Conferencia de Rectores de las Universidades Españolas (2021). *Universidad 2030. Propuesta para el debate*. CRUE. https://www.crue.org/wp-content/uploads/2021/11/CRUE_UNIVERSIDAD2030_VERSION-DIGITAL.pdf.
- Cotán Fernández, A. (2017). Educación inclusiva en las instituciones de educación superior: narrativas de estudiantes con discapacidad. *Revista Española de Discapacidad*, 5(1), 43-61. <http://hdl.handle.net/11181/5234>.
- Davies, P. L., Schelly, C. L. & Spooner, S. L. (2013). Measuring the effectiveness of Universal Design for Learning intervention in postsecondary education. *Journal of Postsecondary Education and Disability*, 26(3), 195-220. <https://files.eric.ed.gov/fulltext/EJ1026883.pdf>.

- Díez, E. & Sánchez-Fuentes, S. (2015). Diseño universal para el aprendizaje como metodología docente para atender a la diversidad en la universidad. *Aula Abierta*, 43(2), 87-98. <https://doi.org/10.1016/j.aula.2014.12.002>.
- España. Real Decreto 822/2021, de 28 de septiembre, por el que se establece la organización de las enseñanzas universitarias y del procedimiento de aseguramiento de su calidad. *Boletín Oficial del Estado*, 29 de septiembre de 2021, núm. 233, pp. 119537-119578.
- Fabri, M., Fenton, G., Andrews, P. & Beaton, M. (2022). Experiences of higher education students on the autism spectrum: stories of low mood and high resilience. *International Journal of Disability, Development and Education*, 69(4), 1411-1429. <https://doi.org/10.1080/1034912X.2020.1767764>.
- Ferreira Villa, C., Vieira Aller, M. J. & Vidal García, J. (2014). La atención a los estudiantes con discapacidad en las instituciones de educación superior. El caso de Cataluña. *Revista de Investigación Educativa*, 32(1), 139-157. <https://doi.org/10.6018/rie.32.1.171711>.
- Fossey, E., Chaffey, L., Venville, A., Ennals, P., Douglas, J. & Bigby, C. (2017). Navigating the complexity of disability support in tertiary education: perspectives of students and disability service staff. *International Journal of Inclusive Education*, 21(8), 822-832. <http://doi.org/10.1080/13603116.2017.1278798>.
- Fundación Universia (2023). *VI Estudio sobre la inclusión de personas con discapacidad en el sistema universitario español*. Fundación Universia. <https://www.fundacionuniversia.net/content/dam/fundacionuniversia/pdf/VI%20Estudio%20Universidad%20y%20Discapacidad%20ACCESIBLE.pdf>.
- Griful-Freixenet, J., Struyven, K., Verstichele, M. & Andreis, C. (2017). Higher education students with disabilities speaking out: perceived barriers and opportunities of the Universal Design for Learning framework. *Disability & Society*, 32(10), 1627-1649. <https://doi.org/10.1080/09687599.2017.1365695>.
- Guba E. G. & Lincoln, Y. S. (1981). *Effective evaluation: improving the usefulness of evaluation results through responsive and naturalistic approaches*. Jossey-Bass.
- Ibarra-Sáiz, M. S., González-Elorza, A. & Rodríguez Gómez, G. (2023). Aportaciones metodológicas para el uso de la entrevista semiestructurada en la investigación educativa a partir de un estudio de caso múltiple. *Revista de Investigación Educativa*, 41(2), 501-522. <https://doi.org/10.6018/rie.546401>.
- Kalivoda, K. S. & Totty, M. C. (2004). Disability services as a resource: advancing universal design. In J. L. Higbee (Ed.), *Curriculum transformation and disability: implementing universal design in higher education* (pp. 187-202). University of Minnesota.
- Kennette, L. N. & Wilson, N. A. (2019). Universal Design for Learning (UDL): student and faculty perceptions. *Journal of Effective Teaching in Higher Education*, 2(1), 1-26. <http://doi.org/10.36021/jethe.v2i1.17>.
- Koca-Atabey, M. (2017). Re-visiting the role of disability coordinators: the changing needs of disabled students and current support strategies from a UK university. *European Journal of Special Needs Education*, 32(1), 137-145. <http://doi.org/10.1080/08856257.2016.1254969>.
- Li, Y. F., Zhang, D. & Zhang, Q. (2020). University faculty attitudes and actions toward universal design: a literature review. *Journal of Inclusive Postsecondary Education*, 2(1), 1-20. <https://doi.org/10.13021/jipe.2020.2531>.
- Márquez, C., Sandoval, M., Sánchez-Fuentes, S., Simón, C., Moríña, A., Morgado, B., Moreno-Medina, I., García, J. A., Díaz-Gandasegui, V. & Elizalde-San Miguel, B. (2021). Evaluación de la inclusión en educación superior mediante indicadores. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 19(3), 33-51. <https://doi.org/10.15366/reice2021.19.3.003>.
- López-Gavira, R., Moríña, A. & Morgado, B. (2021). Challenges to inclusive education at the university: the perspective of students and disability support service staff. *Innovation: The European Journal of Social Science Research*, 34(3), 292-304. <http://doi.org/10.1080/13511610.2019.1578198>.

- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: an expanded sourcebook*. 2nd ed. Sage.
- Moliner García, O., Yazzo Zambrano, M. A., Niclot, D. & Philippot, T. (2019). Universidad inclusiva: percepciones de los responsables de los servicios de apoyo a las personas con discapacidad. *Revista electrónica de investigación educativa*, 21, 1-10. <https://doi.org/10.24320/redie.2019.21.e20.1972>.
- Moriña, A., López-Gavira, R. & Morgado, B. (2017). How do Spanish disability support offices contribute to inclusive education in the university? *Disability & Society*, 32(10), 1608-1626. <http://doi.org/10.1080/09687599.2017.1361812>.
- Moriña, A. & Carballo, R. (2018). Profesorado universitario y educación inclusiva: respondiendo a sus necesidades de formación. *Psicología Escolar e Educativa*, 22(spe), 87-95. <https://doi.org/10.1590/2175-35392018053>.
- Moriña, A. & Orozco, I. (2023). Facilitadores para la inclusión: claves para el éxito universitario. *Revista Iberoamericana de Evaluación Educativa*, 16(1), 31-45. <https://doi.org/10.15366/riee2022.16.1.002>.
- Palomero Sierra, B. & Díez Villoria, E. (2022). Requisitos inherentes en la inclusión del alumnado universitario con discapacidad: una revisión de alcance. *Revista Española de Discapacidad*, 10(2), 53-68. <https://doi.org/10.5569/2340-5104.10.02.04>.
- Sanahuja, A., Barrera, M., Moliner, O. & Sales, A. (2023). *Tema 2. Diseño Universal para el Aprendizaje: implicaciones prácticas a través de las TIC*. Universitat Jaume I. <http://doi.org/10.6035/DUARDM.2024.6>.
- Sánchez-Fuentes, S. (2023). *El diseño universal para el aprendizaje: guía práctica para el profesorado*. Narcea Ediciones.
- Sánchez Díaz, M. N. (2021). Ajustes razonables en la universidad. Creencias, prácticas y dificultades para llevarlos a cabo desde la voz de docentes inclusivos. *Revista de Fomento Social*, (299), 60-89. <https://revistas.uoyola.es/rfs/article/view/4581>.
- Sandoval, M., Simón, C. & Márquez, C. (2019). ¿Aulas inclusivas o excluyentes?: barreras para el aprendizaje y la participación en contextos universitarios. *Revista Complutense de Educación*, 30(1), 261-276. <https://doi.org/10.5209/RCED.57266>.
- Schreier, M. (2012). *Qualitative content analysis in practice*. Sage.
- Sullivan, J. (2023). 'Pioneers of Professional Frontiers': The experiences of autistic students and professional work based learning. *Disability & Society*, 38(7), 1209-1230. <https://doi.org/10.1080/09687599.2021.1983414>.
- Tamjeed, M., Tibdewal, V., Russel, M., McQuaid, M., Oh, T. & Shinohara, K. (18-22 October 2021). *Understanding disability services toward improving graduate student support* [Conferencia]. The 23rd International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '21), Virtual Event, New York, USA. <https://doi.org/10.1145/3441852.3471231>.
- Timuş, N., Barlett, M. E., Barlet, J. E., Ehrlich, S. & Babutsidze, Z. (2024). Fostering inclusive higher education through universal design for learning and inclusive pedagogy – EU and US faculty perceptions. *Higher Education Research & Development*, 43(2), 473-487. <http://doi.org/10.1080/07294360.2023.2234314>.
- Waisman, T. C., Williams, Z. J., Cage, E., Santhanam, S. P., Magiati, I., Dwyer, P., Stockwell, K. M., Kofner, B., Brown, H., Davidson, D., Herrell, J., Shore, S. M., Caudel, D., Gurbuz, E. & Gillespie-Lynch, K. (2023). Learning from the experts: evaluating participatory autism and universal design training for university educators. *Autism*, 27(2), 356-370. <https://doi.org/10.1177/13623613221097207>.
- Yphantides, J. (2022). EFL teachers' experiences with neurodiverse students and self-efficacy for inclusive practice in Japanese universities. *European Journal of Applied Linguistics and TEFL*, 11(2), 125-139.