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Inclusive Methodological Strategies for Students with Disabilities in Higher Education: Content Analysis through Scopus

Estrategias Metodológicas Inclusivas para Estudiantes con Discapacidad en Educación Superior: Análisis de Contenido a través de Scopus

高等教育中残疾学生的全纳方法策略：通过 Scopus 进行内容分析

Инклюзивные методологические стратегии для студентов с ограниченными возможностями здоровья в высшем образовании: Контент-анализ с помощью Scopus

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Abstract

Introduction: This content analysis explores the main methodological strategies that are identified in the literature as inclusive, as well as their benefits and potentials for the learning of students with disabilities.

Method: A search was conducted in the Scopus database. Through the PRISMA methodology, the content analysis included 15 articles from the last 5 years (2019-2023) that met the inclusion criteria. The data were analysed using an inductive system of categories and codes.

Results: The results are organised in three blocks: 1) description of the analysed studies, 2) analysis of strategies and resources that allow developing inclusive methodological strategies at university, and 3) identification of curricular adjustments and implementations for students with disabilities.

Conclusions: The conclusions obtained indicate that, for the design of inclusive educational practices, it is necessary to opt for the use of diverse methodologies, active and participatory strategies that focus on the student as the protagonist of learning, including technological resources in the classroom to improve accessibility and personalise learning.

Keywords: methodological strategies, students with disabilities, educational inclusion, higher education, content analysis, Scopus.

Resumen

Introducción: Este análisis de contenido analiza las principales estrategias metodológicas que se identifican en la literatura como inclusiva y cuáles son sus beneficios y potencialidades para el aprendizaje de los estudiantes con discapacidad.

Método: Se realizó una búsqueda en la base de datos Scopus. A través de la metodología PRISMA, el análisis de contenido incluyó 15 artículos de los últimos 5 años (2019-2023) que cumplían todos los criterios de inclusión. Los datos se analizaron a través de un sistema inductivo de categorías y códigos.

Resultados: Los resultados se organizan en tres bloques: 1. Descripción de los estudios analizados; 2. Análisis de estrategias y recursos que permitan desarrollar estrategias metodológicas inclusivas en la universidad, y; 3. Identificación de los ajustes e implementaciones curriculares para los estudiantes con discapacidad.

Conclusiones: Las conclusiones obtenidas indican que, para el diseño de prácticas educativas inclusivas, se debe optar por el uso metodologías diversas, estrategias activas y participativas que ponen el foco de atención en el estudiante como protagonista del aprendizaje, incluyendo recursos tecnológicos en las aulas para mejorar la accesibilidad y personalizar el aprendizaje.

Palabras clave: estrategias metodológicas, estudiantes con discapacidad, inclusión educativa, educación superior, análisis de contenido, Scopus.

摘要

导言： 本内容分析报告分析了文献中被认为具有包容性的主要方法策略，以及它们对残疾学生学习的益处和潜力。

方法：通过 Scopus 数据库中进行检索。采用 PRISMA的方法，内容分析包括过去 5 年（2019-2023 年）中符合所有纳入标准的 15 篇文章。通过分类和代码的归纳系统对数据进行分析。

结果：分析结果分为三个部分：1.对所分析研究的描述；2.对促进大学包容性方法战略发展的策略和资源的分析；3.确定针对残疾学生课程的调整和实施。

结论： 得出的结论表明，对于全纳教育实践的设计，我们应选择使用多样化的方法论、主动性和参与性的策略，将学生作为学习的主角，包括在课堂上使用技术资源，以提高学习的无障碍性和个性化。

关键词：方法策略、残疾学生、全纳教育、高等教育、内容分析、Scopus。

Аннотация

Введение: В данном контент-анализе рассматриваются основные методологические стратегии, которые в литературе определяются как инклюзивные, а также их преимущества и потенциал для обучения студентов с ограниченными возможностями.

Метод: Был проведен поиск в базе данных Scopus. С помощью методологии PRISMA в контент-анализ были включены 15 статей за последние 5 лет (2019-2023 гг.), которые соответствовали критериям включения. Данные были проанализированы с использованием индуктивной системы категорий и кодов.

Результаты: Результаты организованы в три блока: 1) описание проанализированных исследований, 2) анализ стратегий и ресурсов, позволяющих развивать инклюзивные методологические стратегии в университете, и 3) выявление корректировок и внедрений учебных программ для студентов с инвалидностью.

Выводы: Полученные выводы свидетельствуют о том, что для разработки инклюзивных образовательных практик необходимо выбирать использование разнообразных методик, активных и партисипативных стратегий, ориентированных на студента как главного героя обучения, включая технологические ресурсы в аудитории для повышения доступности и индивидуализации обучения.

Ключевые слова: методологические стратегии, студенты с инвалидностью, образовательная инклюзия, высшее образование, контент-анализ, Scopus.

Introduction

Nowadays, we are witnessing an increasing worldwide interest for the right of access to education and permanence of students with different capacities, including those with disabilities (Algolayat et al., 2023). This tendency has resulted in a significant increase in the proportion of students with disabilities registered in higher education institutions in the last two decades (Arora, 2023).

This increase in the number of students with disabilities registered in higher education shows a growing commitment to equal opportunities in education. Global policies aimed at fighting discrimination and exclusion (Martínez-Usarralde, 2020), such as the Universal Declaration of Human Rights (1948), the 2006 United Nations Convention on the Rights of Persons with Disabilities, and the 2020 European Strategy for smart, sustainable and inclusive growth (2014), have significantly contributed to this progress at an international level.

In Spain, during the academic year 2020/2021, there were 23,851 university students with disabilities, which represented an increase of 4.5% compared to the previous year (Fundación Universia, 2021), which demonstrates that universities must provide a quality, inclusive and equitable educational service for every student, in line with the principles of equality, social justice and equity, which predominate in today's society. In this sense, it is essential that universities integrate the principles of inclusive education in their study plans, agendas and policies, as they are fundamental for the development of inclusive, effective and quality educational practices (Moriña et al., 2024).

In this regard, it is important to highlight that the adaptations and adjustments performed for students with disabilities not only benefit this group, but they also improve the learning experiences of all students (Carballo et al., 2021). Thus, in their study plans, universities must adopt inclusive approaches that address student diversity rather than focusing on specific groups, thereby preventing stigmatisation. However, despite the legislative advances and political reforms, there continue to be significant challenges in the implementation of effective educational practices in universities, which, in some cases, are still exclusive, due to the lack of faculty training in terms of disability, inadequate study plans and methodologies, and non-adapted evaluations (Fiuza-Asorey et al., 2023; Kendall, 2018). These barriers often lead students with disabilities to abandon their university studies (López-Gavira et al., 2021).

Thus, in order to guarantee the permanence and graduation of students with disabilities in Higher Education, it is essential to provide the necessary support and adjustments. In this respect, Universal Design for Learning (UDL) and Universal Design for Instruction (UDI) have been proposed as effective solutions (Sánchez & Morgado, 2023; Sandoval et al., 2020). These approaches allow designing accessible programmes and materials for all students, reducing the need for additional adjustments. Moreover, it has been demonstrated that academic success not only depends on the students, but also on the faculty and the resources available at university (Arora, 2023; Lorenzo-Lledó et al., 2020), where informed, trained and sensitised faculty members are an essential element in the experience of students with disabilities (Cotán et al., 2021a).

Despite the relevance of this topic, few studies have delved into the characteristics of inclusive faculty members and their practices in the classroom to attend to diversity (Cotán et al., 2021b; Orozco & Moriña, 2023). However, these studies highlight certain aspects that define these committed faculty: 1) use and development of active methodologies and pedagogies focused on the student's learning and participation;

2) use of different methodological and evaluation options; and 3) adjustments of the educational materials, when students require them (Kendall, 2018; Lorenzo-Lledó et al., 2020).

Consequently, the selection of teaching methods plays a fundamental role in student success, especially for those with disabilities (Fiuza-Asorey et al., 2023; Sandoval et al., 2020). In this sense, traditional methods, such as master lectures, in which the faculty member merely transmits knowledge without fostering interaction, may not be effective in promoting inclusion in the classroom, motivation, or meaningful learning (Alkhawaldeh & Khasawneh, 2024; Moriña et al., 2024). In contrast, the models based on constructivist theory, in which the faculty member acts as a guide to help the students to build their own knowledge, are considered more effective in attaining inclusion in the classroom (Cotán et al., 2021a).

The scientific literature identifies that active, participatory, playful and collaborative pedagogical strategies are preferred by students with disabilities, as these stimulate their motivation, engage them in the learning process and generate a meaningful and accessible learning (Alkhawaldeh & Khasawneh, 2024; Carballo et al., 2021). These strategies not only improve the learning of students, but they also develop their sense of commitment and belonging (Almarghani & Mijatovic, 2017).

It is essential to select active methodological strategies that promote meaningful and constructivist learning and generate interaction and participation among students. These active methodologies stand out as teaching approaches that require students not only to carry out assignments, but also to reflect on what they are doing. These methodological strategies aim to grant students greater autonomy to actively and participatorily engage in the construction of meaningful and reflective knowledge based on their own experience, including problem-based strategies, cooperative work, case studies, flipped classrooms and project-based teaching (Brewer & Movahedazarhouligh, 2019).

The participation in the classroom and group-work methodological strategies can also reduce anxiety in students by overcoming different social barriers and obstacles, such as differences in age, gender, sociodemographic level, or different skills. Therefore, activities that promote participation in a collaborative environment contribute to the development and attainment of an inclusive and democratic classroom (Gibbs et al., 2019). Thus, all faculty members must have a variety of methodological strategies that they can apply and combine in the classroom to attend to a diverse student population, including students with disabilities (Moriña, 2020; Moriña et al., 2019).

With the aim of contributing to the research of other authors, who have supported the relevance of adopting active and inclusive methodological strategies in higher education, the objective of this study was to carry out a systematic analysis in the Scopus database, in order to identify the main active methodologies that promote the inclusion of students with disabilities in universities. The following research questions guided the analysis:

Which are the main elements that allow developing inclusive methodologies at university?

Are different methodologies being used in the teaching-learning processes of students with disabilities?

Methods

Following the methodological principles established by Fernández and Bueno (1998) for bibliometric analyses in the field of education, as well as the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Hutton et al., 2016; Moher et al., 2009), we rigorously and thoroughly considered the criteria for information source selection, search document eligibility and title selection, and data extraction and presentation process.

In the framework of the present study, we selected the internationally recognised Scopus database, given its scientific prestige supported by its exhaustive and demanding selection criteria to include documents in its repository (López-Noguero & Gallardo-López, 2020). Scopus has 26,591 active scientific peer-reviewed journals, 1,167 scientific books, and over 11,7 million presentations and documents from conferences presented in more than 148,500 international events (Elsevier, 2023), and it is, undoubtedly, one of the most important databases of the world scientific scope.

Furthermore, Scopus offers very efficient tools for document search, thereby facilitating research and article impact analysis, using metrics that define and categorise the information in variables of interest, such as: publication year, most prolific authors, thematic areas, document type, affiliation, country, language, keywords, sponsor, most cited documents, and the prominent scientific journals related to the research topic.

Search criteria in the database

Initially, a set of keywords were selected for the document search: methodology, inclusion, disability, higher education, university, strategies, and participatory. To carry out the study, the following search equations were employed, with their corresponding Boolean operators, in order to define and limit the search:

1. Methodol* AND inclus* AND disabilit* AND higher AND educat*
2. Methodolog* AND inclusiv* AND higher AND education AND disabilit*
3. Methodolog* AND inclusiv* AND university* AND disability*
4. Participat* AND methodolog* AND strateg* AND higher AND educat* AND disabil*.

Document eligibility criteria and justification

Different inclusion and exclusion criteria were established to select the articles for analysis. The inclusion criteria were: 1) academic area or discipline of Social Sciences and Humanities; 2) peer-reviewed empirical research articles; 3) articles published in English; 4) journal articles published and indexed in the Scopus database between January 2019 and April 2023; 5) studies focused on higher education and attention to diversity from a perspective centred in students with disabilities.

On the other hand, this systematic review excluded the following documents: 1) studies from other academic areas or disciplines unrelated to the scope of interest for the current investigation; 2) other publications in the format of systematic reviews, books, book chapters or conference presentations; 3) studies focused on attention to

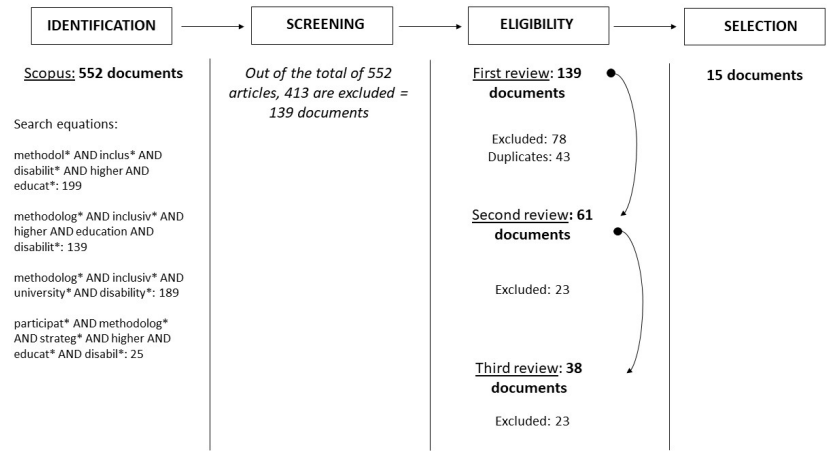
diversity from a multicultural, gender, minority or sex education approach; 4) articles published before January 2019; 5) duplicate documents; 6) articles published in languages other than English.

Screening and selection

In the first phase of this study, which was carried out in April 2023, a keyword search was conducted in the Scopus database, applying the four selection equations that were cited above. In this first search, 552 potential publications for analysis were obtained, which, after screening with the exclusion criteria described above, were reduced to 139 publications. In the second phase of review, the duplicate documents were discarded, obtaining 61 articles, which were reduced to 38 publications after a further review process. Lastly, in the third phase, the research team selected a total of 15 articles, due to their high scientific interest for the objectives of the present study, which constituted the final sample of documents for análisis (Figure 1).

Figure 1

General view of the systematic review phases conducted



A systematic and objective work protocol was established for the selection of documents in every phase of the process. Firstly, the title, abstract and keywords of the publications were read, paying special attention to the previously defined inclusion/exclusion criteria. Then, the researchers independently reviewed the full text of the selected articles and categorised them for subsequent discussion, with the aim of reaching consensus for the inclusion or exclusion of the documents, in order to guarantee the validity of their analysis.

Data extraction and analysis

To extract and analyse the information of the 15 documents selected, we created a system of categories and codes that enabled the systematisation of the process (Table 1), thereby allowing us to compare the publications, effectively identify and examine differences and similarities, and highlight the common success factors. In this sense,

and with the aim of performing an adequate approximation to the studied reality, a content analysis was carried out following the guidelines of Jansen (2013), and in line with other authors, such as López-Noguero (2002).

Table 1

System of categories and subcategories for the content análisis

Category	Subcategory
Characteristics of Inclusive Methodologies	Methodological Diversity Participative, Active, and Collaborative Learning Student as the Protagonist of Learning Teacher as Guide/Mediator Technological Resources
Teaching Strategies	Adjustments and Implementations Universal Design for Instruction Teaching Planning and Adaptation Emotional Perspective of Learning Practical Content
Methodological Strategies	Problem-Based Learning Project-Based Learning Collaborative Learning Cooperative Learning Flipped Classroom Facilitated Debates Guided Discovery Practical Case Studies Gamification Interactive Lessons Peer Tutoring Individual Tutoring

Results

This section presents the results of the literature review. Firstly, a general view of the 15 articles selected for the study is provided. Secondly, the main didactic and methodological strategies are analysed, as well as the didactic resources that promote the design of inclusive educational practices in higher education classrooms.

Description of the analysed studies

The analysis of the reviewed articles (n=15), all of which were published in peer-reviewed journals of high impact index, shows the growing interest in the study topic. Regarding the geographical location of these documents, a large number of them were carried out in Europe, specifically in Spain (n=11) and Portugal (n=1). In a smaller proportion, some of these studies were performed in Asia (N=3), specifically in Jordan (n=1), Indonesia (n=1) and Pakistan (n=1). Similarly, it is worth pointing out that the language (English) and the type of means used in the selected publications (interna-

tional journals) allow disseminating the obtained results beyond the territorial limits of the countries where the studies were published.

With regard to the methodology used in the analysed articles, there were 11 qualitative studies and 3 quantitative studies, whereas the remaining publication followed a mixed methodology (n=1), specifically the study of Zahid (2021). In relation to the participants of the selected studies, the mean sample in the qualitative and quantitative studies was 47 and 173.3 participants, respectively. It is worth underlining, among the qualitative articles, the works of Moriña (2022) and Cotán et al. (2021a), who used a large sample for this type of study (119 participants).

Lastly, in the study selection, a clear premise was considered: to analyse empirical studies that showed practical examples of how to carry out inclusive methodologies in university classrooms for students in general, and for students with disabilities in particular. In this sense, the article selection was based on an inclusive approach for students with disabilities. Thus, a large percentage of the selected studies were focused on students with disabilities in general, and a small percentage of them were focused on students with specific disabilities, such as psychic, visual, auditory and intellectual disabilities.

Table 2

Description of the analysed studies

Authors	Country	Methodology	Participants	Type of disabilitY
Aguirre *et al.* (2021)	Spain	Qualitative	25 teachers	Unspecified
Algoaylat *et al.* (2023)	Jordan	Qualitative	10 students	Psychic, visual, and auditory
Carballo *et al.* (2021)	Spain	Qualitative	24 teachers	Unspecified
Carballo *et al.* (2022)	Spain	Qualitative	25 teachers	Unspecified
Cotán *et al.* (2021[a])	Spain	Qualitative	119 teachers	Unspecified
Cotán *et al.* (2021b)	Spain	Qualitative	24 teachers	Unspecified
Husin *et al.* (2022)	Indonesia	Quantitative	193 students	Unspecified
López-Gavira *et al.* (2021)	Spain	Qualitative	44 students with disabilities	Unspecified
Lorenzo-Lledó *et al.* (2020)	Spain	Cuantitativa	313 teachers and students with disabilities	Unspecified
Moriña (2022)	Spain	Qualitative	119 teachers	Unspecified
Perera-Rodríguez & Moriña (2019)	Spain	Qualitative	44 students with disabilities	Unspecified
Sánchez & Morgado (2023)	Spain	Qualitative	42 teachers	Unspecified

Authors	Country	Methodology	Participants	Type of disabilitY
Santana-Valencia & Chávez-Melo (2022)	Spain	Qualitative	65 teachers	Unspecified
Sousa *et al.* (2022)	Portugal	Quantitative	14 students	Intellectual disability
Zahid (2021)	Pakistan	Mixed-methods	63 teachers	Unspecified

What are the main elements that allow carrying out inclusive methodologies at university? Keys for the promotion of an inclusive, equitable and quality learning

The analysis of the results obtained in this study show that teaching methodologies are a key factor for the inclusion of students with disabilities in university classrooms, as well as for the success of their learnings. However, there are different methodological and didactic strategies used in the design of inclusive educational practices in higher education.

Use of different teaching methodologies for an inclusive learning

The analysed documents recommend adjusting the teaching methodologies and didactic resources to the needs of the students, especially those of students with disabilities, as an essential requirement for the attainment of an inclusive, equitable and quality learning (López-Gavira et al., 2021). The addressed studies indicate that using different methodological strategies in the classrooms is fundamental for the design of inclusive practices (Cotán et al., 2021ª; Moriña, 2022). Thus, methodological variability is necessary for improving the possibilities of all students to participate in learning (Carballo et al., 2021; López-Gavira et al., 2021; Sousa et al., 2022). Moreover, considering this methodological diversity in the classrooms allows responding to the different learning styles of the students (Moriña, 2022), improves motivation (Cotán et al., 2021ª; Husin et al., 2022; Moriña, 2022; Santana-Valencia & Chávez-Melo, 2022), fosters participation and learning (Zahid, 2021) and prevents monotonous sessions (Carballo et al., 2021).

Participatory, active and enjoyable learning

In the analysed articles, it is pointed out that these methodologies must also promote a participatory, active and enjoyable learning (Aguirre et al., 2021; Moriña, 2022; Zahid, 2021). The active participation of students in the teaching-learning processes is essential for the attainment of an effective and meaningful learning (Carballo et al., 2022; Cotán et al., 2021a), as one of the main premises of inclusive education (Carballo et al., 2021). Consequently, selecting the design of participatory methodologies enables the improvement of interaction and group cohesion among students, respects the different learning paces, and provides different levels of participation as a function of their characteristics, interests and capacities (Carballo et al., 2022), allowing the faculty not only to involve the students in the learning process, but also to empower them

by making them the leaders of their own learning and fostering their commitment to it (Aguirre et al., 2021; Carballo et al., 2021; Zahid, 2021). Lastly, these studies state that, in addition to carrying out participatory and active methodologies, it is also important to generate enjoyable spaces (Cotán et al., 2021ª; Moriña, 2022), since using humour in the classrooms facilitates the generation of optimism and the association of positive emotions between the learnings and the contents (Sánchez & Morgado, 2022).

Students as the leaders of their learning

In the design of inclusive practices, it is also important to involve the students in an effective learning, as well as to promote their participation and active role (Carballo et al., 2021; Sánchez & Morgado, 2022). In this way, from a constructivist learning approach (Moriña, 2022) and the principles of active pedagogy (Cotán et al., 2021ª), the students build their conceptual scaffold, rising as leaders of the process and assuming the responsibility of their own learning (Aguirre et al., 2021). From this premise, the students feel included and are free to make decisions, taking charge of their own learning (Sousa et al., 2022).

The role of the faculty in the design of inclusive educational practices

According to the analysed documents, faculty members play a fundamental role in the academic experiences and journeys of students with disabilities (Aguirre et al., 2021; Carballo et al., 2021). Thus, regarding the teaching behaviours, the results showed that the faculty must reflect their enthusiasm for teaching, foster motivation and curiosity among their students, and use humour to generate optimism in their classrooms (Sánchez & Morgado, 2022).

They also underline that faculty members must be respectful, confident, close, and accessible toward their students (Aguirre et al., 2021; Cotán et al., 2021a), as one of the main keys in the design of inclusive practices. In this sense, faculty members must show accessibility and be willing to provide support and to make the necessary changes attending to the opinions and needs of their students (Carballo et al., 2022). In this way, actions such as constant, critical and constructivist feedback (in lectures, activities, emails, etc.), individualised follow-up (tutorials, phone calls, etc.) and active and close communication (horizontal communication) are key processes that prevent the discouragement of students (Aguirre et al., 2021; Carballo et al., 2022; Husin et al., 2022; Moriña, 2022; Sánchez & Morgado, 2022).

From the analysed articles, the role of the faculty is perceived as a facilitator, a mediator and/or guide in the teaching-learning processes, and not as a mere transmitter of contents or a person who, in some cases, may even act as a barrier (Carballo et al., 2021; Cotán et al., 2021b; Moriña, 2022). Consequently, faculty members are recommended to become referents and develop capacities in all their students (Moriña, 2022). It is fundamental that the students trust their faculty members and their learning capacity. Furthermore, with the aim of selecting the most appropriate methodology for the learning of their students, with and without disabilities, faculty members must attend to their specific characteristics and needs (Aguirre et al., 2021).

Technological resources for the design of an inclusive and quality learning

According to the obtained data, the use of technologies in the classrooms is an important element to promote inclusive educational practices (Algoaylat et al., 2023;

López-Gavira et al., 2021; Moriña, 2022). Technology is considered a facilitator element that allows recreating real learning scenarios, thereby improving the academic performance and motivation of the students (Perera-Rodríguez & Moriña, 2019). In addition, the use of technological resources makes it possible to personalise learning (Santana-Valencia & Chávez-Melo, 2022; Zahid, 2021) and helps the students to follow the subject matter, promoting their autonomy (López-Gavira et al., 2021). Among the main technological resources identified in the analysed studies, the following stand out: 1) virtual-educational platforms; 2) assistive technology; 3) specialised software (Jaws); 4) digital blackboard; 5) email; and 6) WhatsApp. In any case, although these studies recognise that the use of technological resources favours the inclusion of students at university, the academic staff are required to have techno-pedagogical training in order to design learning experiences adapted to specific methodologies (Algoaylat et al., 2023; Perera-Rodríguez & Moriña, 2019; López-Gavira et al., 2021).

Didactic strategies that promote inclusion in university classrooms

The analysed studies approach different didactic strategies that enable the design and implementation of inclusive methodologies in university classrooms, five of which are worth highlighting: 1) appropriate adjustments; 2) UDI; 3) teaching planning and adaptation; 4) emotional dimension of learning; 5) practical contents.

The first didactic strategy analysed, which is in turn linked to the second strategy (i.e., the design of practices based on UDI), is focused on facilitating the appropriate adjustments and implementations for the students, providing different options for accessing and representing the content to promote inclusion (Algoaylat et al., 2023; Husin et al., 2022; Lorenzo-Lledó et al., 2020). In this way, as an example, diverse strategies are proposed (Moriña et al., 2024), such as: recording the lectures; extending the time for assignments; adjusting the learning spaces; offering a sign language interpreter; audio software; text augmentation; interactive sessions; flexible schedules; use of computers; and text narration. In this sense, Husin et al. (2022) assert that faculty members who use UDI in their classrooms are perceived as more efficient by their students with disabilities, and they improve not only the learning of these students but also that of all students in general (Carballo et al., 2021).

The third didactic strategy is focused on planning and adapting the teaching-learning processes at the beginning of the subject (Aguirre et al., 2021; Moriña, 2022). To this end, the studies identify that this planning must be dynamic, flexible, open, and adapted to the degrees and specific characteristics of the students who undertake the subjects (López-Gavira et al., 2021; Lorenzo-Lledó et al., 2020; Sánchez & Morgado, 2022). Specifically, it is proposed that, in addition to planning the subject matter, the faculty must also inform the students, in a clear and detailed manner (through the teaching guides and during the first sessions), about the contents and target competences to be acquired in the subject. The teaching plan must gather all the information related to the learning contents and their practical application, the activities, the methodology, the schedule, the evaluation systems, and the possible adaptations to be carried out in order to respond to the particular needs of the students. Furthermore, in this planning and adaptation process, it is fundamental to consider the previous knowledge of the students and connect it to the subject matter, aiming to motivate them at all times. To this end, it is important to recover and synthesise the contents addressed in the previous lectures, elaborating a final summary of them and using different materials and activities that promote reflection and critical thinking, adapting to the peculiarities of each group-class (Carballo et al., 2021; Husin et al., 2022; Lorenzo-Lledó et al., 2020).

An important element gathered in the study of Sánchez and Morgado (2022) is that, in this flexible planning, faculty members must take into account the emotional and motivational aspects of the students, which is strongly related to the fourth didactic strategy: attend to the emotional dimension of learning. In this regard, Aguirre et al. (2021) and Moriña (2022) pointed out that it is important to carry out affective and emotional strategies, since these contribute to effectively and positively develop the learning of the students (Cotán et al., 2021a). The analysed studies assert that all students should feel that they are members of the group-class, using different strategies to promote emotional commitment. The authors of these studies recognise the need to connect with the students, for which they proposed some strategies that would allow faculty members to develop close relationships: 1) learn the names of all the students to generate a closer treatment; 2) generate a classroom climate based on respect and elements that enhance positive aspects over negative aspects; and 3) establish close relationships with students with disabilities (beyond the academic scope). These actions help to generate safe spaces for the students, where they can open up to participate and ask the faculty and their peers for help when necessary, which is especially important for students with disabilities. This emotional commitment allows not only developing the feeling of belonging of the students but also humanising the teaching-learning processes (Moriña, 2022; Moriña et al., 2024).

To this respect, the study of Santana-Valencia and Chávez-Melo (2022) proposes to attend to this perspective not only individually from the student, but also from an ecological perspective that includes the family and social environment of students with disabilities. These authors state that faculty members must modify their educational practices, adjusting their way of teaching by adapting the materials, making use of digital resources and contextualising the learning environments based on the reality of each student. To this end, it is fundamental to trust the families and the social environment of the students, granting them a greater degree of participation in the teaching-learning processes and creating bridges for educational inclusion through a homework plan that includes dialogue among the academic, family and social agents involved.

Lastly, the fifth didactic strategy identified in the studies for the design of inclusive educational practices is focused on working in the classrooms on practical and applied contents (Husin et al., 2022; Moriña, 2022). It is important to establish a connection between theory and practice, to ensure that students find the link to the professional reality (Aguirre et al., 2021; Zahid, 2021), since one of the main interests of university students is to acquire knowledge and skills related to the job they will carry out in the future (Carballo et al., 2021). Proposing practical activities, such as workshops, examples of real cases and visits of external professionals, enables the promotion of this didactic strategy in the classroom, allowing the students to see the usefulness of their learning, as well as having a positive impact on their motivation toward learning.

Inclusive methodological strategies in the classroom

There are different didactic actions and strategies that allow designing educational processes from an inclusive approach; however, among the existing methodological strategies, which of these could gather these inclusive principles? The analysed studies (Carballo et al., 2021; Cotán et al., 2021ª; Lorenzo-Lledó et al., 2020; Moriña, 2022; Sánchez & Morgado, 2022) point out some of them, with the following standing out: 1) problem-based learning; 2) project-based learning; 3) collaborative learning; 4) cooperative learning; 5) flipped classroom; 6) guided debates; 7) guided discovery; 8)

practical case studies; 9) gamification; 10) interactive lessons; 11) peer turorials; and 12) individual tutorials.

To sum up, the analysed studies show that teaching must not be carried out merely using the model of traditional lectures (although, in some cases, it is important to use this format in combination with active methodologies), but it should be based on diverse, active and participatory methodologies that enable the flexibilisation of the curriculum, focusing on the student as the leader of her/his learning and on the role of the faculty member as a mediator and guide of the teaching-learning processes.

Are different methodological strategies being used in the teaching-learning processes of students with disabilities?

The analysed studies are based on the premise that, although all students are different from each other, they all must have the same opportunities to access the content and learning, for which they must be offered the necessary adjustments and implementations that respond to their educational needs (Lorenzo-Lledó et al., 2020; Sánchez & Morgado, 2022; Zahid, 2021). The main adjustments and implementations that were identified in these studies are: 1) offering the didactic material in advance; 2) materials adapted to the different needs; 3) use and application of different resources that allow accessing the content from different formats; 4) use of technological resources and tools; 5) extending the submission deadline for assignments; 6) promote the participation of the students in the selection of methods, contents, activities and resources to be used in the subject; and 7) different evaluation options.

These adjustments are not considered as a special treatment toward students with disabilities (the studies indicate that these adaptations are offered to all students, such Erasmus students); on the contrary, based on the principle of equal opportunities, all students must access the teaching-learning processes under the same conditions. To this end, it is fundamental to enable the participation of all students and adapt the methodologies to the students, rather than adapting the students to the methodology. Moreover, the analysed studies indicate that these types of actions not only benefit students with disabilities, but all students in general (Carballo et al., 2021).

Discussion

The growing worldwide recognition of the right of access to and permanence in education for non-traditional students, including those with disabilities, is an undeniable right (Algolayat et al., 2023). This circumstance is reflected in the increasing number of students with disabilities registered in higher education institutions (Arora, 2023), which makes it necessary to attend and respond to their learning needs. However, this advance faces current and future challenges that must be attended to by universities and other educational institutions. Universities must develop and strengthen personalised support programmes, counseling services and adapted resources, in order to ensure that each student, regardless of his/her characteristics, can access and benefit from this academic training (Algolayat et al., 2023; Fiuza-Asorey et al., 2023).

Numerous studies (Langørgen & Magnus, 2018; Kendall, 2018) have addressed the development of inclusive practices from the view of students themselves and the characteristics that, according to their experiences, have been considered inclusive. Other studies, from the voice of the faculty and their perspective, have analysed the char-

acteristics that make them inclusive and how they work in the classroom to attend to diversity (Moriña, 2020). Nevertheless, different studies show educational practices that are poorly inclusive (Zabeli et al., 2021). Consequently, it is necessary to generate knowledge on the use and implementation of inclusive educational strategies that fully address student diversity, including students with disabilities and their needs. The aim of the present work was to analyse, from a systematic review of the literature in the Scopus database, the main methodological strategies that promote the inclusion of students with disabilities in university classrooms.

We identified different characteristics that methodological strategies must have in order to promote the inclusion of students with disabilities and improve the quality of learnings in higher education. In this sense, methodological variability is highlighted as an essential factor to improve student participation and adapt to different learning styles (Carballo et al., 2021; López-Gavira et al., 2021; Moriña et al., 2024; Sousa et al., 2022). Active and participatory methodological strategies, such as problem-based learning, collaborative work and gamification, have been underlined as inclusive, placing the student as the leader and the faculty member as a mediator (Alkhawaldeh & Khasawneh, 2024; Cotán et al., 2021ª; Lorenzo-Lledó et al., 2020; Moriña, 2022; Sánchez & Morgado, 2022). This constructivist approach empowers students, fosters their autonomy and involves them in their learnings (Cotán et al., 2021ª; Aguirre et al., 2021). Moreover, the role of the faculty is fundamental, being identified as inclusive when they are respectful and accessible and provide individualised support (Aguirre et al., 2021; Carballo et al., 2022; Cotán et al., 2021ª). However, the implementation of these strategies and faculty training, both among different institutions and within the same institution, are varied. In this sense, universities must establish standards and good practices to guarantee the consistency and efficacy of inclusive strategies at all levels.

Likewise, the integration of technology in the classroom emerges as an essential component for inclusive educational practices, enabling the recreation of real learning scenarios and the personalisation of teaching (López-Gavira et al., 2021; Perera-Rodríguez & Moriña, 2019; Santana-Valencia & Chávez-Melo, 2022). Nevertheless, the digital divide and the lack of equitable access to technology and technological resources among students is one of the future challenges that must be considered (Beyene et al., 2023; Moriña et al., 2024). In this regard, universities are recommended to design and implement policies that guarantee the availability of devices and connectivity for all students, ensuring that technology is a facilitator of inclusion and not an additional barrier (Cotán et al., 2021b). In turn, the lack of techno-pedagogical qualification for faculty members emerges as a key challenge, since technology is a fundamental pillar for inclusive practices (Algoaylat et al., 2023). Overcoming this divide would require an integral approach of professional development to provide educators with the necessary skills.

Lastly, equal opportunities are essential for students with disabilities. In the analysed studies, diversity and differences are recognised as an added value (Carballo et al., 2021; Lorenzo-Lledó et al., 2020). Adjustments are not considered special, but essential to guarantee equal access to learning (Aguirre et al., 2021; Carballo et al., 2022). Thus, the results emphasise the importance of inclusive methodologies for equal opportunities and educational quality (López-Gavira et al., 2021; Lorenzo-Lledó et al., 2020). On the other hand, the lack of knowledge about disability, the educational and personal needs of these students, and the discriminating stereotypes and attitudes continue to pose a real problem and a future challenge (Langørgen & Magnus, 2018).

In this sense, universities must develop sensitisation and training programmes to create inclusive environments and promote the understanding of diversity (Carballo et al., 2021; Cotán et al., 2021ª; Fiuza-Asorey et al., 2023; Moriña, 2022). Moreover, the educational policies must support initiatives that foster equality and non-discrimination in all education levels (Martínez-Usarralde, 2020).

To sum up, the results obtained in this study strengthen the importance of using and implementing inclusive methodologies in higher education as a means to promote equal opportunities and educational quality especially for students with disabilities (Fiuza-Asorey et al., 2023; López-Gavira et al., 2021; Lorenzo-Lledó et al., 2020; Sandoval et al., 2020). Therefore, it can be asserted that educational approaches in university classrooms must abandon the traditional model and develop different, active and participatory methodologies (Carballo et al., 2021; Moriña, 2022; Sánchez & Morgado, 2022). This will allow flexibilising the curriculum and placing the student at the centre of the learning process, while the faculty member acts as a guide and mediator in the path to an inclusive, equitable and quality education (Husin et al., 2022; Santana-Valencia & Chávez-Melo, 2022; Zahid, 2021). From an approach based on methodological variability and the use of technologies, the academic and personal development of all students will be enhanced in the university educational environment. However, these advances coexist with current and future challenges that must be attended to by universities, formative agendas, educational policies, and other competent institutions (Carballo et al., 2021; Cotán et al., 2021b). It is essential to address these challenges in order to guarantee that all students, regardless of their skills, have equal access and opportunities in the scope of university education.

Implications for practice

This study presents several recommendations for the design and development of inclusive methodologies in higher education classrooms:

1. Use different methodological strategies in the classrooms to adapt to the needs and learning styles of the students.

2. Promote a participatory, active and enjoyable learning to improve the motivation and participation of the students.

3. Empower the students as leaders of their own learning, fostering the constructivist approach and active pedagogy.

4. Develop teaching behaviours that reflect enthusiasm, motivation, accessibility and respect toward the students, and provide constant feedback and active communication.

5. Integrate technological resources to personalise learning and improve accessibility.

6. Apply didactic strategies such as appropriate adjustments and implementations, Universal Design for Instruction (UDI), flexible planning, attention to the emotional dimension of learning, and approaching practical and applied contents.

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Conflict of interest

There are no conflicts of interest

Annex

Key Features of Inclusive Methodologies

Authors		Aguirre *et al.* (2021)	Algoaylat *et al.* (2023)	Carballo *et al.* (2021)	Carballo *et al.* (2022)	Cotán *et al.* (2021ª)	Cotán *et al.* (2021b)	Husin *et al.* (2022)	López-Gavira *et al.* (2021)	Lorenzo-Lledó *et al.* (2020)	Moriña (2022)	Perera-Rodríguez & Moriña (2019)	Sánchez & Morgado (2023)	Santana-Valencia & Chávez-Melo (2022)	Sousa *et al.* (2022)	Zahid (2021)
Categories	Subcategories															
Use of diverse teaching methodologies	Adjustment to students' needs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Methodological variability			X		X		X	X		X			X	X	X
	Learning styles	X		X		X	X	X	X		X	X	X	X	X	X
Participatory, active and fun learning	Active participation	X		X	X	X	X		X	X	X	X	X			X
	Participatory methodologies	X		X	X	X	X	X	X	X	X		X			
	Incorporating humour					X					X					
Student as the protagonist of learning	Involving the learner	X	X	X	X	X	X	X		X	X		X		X	
	Constructivist approach					X					X		X			
The role of the teacher in the design of inclusive educational practices	Teaching attitude	X		X		X	X	X			X		X			
	Feedback and follow-up				X	X	X	X			X		X			
	Mediator/Guide			X	X	X					X		X			
Use of technological resources	Technology in the classroom		X				X		X	X	X	X	X	X		X
	Personalisation of learning						X					X		X		X
Teaching strategies	Adjustments and implementations	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Planning and adaptability	X		X	X	X	X	X	X	X		X	X			
	Attention to the emotional dimension	X				X					X		X			
	Methodological strategies			X		X				X	X		X			

Source: developed by author