

---

# Study on the inclusive use of resources in primary education from the perspective of teachers

Estudio sobre el uso inclusivo de recursos en educación primaria desde la perspectiva del profesorado

教师视角下对小学教育资源包容性使用的研究

Исследование инклюзивного использования ресурсов в начальном образовании с точки зрения учителей

---

**Pilar Arnaiz-Sánchez**

University of Murcia  
parnaiz@um.es  
<https://orcid.org/0000-0002-0839-891X>

**Violeta Jurado López**

Sabina Mora Teaching Cooperative, La Unión  
violeta.jurado@um.es  
<https://orcid.org/0000-0003-0040-4817>

**Carmen María Caballero García**

University of Murcia  
carmenmaria.caballero2@um.es  
<https://orcid.org/0000-0003-3966-1546>

**Salvador Alcaraz García**

University of Murcia  
sag@um.es  
<https://orcid.org/0000-0001-8590-8912>

---

## Dates · Fechas

Received: 2023-06-20  
Accepted: 2023-11-13  
Published: 2023-12-31

---

## How to Cite this Paper · Cómo citar este trabajo

Arnaiz-Sánchez, P., Jurado, V., Caballero, C. M., & Alcaraz, S. (2023). Study on the inclusive use of resources in primary education from the perspective of teachers. *Publicaciones*, 53(3), 317–336. <https://doi.org/10.30827/publicaciones.v53i3.26378>

## Resumen

Atender la diversidad del alumnado desde el paradigma de la inclusión requiere que los centros educativos realicen procesos de autorreflexión que les ayuden a analizar cuáles son las fortalezas y debilidades que dificultan la plena participación de todo el alumnado. El objetivo de esta investigación fue analizar las fortalezas y barreras en el uso y disposición de los recursos presentes en un colegio concertado en la etapa de educación primaria.

Se realizó un estudio de caso de corte descriptivo y cuantitativo, en el que se analizó la opinión de 23 profesionales encuestados a través del instrumento "Guía de Autoevaluación de Centro para la Atención a la Diversidad (ACADI)", en concreto, la dimensión referida a "Recursos".

Los resultados mostraron como principales fortalezas la finalidad que el centro da a los recursos existentes en el mismo, la accesibilidad a sus instalaciones, la participación de las familias y la coordinación entre el profesorado para responder a la diversidad del centro. Como barreras para favorecer la inclusión se detectaron la falta de recursos para que el profesorado pueda poner en práctica su formación, la escasez de ayudas técnicas para el alumnado que las requiera, la carencia de actividades de formación para el profesorado, así como la escasa consideración de partir de los intereses del alumnado para construir el currículo.

Las conclusiones muestran que conocer los recursos facilitadores y obstaculizadores presentes en este centro, para la inclusión educativa de su alumnado, posibilitará el emprendimiento de líneas de mejora en el camino hacia una educación de calidad con todos y para todos.

---

Palabras clave: educación inclusiva, diversidad, autoevaluación, recursos educativos.

---

## Abstract

Addressing the diversity of students from an inclusive perspective requires that schools carry out self-study processes that help them analyse the strengths and weaknesses that hinder the full integration of students. The main objective of this research was to analyse the strengths and obstacles in the use and availability of materials and education resources present in a private school of primary education.

A descriptive and quantitative case study was carried out, in which the opinion of 23 professionals was analyzed through the instrument "Guía de Autoevaluación de Centro para la Atención a la Diversidad (ACADI)", specifically, the "Resources" section.

The results showed that the main strengths are the final purpose the centre gives to the resources, the accessibility of its facilities, the engagement of families and the coordination between professionals to respond to the diversity of the centre. The lack of resources for teachers to put their training into practice, the lack of technical support for students who need it to access information, the lack of activities for teacher training, and the lack of consideration given to students' interests when developing the curriculum were identified as the main barriers to inclusive education.

We conclude by stating that identifying the facilitating and hindering elements present in this centre for inclusive education helps us to start progressing on the road to quality education with all and for all.

---

Keywords: inclusive education, diversity, self-evaluation, educational resources.

---

## 摘要

从包容范式面对学生的多样性需要学校进行一个自我反思的过程,以帮助他们分析阻碍所有学生充分参与的优势和劣势。本研究的目的是分析初等教育阶段半公半私学校资源使用和配置的优势和障碍。

我们进行描述性和定量的案例研究,通过“关注多样性中心(ACADI)自我评估指南”工具对23名受访专业人士的意见进行分析,其中具体的维度为“资源”维度。

结果表明,该中心的主要优势在于其现有资源的目的、设施的可达性、家庭的参与以及教师之间的协调,以应对学校的多样性需求。其阻碍包容性的障碍包括教师缺乏将培训付诸实践的资源、缺乏为有需要的学生提供的技术援助、缺乏对教师的培训活动以及从学生利益出发的考虑有限。学生构建课程。

结论表明,了解该包容性教育中心存在的促进和阻碍因素,有助于我们开始在全民优质教育的道路上取得进展。

---

关键词:全纳教育、多样性、自我评估、教育资源。

---

## Аннотация

Решение проблемы разнообразия учащихся в парадигме инклюзии требует от школ осуществления процессов самоанализа, которые помогают им оценить сильные и слабые стороны, препятствующие полноценному участию всех учащихся. Целью данного исследования было проанализировать сильные и слабые стороны использования и предоставления ресурсов в одной начальной школе.

Было проведено описательное и количественное исследование, в котором анализировалось мнение 23 специалистов, опрошенных с помощью инструмента «Руководство по самооценке Центра внимания к разнообразию (ACADI)», в особенности аспект, касающийся «Ресурсов».

в качестве основных достоинств были отмечены целевое использование центром имеющихся ресурсов, доступность помещений, участие семей и координация работы преподавательского состава в соответствии с разнообразием центра. В качестве барьеров, препятствующих развитию инклюзии, были отмечены недостаток ресурсов для практического применения преподавателями своей подготовки, нехватка технических средств обучения для нуждающихся в них учащихся, отсутствие обучающих мероприятий для преподавателей, а также недостаточный учет интересов учащихся при построении учебной программы.

Сделанные выводы показывают, что знание ресурсов, способствующих и препятствующих включению учащихся в образовательный процесс в данном центре, позволит наметить направления совершенствования на пути к качественному образованию для всех и для каждого.

---

Ключевые слова: инклюзивное образование, разнообразие, самооценка, образовательные ресурсы.

---

## Introduction

In order to include every student in the school life of a centre, it is necessary to advocate for an education where diversity is considered an educational value, since we are all unique and diverse (Ainscow, 2020; Arnaiz, 2019). However, in order to achieve inclusive, quality and equitable education for all, it is essential to have adequate resourc-

es and to know which processes ensure their correct use (Gitschthaler et al., 2021; Goldan & Schwab, 2020; Thieme et al., 2011).

The current Law on Education 3/2020, of December 29 (LOMLOE, 2020), establishes in its preamble that the schooling of students must be governed by the principles of inclusion, participation, equality and facilitate access and presence within the educational system. To achieve this, in Chapter 2, it outlines the objectives and actions that must be carried out between educational Administrations to eliminate the barriers that limit access, attendance, participation or learning of all students, including students with specific educational support needs.

Based on this legislative approach, the school, as an educational institution, must have resources adjusted to the characteristics of each student so that everyone feels welcomed, safe and assured that they will achieve their proposed goals (Goldan et al., 2021; Valenzuela et al., 2014), thus, the provision of resources according to a student's needs - as well as the specific services provided -, is estimated as one of the ten success criteria when defining an educational system of quality (Paseka & Schwab, 2020). In fact, a centre with a wide variety of resources will encourage teachers to take them into account when planning their classroom activities. This promotes methodologies used by teachers which allows the fulfilment of different tasks, an increase in student motivation and, therefore, more meaningful learning (Puspitarini & Hanif, 2019; Wang et al., 2021). In this sense, it should be noted that the research by Botías and Mirete (2019) concluded that teachers in state-aided centres claimed to have more resources to meet the specific needs of their students than teachers in state run centres.

From this perspective, we can consider that the barriers faced by the students do not come only from their own difficulties or from the existing resources in the centre, but also from the interactions they have with their environment (Antona, 2020) and from the attitudes or beliefs shared by the different educational agents (De Haro et al., 2019; Sanahuja et al., 2020a; Valenzuela et al., 2014). For this reason, a particular students' progress does not depend on a single factor -such as their personal characteristics-, but is also influenced by the type of opportunities, support and resources which are provided by the school. (González et al., 2019). In this way, Blanco (2006) affirms that the same student can have learning and participation difficulties in one school and not have them in another.

Consequently, schools must be structured in such a way that they are accessible and safe for the entire educational community (Collins et al., 2021), since a good school environment means a better quality of life and better academic results (López, 2005). In this regard, Moreno et al. (2020) highlight, as one of the main limitations of centres for students with disabilities, the architectural barriers or the lack of signage that prevent and hinder movement in them. The aforementioned study indicates that the majority of teachers estimated that the tables and chairs in the classrooms were not sufficiently adapted to provide full inclusion of students with these needs, and that in 30% of cases there was no adequate accessibility to the classroom essentials (teacher's desk, blackboard). To avoid situations like the one mentioned, educational centres must have adequate facilities and resources accessible to all, since learning is based on the interaction of the individual with the environment that surrounds him or her. Following Benítez (2020) and Milojković et al. (2019), the various learning spaces of educational centres should present the following characteristics: flexibility, variability, security, adaptability, polyvalence and communicability, in order to achieve multilevel teaching and methodologies focused on a greater degree of participation (Pascual et al., 2019; Sanahuja et al., 2020b).

Inclusion also refers to the need to eliminate barriers to access, learning and participation, understanding barriers as being those elements or factors that make it impossible to access the right to receive an inclusive education (Moya, 2019). The elimination of these requires the organization and adaptation of the resources in the centre and its surroundings (Tébar, 2018), since inclusion is not only the responsibility of the school, but needs the participation of “all the social agents that are involved within and outside the school, such as: family, neighbourhood and the media... Therefore, it affects the community in general” (Araque & Barrio de la Puente, 2010, p. 8). Carmona-Saez et al. (2021) underline the benefits of the participation of the community and, specifically, of families in the teaching-learning process of the students, since this not only increases the academic performance of the students, but also reduces school dropout rates and improves the climate of coexistence inside the schools. In this same line, Santos et al. (2019) highlight the importance of family-school collaboration as a key resource to promote the educational success of all students (García et al., 2010; Hernández & López, 2006).

Another important key factor, for the good use of resources, is teacher training and how to organize and include it in teaching-learning processes (Gallardo et al., 2019; López et al., 2012). The teacher must have training that has an impact in the classroom and improves the quality of teaching, so that it acquires an essential role in the educational response to all students who, regardless of their ability or level of learning, develop their skills to the maximum. (Kisbu-Sakarya & Doenyas, 2021; Majoko, 2019). As indicated by González et al. (2019), “the teacher, as designer of teaching-learning processes, is an essential element to guarantee education with all and for all students” (p. 244).

Therefore, resources are essential to build an inclusive school, and they must be sufficient so that all students have the same opportunities and can fully develop (Garzón et al., 2016; Gutiérrez & Castro, 2018), as long as they are accompanied by a favourable attitude towards inclusion on the part of the entire educational community. This would ensure that diversity is considered as a valued asset and as a fundamental resource to promote inclusive practices. Alcaraz and Arnaiz (2020) point out the value of inclusion as a commitment that positively values diversity in society, which is why it is necessary for schools to put it into practice and make it a reality for all students. To this end, self-assessment processes must be carried out by the centres which identify the existing barriers in them and detect the elements that hinder the development of inclusive teaching models and establish actions for change and improvement.

With this purpose in mind, in the present study, the general objective consists of analysing the strengths and barriers in the use and disposition of the resources present in a state-aided school for infant and primary education in the Region of Murcia.

The specific objectives derived from it are:

1. Ascertain the need for and availability of resources in the centre.
2. Identify the diversity of materials and facilities in the centre.
3. Explore the resources that families and the educational community contribute to the centre.
4. Examine how teachers organize time and space, as well as the use of resources in the teaching-learning processes.

# Method

## Design

Research has been carried out with a descriptive and quantitative approach, specifically, a case study (Stake, 2006). The analysis of the availability and the use of resources was a topic of interest for the improvement of educational practices carried out by the educational centre. However, the centre did not have a system of analysis for this dimension. This entailed the selection of the case under study based on convenience criteria/sampling.

## Context and participants

The chosen school, situated in the Region of Murcia, is a state-aided cooperative educational centre which comprises of Early Childhood, Primary and Secondary Education. It is close to a nursery school and an industrial park where several car showrooms are located. In a relatively close radius is the centre of the urban area with leisure and service areas.

To obtain the sample, a non-probabilistic procedure was carried out, specifically, a convenience sampling. The invited sample was made up of 23 Primary Education professionals who agreed to participate fully in this study, which means 100% representation and a margin of error less than 3% (Table 1).

**Table 1**

*Participants according to the position they hold in the centre*

Post	Participants (%)
Primary Education Teachers	12 (52.0)
Specialists	3 (13.0)
Attention to Diversity team	6 (26.0)
Management Team	2 (9.0)
Total	23 (100.0)

## Instrument

The “A Guide to School Self-assessment for Attention to Diversity” (ACADI) instrument was used, based on an inclusive educational model (Arnaiz & Guirao, 2015). This allows for an objective institutional self-assessment which is capable of analysing and interpreting the reality of the situation within a centre and establish actions of improvement. Through a series of indicators, it allows the evaluation of the quality of the educational response to the diversity of the students and to discover whether or not their educational model favours educational inclusion.

ACADI consists of four areas (school context, resources, educational process, and results) that are divided into a series of categories and indicators that are broken down into items that are answered on a Likert-type scale (Very little/Little/Sufficient/A lot).

Specifically, in this paper the dimension “Resources” (Cronbach’s Alpha ( $\alpha$ ) = .967) was used.

## Variables

The predicting variable was the body that completed the questionnaire (management team, specialist teachers, tutors and support team).

The criteria variables were made up of the different needs of the centre concerning the provision of resources, the identification of the materials and facilities existing in the centre, the coordination between the different professionals, the use of space and time, as well as the use of resources in teaching-learning processes in responding to diversity.

## Procedure

Various sources of information were consulted and it was concluded that the ACADI “Resources” field would be the object of study, because of the great importance the centre placed on resources favouring the carrying out of practices consistent with inclusive education. In determining the problem and the objectives of the study, the participating sample was selected. Before data collection, and in order to comply with the ethical principles of educational research, the participants were informed of the aims and objectives of the study, as well as the guarantee of data protection, both individual and collective. Subsequently, all participants completed an informed consent form. Once the data was analysed and the results interpreted, the conclusions, limitations of the study and future lines of research were drawn up.

## Data analysis

Descriptive statistics (means and standard deviations) were used for the analysis of quantitative data. Subsequently, inferential statistics were carried out to assess the existence of statistically significant differences based on the following variables: management team, specialist teachers, tutors and support team.

To verify the normality of the study sample, the Shapiro-Wilk statistical test and the Levene test were applied. The results obtained were  $p < .5$ , so non-normal distribution, non-parametric statistics (Kruskal-Wallis) were applied, with a statistical significance level of ( $\alpha$ ) equal to .05. These analyses were performed using the SPSS statistical package, version 24 for Windows.

## Results

The results are presented following the specific set objectives. As this study aimed to identify the strengths and barriers that lead to inclusive education, those items whose average is less than 3 were considered as hindering elements to achieve it, and those that exceeded said value as facilitators.

## a) Need for and availability of resources in the centre

To respond to this objective, 18 items have been used that refer to the criteria that the centre uses for the provision of resources according to the needs of the students, and the use and the purpose that the teaching staff makes of them.

The item that obtained the highest score was 1.10 ( $X = 3.52$ ;  $\sigma = .51$ ). 47.8% of the professionals considered that the purpose of human and material resources is focused on supporting the acquisition of basic skills by the students and 52.2% "A Lot", which means that all the participants gave positive assessments concerning this statement. The next highest score was item 1.13 ( $X = 3.43$ ;  $\sigma = .72$ ), with 87% of responses giving values "Sufficient" and "A Lot". Item 1.11 was also well valued ( $X = 3.39$ ;  $\sigma = .65$ ), since 91.3% of the professionals considered that the use made of resources in order to favour the development of students' social skills "Sufficient" or "A Lot". Finally, items 1.9 and 1.12 obtained the same average ( $X = 3.35$ ;  $\sigma = .57$ ) with a positive assessment of 95.6% divided between the options "Sufficient" and "A lot". This result indicates that a high percentage of teachers consider that support resources are used to prevent barriers to learning and participation. Moreover, we can also observe that the majority of teachers consider that supplementary personal resources are provided for students with some specific educational support needs.

As for hindering elements, we find item 1.14 ( $X = 2.96$ ;  $\sigma = .63$ ), according to which 21.7% of teachers considered that the resources assigned to the centre to support students with special educational needs was limited. It is also worth noting the values obtained by items 1.4 and 1.6 ( $X = 2.87$ ;  $\sigma = .75$ ) which show 65.2% of teachers considered that the use made of diversity as a teaching resource was "Sufficient" and "A lot", compared to 34.8% who considered it "Little". Finally, item 1.17 ( $X = 2.74$ ;  $\sigma = .75$ ) obtained the highest percentage (43%) with the value "Little", consequently, teachers considered the resources provided to them for their training and improvement to be insufficient which has repercussions in the classroom (Table 2).

**Table 2**

*Descriptive statistics and frequencies for the items of specific objective 1*

	Very Little	Little	Sufficient	A Lot
1.10 Human and material resources are focused on promoting the acquisition of basic skills of students in the learning process	0	0	47.8	52.2
1.13 There is concern on the part of the teaching staff to find resources and support that helps them manage and improve learning in the classroom	0	13.0	30.5	56.5
1.11 Use resources to promote the development of students' social skills	0	8.7	43.5	47.8
1.9 Support resources are directed at preventing barriers to learning and participation	0	4.3	56.5	39.1
1.12 The availability of supplementary personal resources is carried out to reinforce the educational attention to those students who present a specific need for support	0	4.3	56.5	39.1



	Very Little	Little	Sufficient	A Lot
1.3 The experience of teachers is used to improve educational processes	0	13.0	43.5	43.5
1. 8 Human and material resources are focused on promoting autonomy	0	8.7	52.2	39.1
1.5 Teachers make resources to support learning and participation	0	17.4	39.1	43.5
1.7 Common organizational principles are established that make it possible to maximize the use of resources	0	21.7	47.8	30.4
1.15 Resources to respond to special educational needs are used to increase the capacity of the centre to attend to diversity	0	26.1	39.1	34.8
1.1 Teachers review the use of material or teaching resources regularly, so that they can be used flexibly to respond to the changing needs of all students	0	17.4	65.2	17.4
1.2 Different professionals from the community are used to collaborate in different extracurricular activities	0	26.1	47.8	26.1
1.16 There is coordination between the centre and the resources for attention to special needs external to it (associations, early care centres)	0	21.7	56.5	21.7
1.14 Resources are assigned to the centre to support students with special educational needs	0	21.7	60.9	17.4
1.18 Material resources are available for use by all teachers	0	30.4	47.8	21.7
1.4 The diversity of the student body is used as a didactic resource for the teaching and learning	0	34.8	43.5	21.7
1.6 Community institutions are considered as a resource for the centre	0	34.8	43.5	21.7
1.17 Necessary resources are provided so that the training and improvement of teachers has an impact in the classroom	0	43.5	39.1	17.4

In relation to the existence of statistically significant differences between professionals, the Kruskal-Wallis test has not shown differences for this specific objective ( $p > .05$ ).

## b) Diversity of materials and facilities of the centre

The 18 items referring to the diversity of materials and facilities existing in the centre in order to respond to the diversity of the students were analysed.

In the data presented in Table 3, item 2.3 is the one that obtained the highest average score ( $X = 3.52$ ;  $\sigma = .51$ ), since 47.8% of the teaching staff affirmed that the centre and

its facilities are “Sufficiently” accessible to everyone, added to a 52.2% that gave the value “A lot”. This is followed by item 2.15 ( $X = 3.43$   $\sigma = .66$ ), were 91.3% of the participants responded with the values “Sufficient” and “A Lot” regarding the use of email and the Internet in class. Item 2.5 had an average rating of 3.39, thus showing that 60.9% of the participants considered accessibility to be something that is universal, together with 39.1% who confirmed it with the highest value. This is corroborated with item 2.6 ( $X = 3.30$ ), in which 95.7% considered that the centre cares “Sufficiently” and/or “A Lot” in its understanding of the regulations of universal accessibility and non-discrimination.

On the contrary, the weaknesses found in this objective refer to the limited availability and use of resources and technical aids for students with visual disabilities (item 2.17;  $X = 2.48$ ,  $\sigma = .84$ ). Along the same lines, item 2.18, with a mean of 2.65 ( $\sigma = .77$ ), indicates that 56.5% of the professionals considered “Little” or “Very Little” the provision and use of alternative communication systems for students with motor disabilities. It is important to highlight that it was the item with the highest percentage in the value “Very Little”. The same happens with item 2.2 ( $X = 2.91$ ,  $\sigma = .66$ ), in which 26.1% of the professionals believed that different materials and supports are rarely used in the presentation of information. In last place is item 2.1 ( $X = 2.78$ ;  $\sigma = .73$ ), observing that 39.1% of the professionals considered technical aids to be insufficient for the students who need such aids to be able to access the information.

**Table 3**

*Descriptive statistics and frequencies for the items of specific objective 2*

	Very Little	Little	Sufficient	A Lot
2.3 The centre makes its facilities and services physically accessible to all	0	0	47.8	52.2
2.15 Teachers use email and the Internet to support teaching and learning	0	8.7	39.1	52.2
2.5 Accessibility is considered universal, as a basis for including all people and not only students with disabilities	0	0	60.9	39.1
2.4 Organizations for people with disabilities are taken into account regarding the accessibility of the centre	0	4.3	56.5	39.1
2.6 The centre is concerned with being aware of the regulations on universal accessibility and non-discrimination of people, and that can affect educational work	0	4.3	60.9	34.8
2.7 The centre offers security measures at the infrastructure level for all students, taking into account the characteristics and needs of students with special educational needs	0	21.7	34.8	43.5
2.16 Cassettes and CDs are used to support the oral work of the curriculum	4.3	8.7	47.8	39.1

	Very Little	Little	Sufficient	A Lot
2.14 Computers are integrated into teaching through curriculum development	4.3	17.4	43.5	34.8
2.9 Give students the opportunity to communicate with their classmates through different means	0	30.4	34.8	34.8
2.10 Students are provided with contact with all kinds of written materials, press, stories, letters, written messages, etc.	0	30.4	47.8	21.7
2.12 Intercultural stories are used that promote the richness of diversity and a whole series of values, such as respect, solidarity, etc.	0	30.4	34.8	34.8
2.8 The students have useful and diverse materials for the class activity	0	30.4	39.1	30.4
2.2 Information is presented using a variety of modalities and supports [visual, auditory, tactile, iconic]	0	26.1	56.5	17.4
2.11 Natural resources or the environment itself are used for educational purposes	0	30.4	47.8	21.7
2.13 Activities that promote the development of empathy through intercultural games are encouraged	0	30.4	52.2	17.4
2.1 Students who need it use technical aids to access information	0	39.1	43.5	17.4
2.18 Alternative communication systems are available and used for students with motor disabilities	8.7	47.8	30.4	13.0
2.17 Tyflotechnical devices or technical aids are available and used for visually impaired students	4.3	8.7	47.8	39.1

The Kruskal-Wallis test did not show significant differences depending on the different professional agents ( $p > .05$ ).

### c) Resources that families and the educational community contribute to the centre

In order to respond to this specific objective, the 4 items related to the participation of families and the educational community in the centre were analysed.

As can be seen in Table 4, in general, the values are high since they are all close to the maximum score (4). Item 4.1, with a mean score of 3.43 ( $\sigma = .59$ ), was answered positively by 95.6%, this indicates that the vast majority of participants (95.6%) inform families of their school's policies and practices. Similarly, item 4.4 had an average score of 3.30 ( $\sigma = .76$ ), which was answered by 47.8% of the professionals with the highest score on the scale. Item 4.2 ( $X = 3.17$ ;  $\sigma = .88$ ) shows that 43.5% of the professionals considered there are numerous opportunities for families to participate in the centre's

decisions and gave them the value “A Lot” within the scale, compared to a 21.7% who did not consider them as “Sufficient”.

As we have mentioned previously, we did not find any weaknesses, since all the items reached a value with a mean greater than 3. However, it is worth noting item 4.3 with a mean of 3.04 ( $\sigma = .87$ ), since it obtained a higher percentage of answers in the value “little” (21.7%).

**Table 4.**

*Descriptive statistics and frequencies for the items of specific objective 3*

	Very Little	Little	Sufficient	A Lot
4.1 The centre informs families of all school policies and practices	0	4.4	47.8	47.8
4.4 The different contributions that families can make to the centre are heard and appreciated in equal measure	0	17.4	34.8	47.8
4.2 All families are offered the opportunity to be involved in decision-making in the centre	4.3	17.4	34.8	43.5
4.3 Families have a variety of opportunities to become involved and participate in the centre	4.3	21.7	39.2	34.8

The Kruskal-Wallis test did not show significant differences depending on the different professional agents ( $p > .05$ ).

#### **d) How teachers organize time and space, as well as the use of resources in teaching-learning processes**

In order to respond to this objective, the 17 items that refer to the organization of time and space in the centre were analysed, as well as the use of learning resources used by teachers to give an adequate response to the diversity of the students present in the classrooms.

In view of the results obtained in Table 5, the item that obtained the highest score was 6.9 ( $X = 3.48$ ;  $\sigma = .59$ ), with 96% of evaluations distributed between “A Lot” (52.5%) and “Sufficient” (43.5%). This shows that teachers instruct students to make presentations using different forms of expression and grouping. It is followed by item 6.15 ( $X = 3.39$ ;  $\sigma = .65$ ), evaluated at 47.8% with the highest value within the scale, which indicates that on many occasions this percentage of teachers start the learning process with easier tasks and progressively transition to more difficult ones. Item 6.5 has also been well valued ( $X = 3.35$ ;  $\sigma = .65$ ), since 95.6% of the professionals take into account actively motivating the students to search for information. Items 6.16 and 6.17 also obtained a good score ( $X = 3.30$ ) with a standard deviation of  $\sigma = .76$  and  $\sigma = .70$ , respectively. Consequently, 82.6% of teachers take into account learning difficulties in the classroom to regulate content compared to 17.4% who take it into account “A Little”. Thus, item 6.17 indicates that 87% of teachers considered that they do take into account the time that

certain students will require to assimilate the contents worked on, as opposed to 13% who considered that it is taken into account "A Little".

As shown in Table 5, items 6.8 and 6.10 are the ones that obtained the worst score with a mean of 2.96 ( $\sigma = .70$ ) and 2.78 ( $\sigma = .79$ ), respectively. Item 6.8 shows that 26.1% of teachers considered the ability of students to use the library and technological resources by themselves to be low, compared to 21.7% who believe that they are sufficiently capable of doing so. Finally, item 6.10 with 17.4% in the value "A Lot", shows the low proportion of teachers who attach great importance to identifying the interests of the students in order to develop the curriculum.

**Table 5**

*Descriptive statistics and frequencies for the items of specific objective 4*

	Very Little	Little	Sufficient	A Lot
6.9 Students are taught to make oral, written and other ways of presenting their work, both individually and in groups	0	4.0	43.5	52.5
6.15 The learning process begins with less difficult tasks and progressively transitions to the more difficult ones	0	8.7	43.5	47.8
6.5 Students are motivated to actively search for information as a source of learning	0	4.4	56.5	39.1
6.16 The amount of content to be learned is regulated by taking into consideration students who have learning problems, hearing difficulties, etc.	0	17.4	34.8	47.8
6.17 When planning the learning process, the needs of students who will need more time to practice, to review, and smaller incremental steps during the process are taken into account	0	13.0	43.5	43.5
6.12 The didactic unit is set out in such a way that it has a variety of activities, such as debates, oral presentations, writing, drawing, problem solving, use of the library, use of audio-visual materials, the performance of practical tasks or the use of information technologies	0	13.0	47.8	39.1
6.1 Students are provided with the use of different spaces (library, laboratories, computer room...) for the development of the educational process	0	8.7	60.9	30.4
6.13 Teachers provide alternative modalities of access to experiences or learning for students who cannot participate in specific activities, for example, using alternative resources in science or setting different exercises	0	17.4	43.5	34.8
6.4 There are criteria for the distribution of space that take into account the various activities	0	13.0	56.5	30.4

	Very Little	Little	Sufficient	A Lot
6.6 Clear information is provided to students about expectations for learning in classes	0	8.7	65.2	26.1
6.2 There are criteria for determining schedules that allow flexible groupings	0	21.7	43.5	30.4
6.3 There are criteria for the organization of support that favours greater student participation in their reference group	0	21.7	43.5	30.4
6.7 The classroom atmosphere and the organization of teaching resources contribute to the autonomous learning of students	0	21.7	43.5	34.8
6.11 In the didactic planning, the previous knowledge of the students as well as their interests and motivations are taken into account.	0	21.7	43.5	34.8
6.14 A global or interdisciplinary methodology is used to facilitate the establishment of relationships between the contents and the transfer of information	0	30.4	39.1	30.4
6.8 Students are able to use the library and technological resources by themselves	0	26.1	52.2	21.7
6.10 Student interests are identified and used to build the curriculum around them	4.4	30.4	47.8	17.4

The Kruskal-Wallis test has not shown differences between the different professional positions.

## Discussion and conclusions

In this work, the strengths and weaknesses present in the analysed centre have been studied, in terms of the availability of; material resources, facilities and individualised resources which favour the development of an inclusive education for all students (Ainscow, 2020; Arnaiz, 2019; Gutiérrez & Castro, 2018). To this end, the centre's professionals have developed self-assessment processes that have helped them identify, analyse, and assess the strengths and weaknesses in the use of their resources to promote access, learning, and student participation (Arnaiz & Guirao, 2015).

The general perception of teachers regarding the provision of resources in the centre is that there are sufficient to respond to the existing needs in it (Gitschthaler et al., 2021; Goldan & Schwab, 2020; Thieme et al., 2011).

Thus, more than 80% of the participating teachers consider that the centre has the necessary resources to support students with special educational needs, which will help them to be successfully integrated in the classroom, as has also been shown in other investigations (Botías & Mirete, 2019; Garzón et al., 2016). The use of human and material resources to promote the acquisition of basic skills in students stands out as the main strength, making them feel confident that students will achieve their proposed objectives (Sanahuja et al., 2020b; Valenzuela et al., 2014). This premise is

essential if you want to carry out an inclusive educational response based on an equitable and quality model (Blanco, 2006; Goldan et al., 2021; Paseka & Schwab, 2020; Sanahuja et al., 2020a).

Likewise, teachers are concerned about finding resources and support to help direct and improve learning. Although more strengths than weaknesses were found, it is worth mentioning the lack of resources in the centre for the training and improvement of teachers which has an impact in the classroom. This fact makes it difficult for teachers to improve educational quality, and therefore for students to develop their skills to achieve adequate development (Gallardo et al., 2019).

It should be emphasised as a weakness that the conception of diversity is not considered as a valuable asset for the centre and also the lack of positive attitudes towards it (Alcaraz & Arnaiz, 2020). It is worth noting the limited consideration towards community institutions as a resource, due to the lack of perception of the benefits that they can contribute. These results contrast with the principles of an inclusive school where all agents are involved, both internal and external to the school (Antona, 2020; Araque & Barrio de la Puente, 2010).

With regards to the diversity of materials and facilities in the centre, accessibility to the centre's facilities and services stands out as its main strength, considering accessibility as something universal for all people and not only for students with disabilities (Benítez, 2020 ; Collins et al., 2021; Milojković et al., 2019). This accessibility in the centre leads one to think that the teachers agree with what López (2005) expressed, when he affirms that the improvement of the school environment, and of its spaces, produces an increase in the quality of life of the students and their curricular results. On the contrary, there are studies that insist that there are still many centres that do not incorporate accessibility policies (Moreno et al., 2020).

However, one aspect that must be improved is the lack of information and communication technologies (ICT) for students with disabilities, which makes it difficult for them to participate on an equal footing with their peers and to develop aspects of their cognitive, emotional and social development (Ferreya et al., 2009). The limited use of different modalities in presenting information is also detected as a weakness, perpetuating uniformity in the classrooms and thus making it difficult to respond to diversity. This result contrasts with the results of the research carried out by López et al. (2012) where the majority of those surveyed affirmed that they make use of ICT to facilitate the work of the students. Another aspect that could be improved is the lack of activities that promote the development of empathy through intercultural games. With regards to this, what is pointed out by Araque (2008) should be noted when he states that sociocultural animation favours intercultural education.

In relation to the resources that the family and the educational community contribute to the centre, no weaknesses have been detected. The participants in this study positively value their support for the centre and thereby achieve their desire to "make effective the goal of quality education for all and with all" (Valenzuela et al., 2014, p. 64). This idea is consistent with inclusive education in that the family, school and community maintain an attitude of listening and participation in which the contributions made are valued and taken into account. This commitment implies that all educational agents must act collaboratively and show concern for others, disassociating themselves from individualistic positions. In short, as Simón et al. (2016), "this entails the realisation that change in a centre is facilitated when different people (or groups) come together in joint and collaborative actions towards the same goal" (p. 38).

Although it is true that no weaknesses have been found, it should be noted that, for 17% of teachers, families do not have many opportunities to become involved and participate in the centre. This point of view is consistent with that of the participants in the study carried out by García et al. (2010), considering that family participation was low in most activities. In the same way, the study carried out by González et al. (2019) revealed that Early Childhood Education and Primary Education teachers considered the exchange between family and school insufficient. An aspect that is striking since, as indicated by Hernández and López, (2006), “family and school are two sides of the same coin (some speak of their son or daughter and others of the student, but all speak of the same child), and without participation neither the school nor the family can exist as educational agents” (p. 13). This leads us to consider that families, as well as other members of the community environment, should have a greater variety of opportunities to be able to become involved in and be part of the centre (Carmona-Sáez et al., 2021; Santos et al., 2019).

When teachers consider the organization of space and time, as well as the use of resources in their teaching-learning processes, in a way that responds to the diversity of the students, it is considered as a strength to use different forms (oral and written) in which students present their work, this facilitates learning for students who have different rates of understanding and meaningful learning (Puspitarini & Hanif, 2019; Wang et al., 2021). This result shows a favourable attitude towards inclusive practices, coinciding with the results obtained in other works (De Haro et al., 2019). Likewise, the way in which activities are presented stands out as a strength (Kisbu-Sakarya & Doenayas, 2021; Majoko, 2019) -from least to most difficult-, which is in line with diversity in education, since this model consists of adjusting “the educational intervention to individuality [...] to the different capacities, interests and motivations of the students” (Araque & Barrio de la Puente, 2010, p. 11).

However, the centre does not adequately comply with this intervention in diversity, since its main weakness is that the interests of the students are not used to develop the curriculum around them. This is in contrast to an inclusive school in which all students participate in activities and situations suitable to their abilities (Moya, 2019). Likewise, students do not have sufficient autonomy in order to use the library and technological resources.

Continuing with the results, the use of school time has been valued very positively by the entire teaching team. This shows that the centre takes into account the diversity of its students and is flexible in its time organisation, a fact that coincides with the approach presented by Tébar (2018), stating that a centre that seeks quality teaching needs to adapt to the heterogeneity of its students and be compulsory within its organization.

The organization of spaces constitutes another source of strength, from which it can be deduced that the teachers take into account the heterogeneity of the students to work better on the needs and opportunities that the subject requires. This fact coincides with the approach of Botías and Mirete (2019) when valuing all spaces as a source of learning. These results support what was stated by Pascual et al. (2019) when they affirm that “spaces should be conceived as places where multilevel teaching is encouraged and methodologies allow a greater degree of participation and learning for all” (p.14).

As a final contribution, it should be noted in this discussion of the results that no statistically significant differences have been found between the different professional



posts that completed the questionnaire, from which it can be deduced that the use and disposition of resources do not differ from one group to another. This result coincides with those found in the research carried out by López et al. (2012).

In relation to the general objective established in this research, and as a conclusion therefore, it is worth highlighting as strengths of this centre the use of human and material resources to promote the acquisition of basic skills; teachers' commitment to finding resources and support to help direct and improve learning; the participation of families in the centre; the conceptualization of support as a general plan to improve teaching in order to attend to the diversity of the centre; and the different ways in which students present their work.

With regards to the weaknesses, though fewer than the strengths, there are difficulties in the centre that require actions such as: providing more resources to the centre so that the training and improvement of the teaching staff has an impact in the classroom, as well as to support students with special educational needs; the use of diversity as a learning resource; the provision of technical aids which facilitate and supports the realization of training plans and activities for all the teaching staff.

It is also necessary to establish guidelines that support teachers in their professional training in order for them to assist foreign students and thereby change their belief that their care and progress is only the responsibility of specialist teachers and not of the entire educational community. It should be noted that the educational centre has considered the results of this study with the aim of proposing improvements in the next school year aimed, mainly, at a greater provision of technical aids that facilitate access to information for all students and to carry out teacher training and improvement activities for the optimal use of various resources (individualised, material, digital, etc.); aspects that will be considered in the Centre's Annual Report.

With regard to the limitations of the study, it should be noted that qualitative techniques such as interviews or focus groups could have been used to investigate more deeply the opinion of the different participating professional roles. In the same way, the participation of families and the students themselves could be taken into account for future studies, which would broaden the perspective of the strengths and barriers in the use and provision of resources in the centre.

We are aware that there is still a long way to go to achieve an inclusive education that forms part of the culture of the centre. For this reason, a future line of research could consist of expanding the number of participants from state-aided and state run centres, in order to make inter-centre comparisons that contribute to the development of environments that are increasingly committed to attention to diversity and to the creation of fully inclusive educational centres.

## References

- Ainscow, M. (2020). Promoting inclusion and equity in education: Lessons from international experiences. *Nordic Journal of Studies in Educational Policy*, 6(1), 7-16.
- Alcaraz, S., & Arnaiz, P. (2020). La escolarización del alumnado con necesidades educativas especiales en España: un estudio longitudinal. *Revista Colombiana de Educación*, 78, 299-320. <http://doi.org/10.17227/rce.num78-10357>
- Antona, P. (2020). La orientación educativa en la enseñanza reglada. *EIKASIA, Revista de Filosofía*, 99, 157-188.

- Araque, N. (2008). Experiencia sobre resolución de conflictos entre culturas a través de un aula-taller de Educación Intercultural. *Revista Complutense de Educación*, 20(1), 99-113.
- Araque, N., & Barrio de la Puente, J. L. (2010). Atención a la diversidad y desarrollo de procesos educativos inclusivos. *Prisma Social*, 4, 1-37.
- Arnaiz, P. (2019). La Educación Inclusiva: Mejora escolar y retos para el siglo XXI. *Participación Educativa*, 6(9), 39-53.
- Arnaiz, P., & Guirao, J. M. (2015). La autoevaluación de centros en España para la atención a la diversidad desde una perspectiva inclusiva: ACADI. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 18(1), 45-101. <http://dx.doi.org/10.6018/reifop.18.1.214341>
- Benítez, A. C. (2020). El espacio escolar: escenario pedagógico de formación y transformación social. Sinopsis educativa. *Revista Venezolana de Investigación*, 20, 344-353.
- Blanco, R. (2006). La Equidad y la Inclusión Social: Uno de los Desafíos de la Educación y la Escuela Hoy. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 4(3), 1-15.
- Botías, M. S., & Mirete, A. B. (2019). Inclusión en las aulas de apoyo en la Región de Murcia (España) desde la perspectiva de los especialistas. *Revista Interuniversitaria de Formación del Profesorado*, 33(1), 131-146.
- Carmona-Sáez, P., Parra-Martínez, J., & Gomariz-Vicente, M. Á. (2021). Participación de las familias de alumnado con apoyos y atenciones diferentes: un estudio en un contexto multicultural. *RIE: Revista de Investigación Educativa*, 39(1), 49-69. <https://doi.org/10.6018/rie.386551>
- Collins, A., Rentschler, R., Williams, K., & Azmat, F. (2021). Exploring barriers to social inclusion for disabled people: perspectives from the performing arts. *Journal of Management & Organization*, 28(2), 1-21. <https://doi.org/10.1017/jmo.2021.48>
- De Haro, R., Ayala, A., & Del Rey, M. V. (2019). Promoviendo la equidad en los centros educativos: identificar las barreras al aprendizaje y a la participación para promover una educación inclusiva. *Revista Complutense de Educación*, 31(3), 341-352.
- Gallardo, I. M., San Nicolás, M. B., & Cores, A. (2019). Visiones del profesorado de primaria sobre materiales didácticos digitales. *Campus Virtuales*, 8(2), 47-62.
- García, M<sup>a</sup>. P., Gomariz, M.<sup>a</sup> A., Hernández Prados, M.<sup>a</sup> A., & Parra Martínez, J. (2010). La comunicación entre la familia y el centro educativo, desde la percepción de los padres y alumnos. *Educatio Siglo XXI*, 28(1), 157-188.
- Garzón, P., Calvo, M<sup>a</sup>. I., & Orgaz M<sup>a</sup>. B. (2016). Inclusión educativa. Actitudes y estrategias del profesorado. *Revista Española de Discapacidad*, 4(2), 25-45. <http://doi.org/10.5569/2340-5104.04.02.02>
- Gitschthaler, M., Kast, J., Corazza, R., & Schwab, S. (2021). Resources for inclusive education in Austria: an insight into the perception of teachers. In J. Goldan, J. Lambrecht & T. Loreman (Eds.), *Resourcing Inclusive Education (Vol. 15)* (pp. 67-88). Emerald Publishing Limited.
- Goldan, J., & Schwab, S. (2020). Measuring students' and teachers' perceptions of resources in inclusive education-validation of a newly developed instrument. *International Journal of Inclusive Education*, 24(12), 1326-1339.
- Goldan, J., Hoffmann, L., & Schwab, S. (2021). A Matter of Resources?- Students' Academic Self-Concept, Social Inclusion and School Well-being in Inclusive Educa-

- tion. In J. Goldan, J. Lambrecht & T. Loreman (Eds.), *Resourcing Inclusive Education* (Vol. 15) (pp. 89-100). Emerald Publishing Limited.
- González, F., Martín, E., & Poy, R. (2019). Educación inclusiva: barreras y facilitadores para su desarrollo. Análisis de la percepción del profesorado. *Profesorado, Revista de Curriculum y Formación del Profesorado* 1(23), 244-263.
- Hernández, M<sup>a</sup>, & López, H. (2006). Análisis del enfoque actual de la cooperación padres y escuela. *Aula Abierta*, 87, 3-26.
- Kisbu-Sakarya, Y., & Doenyas, C. (2021). Can school teachers' willingness to teach ASD-inclusion classes be increased via special education training? Uncovering mediating mechanisms. *Research in Developmental Disabilities*, 113, 103941.
- Ley Orgánica 3/2020, de 29 de diciembre, por la que se modifica la Ley Orgánica 2/2006, de 3 de mayo, de Educación (LOMLOE).
- López, A. (2005). La organización del espacio escolar: Un factor determinante para el cambio de la estructura organizativa. *Bordón*, 57(4), 519-533.
- López, M<sup>a</sup>, Almazán, F., Losada, O., & Heredero, E. (2012). Estudio de la organización y uso de los recursos educativos en el aula de Educación Primaria: Estudio de casos. *Revista Ibero-Americana de Estudos em Educação*, 7(4), 152-174.
- Majoko, T. (2019). Teacher key competencies for inclusive education: Tapping pragmatic realities of Zimbabwean special needs education teachers. *Sage Open*, 9(1), 2158244018823455.
- Milojković, A., Tamburić, J., Stanković, D., & Brzaković, M. (2019). Influence of space on interactivity aspects in pre-school facilities in the city of niš, Serbia: Case study analysis. *Tehnički Vjesnik*, 26(3), 793-800.
- Moreno, R., López- Bastías, J. L., & Carnicero, J. D. (2020). Formación en atención a Necesidades Educativas Especiales: modificación de la percepción de los maestros de Ecuador sobre la inclusión de estudiantes con discapacidad en el aula ordinaria. *Revista de Educación Inclusiva*, 13(2), 139-152.
- Moya, E. C. (2019). Hacia una educación inclusiva para todos. Nuevas contribuciones. *Profesorado, Revista de Curriculum y Formación del Profesorado*, 23(1), 1-9.
- Pascual, M.<sup>a</sup>, García, M. S., & Vázquez-Cano, E. (2019). Atención a la diversidad e Inclusión en España. *Sinéctica, Revista electrónica de Educación*, 53, 1-17.
- Paseka, A., & Schwab, S. (2020). Parents' attitudes towards inclusive education and their perceptions of inclusive teaching practices and resources. *European Journal of Special Needs Education*, 35(2), 254-272.
- Puspitarini, Y. D., & Hanif, M. (2019). Using Learning Media to Increase Learning Motivation in Elementary School. *Anatolian Journal of Education*, 4(2), 53-60.
- Santos, M. A., Lorenzo, M., & Priegue, D. (2019). La mejor de la participación implicación de las familias en la escuela: un programa en acción. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 22(3), 93-107. <http://dx.doi.org/10.6018/reifop.22.3.389931>
- Stake, T. E. (2006). *Multiple Case Study Analysis*. Guildford Press.
- Tébar, F. (2018). Autonomía de los centros educativos. *Revista de la Asociación de Inspectores de Educación de España*, 29, 1-26. <https://doi.org/10.23824/ase.v0i29.617>
- Thieme, C., Prior, D., Giménez, V., & Tortosa-Ausina, E. (2011). Desempeño de los centros educativos: ¿un problema de recursos o capacidades organizativas? *Revista de Economía Pública*, 199, 81-118.

- Valenzuela, B. A., Guillén, M., & Campa, R. (2014). Recursos para la inclusión educativa en el contexto de educación primaria. *Infancias Imágenes*, 13(2), 64-75.
- Wang, J., Tigelaar, D., & Admiraal, W. (2021). El intercambio de recursos educativos digitales entre docentes rurales: de la motivación al comportamiento. *Informática y Educación*, 161, 104055.

## Financing and thanks

This study has been financed through the project “What are we forgetting in Inclusive Education: A participatory investigation in the Region of Murcia?” (PID2019-108775RB-C44) of the Ministry of Science and Innovation of Spain.

We want to end this work by thanking the teachers for their time, involvement and participation in carrying out self-reflection processes that have allowed us to carry out this study.