

Inclusive education in motion: systematic review of the transition of educational centers to inclusive models

Educación inclusiva en movimiento: una revisión de alcance de la transición de centros educativos hacia modelos inclusivos

Abstract

This article presents a scoping review of the transition from Special Education Centers (SEC) to Support and Resource Centers for Inclusive Education (CRAEI, by its Spanish acronym), in line with the Convention on the Rights of Persons with Disabilities (UN, 2006). Using the PRISMA methodology, studies published between 2010 and 2023 were examined, covering a range of regions and educational contexts. The findings reveal that, although countries have shown a commitment to transforming their educational systems, the shift towards an inclusive model has been slow and uncoordinated, with many still practising the segregation of pupils with disabilities. Key roles for CRAEI were identified, including teacher advisory, provision of resources and support, direct classroom intervention, and coordination among educational institutions. However, the absence of a clear protocol and structural and cultural resistance to change have hindered the effective implementation of these functions. The discussion highlights the need for a robust legal framework and a collaborative approach to overcome existing barriers and to achieve genuine, sustainable educational inclusion across all levels of the education system.

Keywords

Inclusive education, special schools, inclusive education support centers, disability, educational transformation.

Resumen

El artículo ofrece una revisión de alcance sobre la transición de los centros de educación especial (CEE) hacia centros de recursos y apoyos para la educación inclusiva (CRAEI), en cumplimiento de la Convención sobre los derechos de las personas con discapacidad (ONU, 2006). Empleando la metodología PRISMA, se examinaron estudios publicados entre 2010 y 2023, abarcando diversas regiones y contextos educativos. Los resultados revelan que, aunque los países han mostrado un compromiso con la transformación de sus sistemas educativos, la transición hacia un modelo inclusivo ha sido lenta y desorganizada, con muchos países aún practicando la segregación de estudiantes con discapacidad. Se identificaron roles clave para los CRAEI, como el asesoramiento a docentes, la provisión de recursos y apoyos, la intervención directa en las aulas y la coordinación entre centros educativos. Sin embargo, la falta de un protocolo claro y la resistencia estructural y cultural al cambio han obstaculizado la implementación efectiva de estos roles. La discusión enfatiza la necesidad de un marco normativo sólido y un enfoque colaborativo para superar las barreras existentes y lograr una inclusión educativa genuina y sostenible en todos los niveles del sistema educativo.

Palabras clave

Educación inclusiva, educación especial, centros de apoyos y recursos, discapacidad, transformación educativa.

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1. Introduction

Inclusive education is a fundamental right in countries that have ratified the Convention on the Rights of Persons with Disabilities (UN, 2006). This convention obliges State Parties “to ensure an inclusive education system at all levels and lifelong learning” (Art. 24).

This transformation involves successfully achieving the three dimensions of inclusive education as defined by Echeita Sarrionandia (2020): presence, participation, and learning. This means that all learners, in their diversity, should be actively engaged in learning processes, experience a strong sense of belonging and well-being, and achieve meaningful and high-quality learning without being separated from their peers for any reason.

The transformation of Special Education Centres (hereafter, SEC) towards an inclusive model requires rethinking their role as Support and Resource Centres for Inclusive Education (hereafter, CRAEI, for its acronym in Spanish). According to Echeita Sarrionandia (2020), ensuring presence does not entail eliminating SECs, but rather integrating them within the mainstream education system. Despite international commitments, the transition has been slow and disorganised, largely due to the absence of a clear protocol defining the role of CRAEI.

In this regard, Giné Giné et al. (2020) explain that special education has traditionally functioned as a specialised practice aimed at a specific group of students, leading to the development of a structure and work practices that are often overly distinct and isolated from those of mainstream classrooms or the official school curriculum (pp. 35-36).

Countries across the world have sought alternatives to overcome this historical segregation between educational institutions. This “requires proposing new roles, approaches and perspectives in order to achieve a unified education system that is responsive to the diversity of learners’ needs” (Giné Giné et al., 2020, p. 36). This implies the allocation of resources and the organisation of evidence-based educational practices.

Research such as that by Cantero Aguirre et al. (2022) in Paraguay highlights that the functions of CRAEI include providing educational and clinical support, as well as managing inclusion processes. In Spain, Rojas Pernia and Olmos Rueda (2016) identify four main actions of CRAEI: intervention in mainstream settings, counselling and training, provision of resources, and coordination.

These studies underline the need to identify transition pathways towards inclusive education and the associated benefits for all learners. However, implementation continues to face significant challenges, ranging from infrastructure adaptation to teacher training. This article aims to conduct a scoping review of the literature on the transition from SEC to CRAEI, analysing models, enabling factors and barriers, and outcomes in terms of inclusion and educational quality.

2. Methodology

A qualitative research design was adopted through a scoping review to analyse how the transition from SEC to CRAEI has been addressed in scientific literature. The aim was to answer the research question: How has the transition from SEC to CRAEI been studied in scientific research?

This question represents the first of five questions within a broader study. The scoping review was complemented by a qualitative case study involving interviews with six transformation leaders from Spain and Costa Rica, and a descriptive quantitative study involving a sample of 500 professionals working in all SECs across Costa Rica.

The other research questions guiding the broader project were:

1. How are SECs transitioning towards practices that support inclusive education in Spain and Costa Rica?
2. What contributions can SECs make to mainstream schools in Costa Rica?
3. What good practices from the Spanish context could be replicated in Costa Rica?

To address the first question, a scoping review methodology was selected, as it is defined as a type of review that quickly maps key concepts within a research area through a comprehensive examination of the literature (Arksey & O'Malley, 2005). The five methodological steps proposed by the authors are: 1) identifying the research question(s); 2) identifying relevant studies; 3) selecting the studies; 4) charting the data; 5) collating, summarising, and reporting the results.

This study was conducted following the PRISMA-P 2015 checklist, developed by Moher et al. (2015). PRISMA stands for *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* and is “a checklist primarily intended for the preparation of systematic review and meta-analysis protocols, summarising aggregate data from studies, particularly those assessing the effects of interventions” (pp. 2–3). Given the nature of the study, a scoping review—not a meta-analysis—was chosen, as the focus was on an in-depth qualitative analysis of the phenomenon rather than generating quantitative representations.

2.1. Search strategy

The selection of studies was carried out through electronic searches conducted in March 2023, using the following databases: Red de Revistas Científicas de América Latina (Redalyc), PsycInfo, Scopus, ERIC, Education Source, Academic Search Premier, and PUBMED. These databases were recommended by the advisory team for the project at the Universidad Autónoma de Madrid. Other databases, such as Scopus and/or Web of Science (WoS), could not be included because the research institutions involved in the study did not have access to the necessary licenses.

Due to the limited number of studies identified during the screening process, two journals were also included, even though they are not databases. These journals—European Journal of Special Needs Education and International Journal of Inclusive Education—are highly indexed and have an established record of publishing research in the field of special education.

Search terms were defined in both English and Spanish in order to maximise the number of relevant articles retrieved. The keywords used included: “transition”, “transformation” or “evolution”, “special education schools”, and “resource centres” (and their equivalents in Spanish: “transición”, “transformación” o “evolución”, “centros de educación especial” and “centros de recursos”). Given the diversity of terminology in this field, additional terms were initially tested in an attempt to capture studies related to the transformation from SEC to CRAEI, but they yielded no relevant results. These terms included: “inclusive education”, “specific centres”, “students with disabilities”, “schooling”, and “disability”.

This article reports the results obtained using only the keywords that generated relevant hits, as shown in Table 1.

2.2. Inclusion criteria

The articles selected were those that met the following inclusion criteria: (1) Published between 2010 and 2023, covering a 13-year period relevant to the present study; (2) Written in either English or Spanish; (3) Focused on the transformation or transition processes of SEC (or equivalent school institutions); (4) Empirical studies employing qualitative, quantitative, or mixed-method approaches; (5) Published as peer-reviewed scientific articles.

2.3. Exclusion criteria

The articles that were excluded from the study were: (1) those that, despite being scientific publications, are systematic reviews or meta-analyses.

2.4. Search and data collection process

The initial search retrieved a total of 36,127 references. A first screening using a date filter (2010–2023) reduced this number to 4,843. A second screening, limited to academic publications, yielded 260 articles. A third screening based on the title and abstract was applied to assess the studies’ relevance to the research question, resulting in 37 eligible articles.

Following this pre-selection, a thorough review of the full texts was conducted to determine which studies met all inclusion criteria. This process resulted in a final selection of 15 articles, of which 13 were written in English and 2 in Spanish.

The following table presents the detailed record of article selection by database, according to the keywords used, the total documents retrieved before filtering, and the progressive results after applying time filters, academic publication criteria, and title/abstract screening for relevance to the research question.

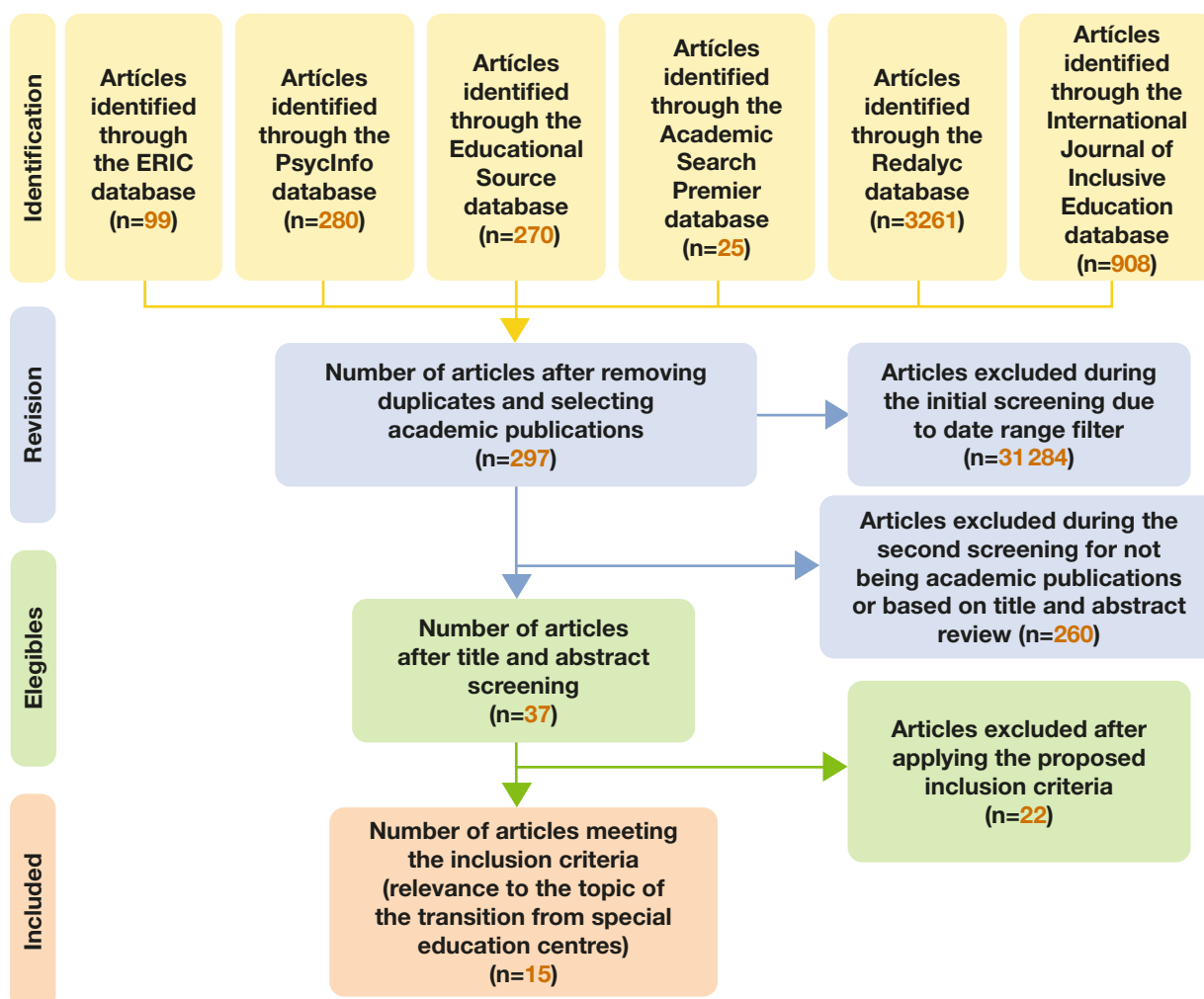
Table 1. Articles by database and screenings

Database	Found	Found by time filter	Academic publications	Filter by title and abstract	Total answering the research investigation
ERIC	10	1	1	0	0
	89	21	10	0	0
PsycInfo	280	10	9	9	1
Education Source	429	270	113 (English)	5	3
	0	0	0	0	0
Academic Search Premier	25	13	13	0	0
	0	0	0	0	0
PUBMED	113	92	4	0	0
	0	0	0	0	0
Redalyc	616	3234	71	8	2
	10	9	7	0	0
European Journal of Special Needs	566	26	26	1	0
International Journal of Inclusive Education	908	74	74	14	9
Total					15

Source: own elaboration.

The following flow diagram portrays the search and selection process of the articles that were used for the scoping review.

Figure 1. Flow diagram about the search and selection of the articles



Source: own elaboration.

2.5. Coding of the selected studies

The selected studies were analyzed and coded in order to address the research question: *How has the transition from SEC to CRAEI been studied?* To achieve this, the articles were grouped according to the database from which they were retrieved, and a numerical code was assigned to each document. Additionally, the following information was extracted from each article: participant population, main themes, year of publication, journal of origin, authorship, and the geographical region where the research was conducted.

The following table shows the codes assigned to each article, using the letter “D” followed by a number to identify each document. Likewise, Figure 2 presents a network created using the data analysis software Atlas.ti 09, showing the articles obtained from each database along with their respective codes.

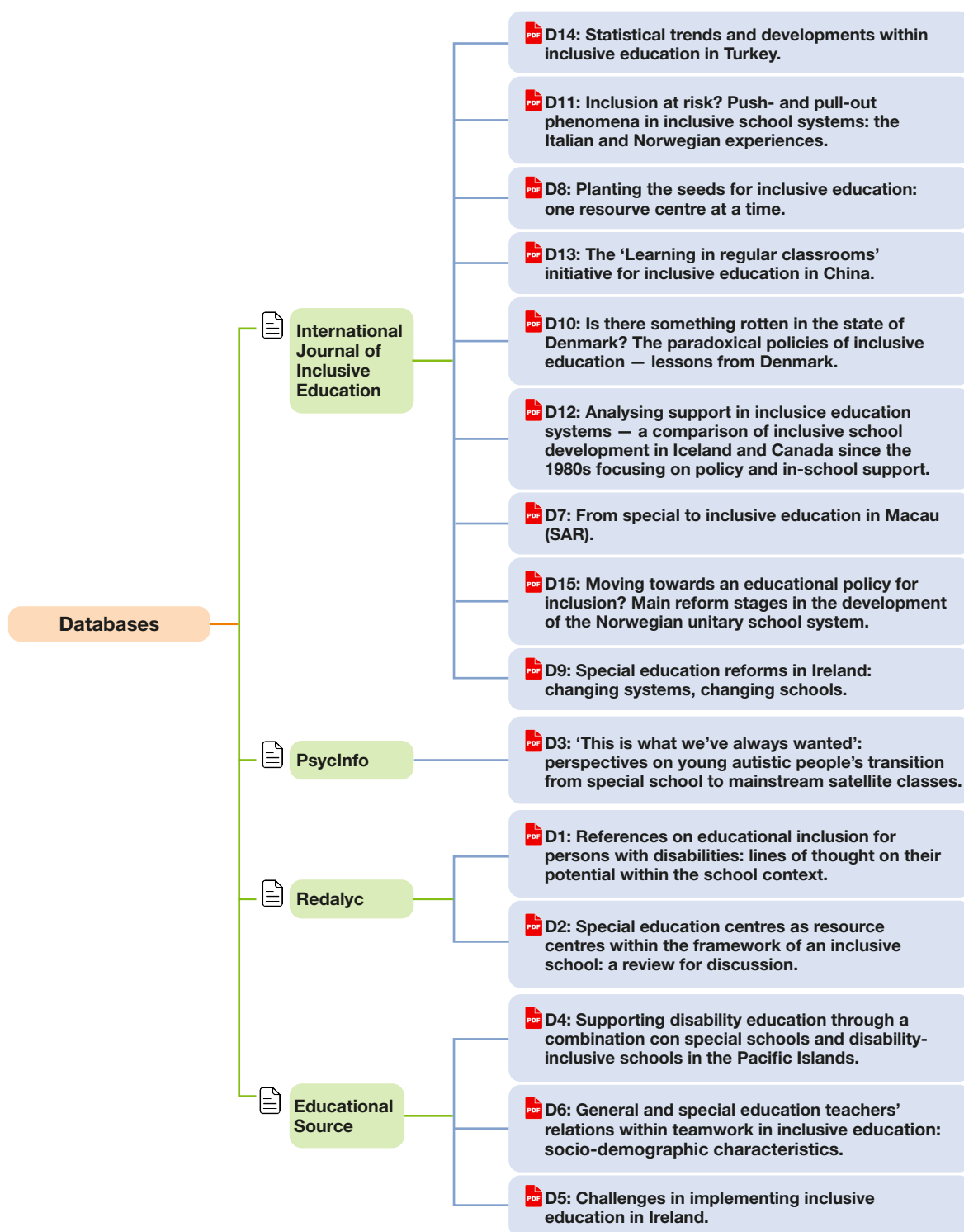
Table 2. Articles and codes

Document code	Title	Journal	Author	Year	Country and region
D1	References on educational inclusion for persons with disabilities: lines of thought on their potential within the school context	Civilizar. Ciencias Sociales y Humanas	Marlem Jiménez Rodríguez Piedad Ortega Valencia	2018	Argentina, Brazil, Chile, Colombia, and Ecuador
D2	Special education centres as resource centres within the framework of an inclusive school: a review for discussion	Revista de Currículum y Formación de Profesorado	Susana Rojas Pernia Patricia Olmos Rueda	2016	Cantabria and Barcelona, Spain
D3	'This is what we've always wanted': perspectives on young autistic people's transition from special school to mainstream satellite classes.	Autism and Developmental Language Impairments	Abigail Croydon Anna Remington Lorcan Kenny Elizabeth Pellicano	2019	London, England
D4	Supporting disability education through a combination of special schools and disability-inclusive schools in the Pacific Islands.	International Journal of Disability, Development and Education	Megan Tones Hitendra Pillay Suzanne Carrington Subhas Chandra Jennifer Duke Rukh Mani Joseph	2017	Fiji Island, Pacific Ocean
D5	Challenges in implementing inclusive education in Ireland: principal's views of the reasons students aged 12+ are seeking enrollment to special schools.	Journal of Policy and Practice in Intellectual Disabilities	Aine Kelly Catherine Devitt Donal O'Keeffe Anne Marie Donovan	2014	Ireland
D6	General and special education teachers' relations within teamwork in inclusive education: socio-demographic characteristics.	South African Journal of Education	Marina Radić-Šestić Vesna Radovanović Biljana Milanović-Dobrota Sanela Slavkovic Ana Langović-Milićvić	2013	Serbia
D7	From special to inclusive education in Macau (SAR).	International Journal of Inclusive Education	Chris Forlin	2011	Macau, China
D8	Planting the seeds for inclusive education: one resource centre at a time.	International Journal of Inclusive Education	Janet Helmer Rita Kasa Michelle Somerton Tsedis Michael Makoelle Daniel Hernández-Torrano	2020	Nursultán, Kazakhstan
D9	Special education reforms in Ireland: changing systems, changing schools.	International Journal of Inclusive Education	Neil Kenny Selina McCoy Georgiana Mihut	2020	Ireland

Document code	Title	Journal	Author	Year	Country and region
D10	Is there something rotten in the state of Denmark? The paradoxical policies of inclusive education – lessons from Denmark.	International Journal of Inclusive Education	Thomas T. Engsig Christopher J. Johnstone	2014	Denmark
D11	Inclusion at risk? Push- and pull-out phenomena in inclusive school systems: the Italian and Norwegian experiences.	International Journal of Inclusive Education	Kari Nes Heidrun Demo Dario Ianes	2018	Italy and Norway
D12	Analysing support in inclusive education systems – a comparison of inclusive school development in Iceland and Canada since the 1980s focusing on policy and in-school support.	International Journal of Inclusive Education	Andreas Köpfer Edda Óskarsdóttir	2019	Iceland and Canada
D13	The 'Learning in regular classrooms' initiative for inclusive education in China.	International Journal of Inclusive Education	Su Qiong Xu Paul Cooper Kenneth Sin	2017	China
D14	Statistical trends and developments within inclusive education in Turkey.	International Journal of Inclusive Education	Orhan Cakiroglu Macid Ayhan Melekoglu	2013	Turkey
D15	Moving towards an educational policy for inclusion? Main reform stages in the development of the Norwegian unitary school system.	International Journal of Inclusive Education	Sven Nilsen	2010	Norway

Source: own elaboration.

Figure 2. Network of articles retrieved from each database and their respective codification



Source: own elaboration.

3. Data analysis

The analysis was conducted using the open, axial, and selective coding approach proposed by Flick (2013). During the open coding phase, the selected studies were uploaded as primary documents in the software Atlas.ti 09, where “expressions are classified into units of meaning (individual words, short sequences of words) in order to assign annotations and, above all, ‘concepts’ (codes)” (Flick, 2013, p. 193). In the second phase, the process continued with “refining and differentiating the categories derived from open coding” (Flick, 2013, p. 197). This involved filtering each code and assigning it to the appropriate category and subcategories.

The third phase is selective coding; in this phase the Atlas.ti 09 codebook is used for data processing, in which “the analyst decides between equally significant phenomena and assigns weight to them, so that a central category emerges, along with subcategories related to it” (Flick, 2013, p. 198). At this stage, the most relevant data were selected for a more in-depth analysis, identifying relationships between categories and subcategories regarding the transition of SECs, and establishing a central idea related to new findings.

This study is part of the author’s postdoctoral research project at Universidad Autónoma de Madrid, where it was subject to continuous reflection and analysis at each stage of its development under the guidance of Dr. Cecilia Simón Rueda.

As a qualitative study, it is important to note that the interpretations derived from the data represent an inductive, flexible, and interactive understanding by the author, and are not intended to provide generalisable results.

Four macro categories were established and quotations linked to codes were extracted, first openly and then selectively, resulting in 22 emerging codes.

The four macro categories that emerge from the data at this stage are:

- The historical development of special education.
- The stance of the educational community on transition.
- The role of Support and Resource Centres for Inclusive Education.
- Transition as a necessary action.

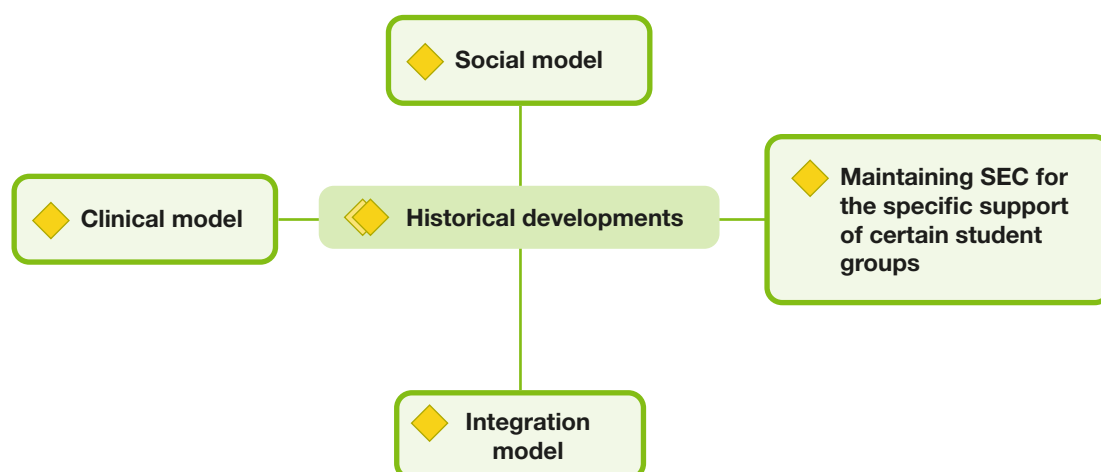
This article presents the findings of two of the categories emerging from the scoping review: the historical evolution and the role of the CRAEIs because of the value of their findings. This selection is justified by the clear interrelation between the origin of SECs as an educational response for students who were historically excluded, and the new roles these institutions must now adopt in order to function as spaces focused on the management, promotion, and coordination of educational supports. The findings in these two categories require a depth of analysis that justifies their exclusive treatment in this article. This does not diminish the importance of the other emerging categories, which will be addressed in a future publication with the scope they deserve.

Additionally, it should be clarified that the methodological aspects of the selected studies are described in Table 2 and are also discussed within each category. However, it is not the intention of the researcher to code

the data based on the methodological approach used in each study, but rather based on their contribution to scientific knowledge.

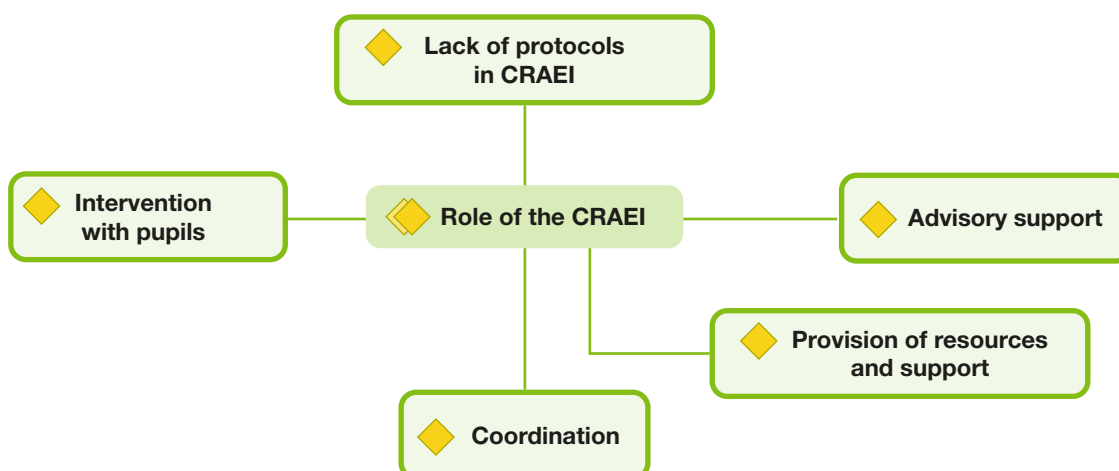
The first category addressed in this article is the historical development of special education, which includes 38 quotations. This category explores how special education has evolved over time across the various contexts presented in the studies. Four codes emerged within this category: clinical model (linked to 6 quotations), integration model (linked to 7 quotations), social model (linked to 12 quotations) and current maintenance of SEC in operation without transition (linked to 13 quotations).

Figure 3. Category 1: Historical development of special education



Source: own elaboration.

Figure 4. Category 2: role of the CRAEI



Source: own elaboration.

4. Discussion and results

4.1. Historical developments

This review shows that various authors frame their analysis of the transition through a socio-historical contextualization of each country represented in the reviewed literature.

This frame of reference is vital for understanding the political, economic and social perspective from which each nation views and redefines inclusive education. Despite the substantial differences between the history of China, for example, heavily influenced by imperial development and socialism, in contrast to Kazakhstan as a post-Soviet republic, or Latin America and its social situation of poverty and migration are subject to national or international legal frameworks that compel them to undertake transformations toward inclusive education. Each country's analysis in this regard moves through the clinical model, the integration model and the social model of disability. Similarly, in some of these contexts, a decision has been made to keep SECs operating without transformation, attributing reasons linked to the model that prevails in the specific society. The findings obtained in this line with respect to each code are detailed below.

4.1.1. *Clinical model*

In the historical analysis made by the articles, it is determined, as a meeting point in the different nations, that the education of the student population with disabilities, in its beginnings, focused its attention on the deficit of the person from a clinical point of view, in order to organise educational systems for the classification of students.

In its beginnings, this student population was excluded from education and was served by healthcare or other non-educational services. This is illustrated in the paper by Helmer et al. (2020), referring to the context of post-Soviet republics, specifically in Kazakhstan, where they note that 'children with any kind of disability were educated by "defectologists"' (p. 4). According to the authors, these practices currently explain the resistance and lack of understanding of inclusive education in the post-Soviet republics.

This division justified the construction of specialised professional profiles, which placed full responsibility for the education of students with disabilities in the hands of a group of specialists. Under this logic, segregated services were established and consolidated over time, making their subsequent transformation difficult.

In this regard, Rojas Pernia & Olmos Rueda (2016) point out that 'the design of special practices that pedagogues would put into play in segregated spaces helped to stabilise a discourse centred on the subject with impairment and its inescapable rehabilitation' (p. 325). This view, far from focusing on the context, the curriculum and its possible barriers, or on the accessible design of the educational environment to bring learning and participation closer to the individual, seeks instead to address a diagnosis with the questionable assumption that learning could be standardized for those who coincide in clinical situations and functional deficits.

This is similar to what has been documented by Macau in more recent times, where it is noted that 'in 1999-2000 a Macau IQ test was developed and used for educational placement decisions' (Forlin, 2011, p. 435). Along these lines, the article indicates that referral and classification systems were in place to justify

segregation decisions based on the results of these tests based on the measurable cognitive deficit of the student body.

In Norway, meanwhile, Nilsen (2010) comments that, by the end of the 20th century, 'there was a prevailing fear of lowering the quality of education if pupils with severe learning difficulties and social problems were included in schools' (p. 482). This condition today justifies the perspectives of many professionals and non-professionals in the education community who are reluctant to embrace inclusive education.

4.1.2. Integration model

Subsequent to the clinical model, evidence of an integration model emerges in the documents in which, as noted, "the aim was to promote the joint schooling of all students, attending to their educational needs within the same system" (Rojas Pernia & Olmos Rueda, 2016, p. 326). This involves the admission of students in mainstream schools where students were placed in separate classrooms, so that they did not share learning experiences with the rest of the non-disabled student body.

In Kazakhstan, Helmer et al. (2020) explain that, even by 2020, "the majority of students with special educational needs attending mainstream schools where school resource centers had been opened were in "correctional classes" (p. 10), which is justified as a step on the road to inclusive education. However, Kenny et al. (2020), in Ireland, are of the opinion that "special classes serve to give the appearance of inclusion within schools, but are potentially circumventing the problem" (p. 9).

In this vein, it is further explained that "the implementation of inclusion policies through special classes often served to protect the "deep structure" (Thomas, 2013) of mainstream teachers' roles of delivering curricular objectives to regular students, while special education takes place in segregated settings." (Kenny et al., 2020, p. 9). This perpetuates the fragmented efforts of the educational community and reinforces the specialist-centric perspective of special education professionals.

4.1.3. Social model

The documents also show the position of the social model of disability. In this sense, the one elaborated in Spain by Rojas Pernia & Olmos Rueda (2016), points out that "inclusive education questions the creation of specialized services or differentiated measures based on previously defined categories, the expert organization of support or the separation of quality and equity in education" (p. 327). In agreement with the above, Kenny et al. (2020), in Ireland, state that "doubts arose about the reliability and validity of disability categories and their use in the allocation of resources" (p. 5).

Inclusive education, by principle, lies in the hands of the educational community, i.e., families, students and professionals in the field of education who possess pedagogical knowledge on which they design their work. It is well known that, in order to carry out an educational curriculum in a timely manner, it is necessary to know the context, barriers, capacities, family system, culture, interests, potential and previous knowledge of the students, as well as the diversities of the group. All of these characteristics are entirely independent of any clinical diagnosis. Under this logic, the classification of students in restrictive environments based on medical conditions loses all sense and is seen as a practice that generates discrimination and social isolation.

In Denmark, Engsig & Johnstone (2015) state that “inclusive schools were mentioned as a way to change discriminatory attitudes, create welcoming communities and create inclusive societies. Inclusive schools were called upon to challenge and dismantle ‘disabling societies’” (p. 474). Therefore, inclusive education does not use labels but, on the contrary, focuses on breaking down contextual barriers, creating universal curricula and taking diversities as an element of curricular enrichment, viewing the school years as the ideal time to promote inclusive, equitable, and democratic societies.

4.1.4. Maintenance of Special Education Centres (SEC)

In the analysis of this historical evolution towards the transformation of the SEC, the documents show that in several nations, the continuation of a separate system from mainstream education is still justified, under certain conditions.

In Spain, for their part, Jiménez Rodríguez & Ortega Valencia (2018) state that “educational attention will be provided in specialized classes, schools or services, whenever, according to the specific conditions of the students, their integration in regular education classes is not possible (p. 92).

As in Spain, Fiji also promotes the maintenance of special classrooms, either in SEC or in regular centers for some student population. This is evident in D4, where Tones et al. (2017) state that “MOENHCA (Ministry of Education, National Heritage, Culture and Arts) intends to keep special schools open in order to facilitate continuing education for students with severe disabilities and also prepare students for transition to inclusive mainstream education” (p. 498).

In Italy and Norway, these practices are questioned by Nes et al. (2018) when they analyze the causes why student segregation is sustained and find within the main reasons, teacher attitudes, inaccessibility of the curriculum and the very existence of a parallel system. In this regard, they state that students are sent “to special classes due to the presence of special units/classes equipped with specialized teachers” (p. 112). This shows that integration, far from being a step towards inclusive education, constitutes, in itself, an obstacle for schools to adopt an interdisciplinary and cooperative posture.

Now, in line with human rights, the focus would be on how to bring the curriculum closer to the diversity of the student body, making the necessary adjustments and not, on the contrary, on placing students in settings where they receive that is completely different from that of his/her peers.

4.2. Role of Support and Resource Centres for Inclusive Education (CRAEI)

In this scoping review, the various countries represented establish coinciding functions in relation to the tasks to be assumed by the CRAEI. However, each study adjusts the roles of these bodies to the particularities of its context. The findings along these lines are detailed below.

4.2.1. Lack of protocols in CRAEI

In the documentation consulted on the role of CRAEI, it is evident that the different countries that signed the Convention on the Rights of Persons with Disabilities, committing themselves to inclusive education,

issued their own laws, decrees and agreements regarding the obligation to gradually eliminate the parallel systems of segregated and inclusive education. To this end, the transformation of SEC into resource centers for regular centers in the communities was mostly proposed. However, there is no evidence of specific protocols regulating this transition.

In the face of this juncture, in Kazakhstan, Helmer et al. (2020), in their research, acknowledge that “while this statement formally describes a reason why resource centers were established, this statement illustrates that there is no clear understanding of the main objectives of the centers” (p. 11) and, therefore, “there seemed to be no consistent operating model” (p. 11).

The authors, in this regard, find in their findings that “participants have a mixed understanding of how the resource center operates and the support provided in the effort to advance dialogue and thinking toward further development of inclusive education” (p. 11). Which, coupled with the diverse positions around inclusion and the decadent practices of segregation, creates significant confusion for managing the transition of SEC.

This indicates that, despite this robust legal system and the various timeframes that each country stipulates for it, none appear to have a clear understanding of the specific functions, quality criteria or even specific accreditations around the operation of these entities. This situation, at times, has proven to be an opportunity for creation and development in accordance with the context and the specific needs of each nation or, in other cases, has constituted a barrier to justify the delay in the transformation processes. What is certain is that the different studies analyzed suggest a series of roles that, in each nation, are considered indispensable in the CRAEI. These findings are detailed below.

4.2.2. Advisory support

One of the main functions of the CRAEI, as highlighted in the literature, is to provide guidance to mainstream schools. In Kazakhstan, for instance, Helmer et al. (2020) propose that “resource centres are seen as a way to promote knowledge in inclusive education for both teachers and parents” (p. 8).

In this regard, the authors affirm that CAREI should offer guidance by modelling their actions through interventions with pupils, as well as by providing accessible material resources that can be used in classrooms. On this point, Helmer et al. (2020) suggest roles such as “providing instruction by adapting and developing materials to match the learning styles, strengths and special needs of each of their students with disabilities” (p. 3).

Similarly, in Canada, Köpfer & Óskarsdóttir (2019) observe that, in the context of the transformation of special education centres (SEC), “the former roles of ‘special school teacher’ and later ‘special education coordinator’ were gradually evolving into a methodological and advisory role focused on pedagogy” (p. 884). However, they add that the guidance provided should aim to promote action research as an educational practice, enabling “teachers the opportunity to understand and implement professional action in inclusion as reflective action” (p. 884). This approach fosters critical reflection on teaching practice and supports ongoing, collective improvements that involve the entire educational community.

In Spain, Rojas Pernia & Olmos Rueda (2016) propose that CRAEI guidance should consist of:

Leading particularly complex assessments, providing consultancy and support to colleagues – Supplying information (pedagogical strategies, materials, pupil grouping, etc.) for mainstream classrooms – Offering information about

specific programmes, software, or other materials – Collaborating in the design and development of general proposals for all pupils. (p. 329)

The guidance described in the reviewed documents operates on two levels. One of these is in situ support—delivered directly within the classroom through co-teaching, modelling, the development of inclusive strategies, and teacher accompaniment.

The other form of guidance found in the documents is collective training for school staff. This challenges more traditional models of continuing professional development, where an external body offers a course, lecture, workshop, or programme that some staff may choose to attend in order to improve their practice and then attempt to disseminate what they have learned within their school. While this approach can have a positive impact on certain classrooms, it rarely produces significant or lasting change in the inclusive culture that schools must cultivate in order to achieve real transformation.

In this respect, it is important to note that advising should not be reduced to the individual role of SEC teachers acting as “specialists”, nor is it entirely effective, as already mentioned, for a single teacher—whether from the mainstream school or the SEC—to engage in training on their own to drive inclusive change in their educational community. Ideally, transformation should be addressed at a whole-school level, where the entire teaching staff commits to their professional development, collaboratively builds shared goals, evaluates their practices, and identifies training needs with the support of SEC teachers. In doing so, training content can emerge from a school-wide needs assessment and be tailored to the school’s real and contextualised circumstances. The aim is to establish a collaborative foundation in which the entire educational community identifies with inclusive principles and reflects collectively on their school project in order to foster improved coexistence and a stronger sense of belonging.

4.2.3. Coordination

Coordination is, without a doubt, the most prominent function highlighted in the documents consulted for this systematisation. Within this framework, the collective, supportive, and collaborative articulation of inclusive education with the backing of the entire educational community is perceived as highly valuable. There is a clear interest in fostering a genuine commitment from professionals, families, and students to actively engage in the development of inclusive education. This entails the cultivation of a whole-school culture, a clearly defined and measurable project with specific roles for all involved, and a strong sense of cooperation.

In Serbia, in an effort to ensure such coordination, “teams composed of general or mainstream education teachers and special education teachers have been created to work collaboratively or cooperatively in order to combine their knowledge, perspectives, and professional skills” (Radić-Šestić et al., 2013, p. 2). In this respect, the authors stress that “an effective teaching team should work together as equal partners in interactive relationships, both involved in all aspects of planning, teaching, and assessment” (Radić-Šestić et al., 2013, p. 3). They also add that “this collaboration will include curriculum and instruction, assessment and evaluation, and classroom management and behaviour” (p. 3).

In Spain, Rojas Pernia & Olmos Rueda (2016) likewise propose that coordination between mainstream schools and CRAEI should involve “informal support networks and innovation or research projects” (p. 328). These projects, being joint initiatives, enable an interdisciplinary approach to conflict resolution and the development of creative actions that support full inclusion.

Moreover, Radić-Šestić et al. (2013) found that school environments can influence the level of coordination between CRAEI professionals and mainstream centres. They note that:

Participants in smaller school settings show greater respect for team members' autonomy, resolve conflicts more easily, maintain stronger interconnections, make greater efforts to learn from one another, exchange opinions, assume or follow leadership roles, share mutual beliefs, and value teamwork more than participants in larger schools. (p. 3)

The ability to harmonise teamwork and achieve a deeper sense of cooperation in smaller schools allows these benefits to extend beyond the school environment into the wider social context, as suggested by research conducted in Iceland and Canada.

In both countries—recognised for their good practices in inclusive education—coordination is seen as transcending the boundaries of the school itself. The authors emphasise the importance of working alongside the wider community and its various stakeholders. Köpfer & Óskarsdóttir (2019) state that:

Progress in general education is a process evidenced by schools and communities working together to create citizens for an inclusive society—individuals who are educated to enjoy all the benefits, rights, and experiences of social life. (p. 885)

This perspective ensures the involvement of the wider community, thus promoting a culture of inclusion and guaranteeing the right to fair and democratic participation for all forms of diversity in society.

Although it is often said that the appreciation of human diversity is essentially fostered within schools, the involvement of other sectors of society—such as health, transport, culture, and others—contributes to the development of a consistent approach in line with the principles of inclusive education, thereby promoting just and equitable coexistence among all citizens.

4.2.4. Intervention with pupils

One of the practices that has most challenged the traditional status quo of SEC in their transition to CRAEI is the possibility of special education teachers entering mainstream classrooms to work with pupils alongside general education teachers. This requires coordination efforts that foster a positive codependence between both professions, enabling them to enrich one another and implement pedagogical mediation through co-teaching with the entire group of students.

This marks a gradual move away from practices such as pulling students with disabilities out of the classroom to provide “specialised” support, and towards new approaches focused less on rehabilitation based on normalisation ideals and more on dismantling barriers and designing an accessible, inclusive curriculum that embraces the diverse abilities, strengths, and contributions of all learners.

In Spain, Rojas Pernia & Olmos Rueda (2016) describe co-teaching as “the joint work of a teacher from the SEC and the classroom tutor within the mainstream classroom to support pupils with special educational needs through what is known as shared teaching” (p. 328).

The tasks proposed by the authors for pupil-focused intervention through co-teaching involve “providing personal support to pupils with special educational needs (personal hygiene, feeding, access, transport)

in different school activities and facilitating joint work within the mainstream classroom” (p. 329). For this, flexibility is recommended—both in the resources used for mediation and in the physical organisation of space—as well as ensuring that all pupils may receive support from both teachers without distinction or labelling.

4.2.5. Provision of resources and support

To a lesser extent, the reviewed documents also highlight the importance of CRAEIs in providing resources and support to mainstream schools aimed at removing access barriers and enabling curricular inclusion.

In this regard, in Spain, Rojas Pernia & Olmos Rueda (2016) consider it essential that CRAEI take part in the “design and development of materials for various curriculum areas, the preparation of specific resources, and the search for new tools” (p. 329).

Such resources may include the development of augmentative and alternative communication (AAC) systems, braille transcriptions, the use of assistive technologies, sign languages, and low-tech access devices such as lecterns, adapted chairs, magnifying glasses, lamps, and other accessibility elements. They may also involve adapting materials in line with the curriculum planning carried out collaboratively by teaching staff—for example, substituting a handwritten assignment with a typed one, or replacing a manual tracing task with a tactile or manipulative activity using cards—so that the entire class can participate and benefit from the unique strengths of each learner.

5. Conclusions

In relation to the first category concerning historical evolution, the documents reviewed reveal that the countries represented have undergone a progression from the clinical model, through the integrative model, to the social model of disability in the educational response to students with disabilities. With regard to the latter, it is apparent that CRAEIs challenge the persistence of segregated educational environments and represent a means of approaching and merging educational systems in favour of inclusive education. However, none of the studies reviewed show a fully consolidated transition; all, without exception, remain in a process of change and still carry remnants of the clinical and integrative models with which they continue to grapple. This is partly reflected in the ongoing operation of some SEC, intended to provide education for those students who, due to the extent of support required, have not yet been considered as fully entitled to inclusive education.

That said, abruptly closing special education centres or transferring students without preparation would not be a desirable course of action. According to authors such as Echeita and Simón (2020), doing so could lead to the transfer of exclusionary practices to mainstream schools, particularly “if substantial changes that have a direct impact on the policies and practices of schools are not implemented swiftly and in a sustained manner” (p. 100).

To address this, authors such as Giné Giné et al. (2020) argue that “we must therefore move towards a significant transformation of both the conceptions and practices, in order to convert special education centres into organisations of excellence in the care and education of pupils with more extensive support needs, while simultaneously becoming organisations that promote and support inclusive education” (p. 38). This requires, first and foremost, a structured training process led by core teams with a strong political commitment to transformation in both types of institutions, working in a coordinated and collaborative manner to develop their own transformation plans with a clear organisational structure.

With regard to the role to be assumed by schools, the study identifies several actions emerging from country-level research in the absence of formal protocols. However, drawing on the analysis of centres that have successfully undergone this transformation, researchers such as Echeita and Simón (2020) recommend, among other elements, that a healthy transition requires the generous provision of support teachers and educators. This would help ensure that mainstream teaching staff do not feel abandoned when faced with the educational needs—some of them complex—of pupils they have not previously taught, and in relation to whom many fears and uncertainties may arise (pp. 100–101).

Likewise, the authors emphasise the need for “a clear, consistent, and sustained policy regarding curriculum development in all its possible facets: ongoing professional development for practising teachers, advisory support for educational improvement and innovation, and the production and dissemination of curriculum materials” (Echeita & Simón, p. 102).

Within a framework of collective work and shared community commitment, such efforts would provide the necessary structure to prevent the reproduction of outdated practices and patterns of school segregation in mainstream settings. Nonetheless, this process appears to require a coordinated, long-, medium-, and short-term networked effort across all levels of the education system—from macro to micro—with strategic leadership and a competency-based approach at its core.

6. Limitations of the review

This study has faced several limitations, including a potential bias in the selection of studies due to the choice of keywords, which may have been insufficient to capture research in either Spanish or English that uses alternative terminology for the topic under investigation. Another limitation was the difficulty in accessing other important academic databases in the field, due to the lack of necessary licences at the research centre where the project was carried out.

Important lines of future research include the identification of best practices in the transformation of educational centres, which could serve as drivers for change in other institutions. Additionally, it is of interest to explore what inclusive policies and accreditation protocols might be implemented to assess the effective functioning of a CRAEI. This would help to ensure, in a fair and balanced manner, the successful articulation between centres necessary to achieve the inclusive education outcomes aspired to.

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Annex 1. Supplementary material

Description: The table below aims to provide information illustrating the link between the emerging macro categories identified in the data analysis, the corresponding subcategories, and the articles related to each of them. It also details the database from which each study originates.

MACRO CATEGORY	SUBCATEGORY	ARTICLE	DATABASE
Evolution of special education	Clinical model	Title: Planting the seeds for inclusive education: one resource centre at a time.	International Journal of Inclusive Education
		Authors: Janet Helmer Rita Kasa Michelle Somerton Tsediso Michael Makoelle Daniel Hernández-Torrano	
		Year: 2020	
		Country: Nur-Sultan, Kazakhstan	
		Title: Special education centres as resource centres within the framework of an inclusive school: a review for discussion.	Redalyc
		Authors: Susana Rojas Pernia Patricia Olmos Rueda	
		Year: 2016	
		Country: Cantabria and Barcelona, Spain	
		Title: From special to inclusive education in Macau (SAR).	International Journal of Inclusive Education
		Authors: Chris Forlin	
		Year: 2011	
		Country: Macau, China	
		Title: Moving towards an educational policy for inclusion? Main reform stages in the development of the Norwegian unitary school system.	International Journal of Inclusive Education
		Authors: Sven Nilsen	
		Year: 2010	
		Country: Norway	
	Integration model	Title: Special education centres as resource centres within the framework of an inclusive school: a review for discussion.	Redalyc
		Authors: Susana Rojas Pernia Patricia Olmos Rueda	
		Year: 2016	
		Country: Cantabria and Barcelona, Spain	

MACRO CATEGORY	SUBCATEGORY	ARTICLE	DATABASE
Evolution of special education	Integration model	Title: Planting the seeds for inclusive education: one resource centre at a time.	International Journal of Inclusive Education
		Authors: Janet Helmer Rita Kasa Michelle Somerton Tsediso Michael Makoele Daniel Hernández-Torrano	
		Year: 2020	
		Country: Nur-Sultan, Kazakhstan	
		Title: Special education reforms in Ireland: changing systems, changing schools.	International Journal of Inclusive Education
		Authors: Neil Kenny Selina McCoy Georgiana Mihut	
		Year: 2020	
		Country: Ireland	
	Modelo social	Title: Is there something rotten in the state of Denmark? The paradoxical policies of inclusive education – lessons from Denmark.	International Journal of Inclusive Education
		Authors: Thomas T. Engsig Christopher J. Johnstone	
		Year: 2014	
		Country: Denmark	
		Title: Special education centres as resource centres within the framework of an inclusive school: a review for discussion.	Redalyc
		Authors: Susana Rojas Pernia Patricia Olmos Rueda	
		Year: 2016	
		Country: Cantabria and Barcelona, Spain	
		Title: 'This is what we've always wanted': perspectives on young autistic people's transition from special school to mainstream satellite classes.	PsycInfo
		Authors: Abigail Croydon Anna Remington Lorcan Kenny Elizabeth Pellicano	
		Year: 2020	
		Country: London, England	

MACRO CATEGORY	SUBCATEGORY	ARTICLE		DATABASE
Evolution of special education	Modelo social	Title:	Is there something rotten in the state of Denmark? The paradoxical policies of inclusive education – lessons from Denmark.	International Journal of Inclusive Education
		Authors:	Thomas T. Engsig Christopher J. Johnstone	
		Year:	2014	
		Country:	Denmark	
	Mantenimiento de los centros	Title:	References on educational inclusion for persons with disabilities: lines of thought on their potential within the school context.	Redalyc
		Authors:	Marlem Jiménez Rodríguez Piedad Ortega Valencia	
		Year:	2018	
		Country:	Argentina, Brazil, Chile, Colombia and Ecuador	
		Title:	Supporting disability education through a combination of special schools and disability-inclusive schools in the Pacific Islands.	Educational Source
		Authors:	Megan Tones Hitendra Pillay Suzanne Carrington Subhas Chandra Jennifer Duke Rukh Mani Joseph	
		Year:	2017	
		Country:	Fiji Island, Pacific Ocean	
		Title:	Inclusion at risk? Push- and pull-out phenomena in inclusive school systems: the Italian and Norwegian experiences.	International Journal of Inclusive Education
		Authors:	Kari Nes Heidrun Demo Dario Ianes	
		Year:	2018	
		Country:	Italy and Norway	
		Title:	Challenges in implementing inclusive education in Ireland: principal's views of the reasons students aged 12+ are seeking enrollment to special schools.	Educational Source
		Authors:	Aine Kelly Catherine Devitt Donal O'Keeffe Anne Marie Donovan	
		Year:	2014	
		Country:	Ireland	

MACRO CATEGORY	SUBCATEGORY	ARTICLE		DATABASE
Role of Support and Resource Centres for Inclusive Education (CRAEI)	Lack of protocols in the CRAEI	Title:	Planting the seeds for inclusive education: one resource centre at a time.	International Journal of Inclusive Education
		Authors:	Janet Helmer Rita Kasa Michelle Somerton Tsediso Michael Makoelle Daniel Hernández-Torrano	
		Year:	2020	
		Country:	Nur-Sultan, Kazakhstan	
	Advisory support	Title:	Planting the seeds for inclusive education: one resource centre at a time.	International Journal of Inclusive Education
		Authors:	Janet Helmer Rita Kasa Michelle Somerton Tsediso Michael Makoelle Daniel Hernández-Torrano	
		Year:	2020	
		Country:	Nur-Sultan, Kazakhstan	
		Title:	Analysing support in inclusive education systems – a comparison of inclusive school development in Iceland and Canada since the 1980s focusing on policy and in-school support.	International Journal of Inclusive Education
		Authors:	Andreas Köpfer Edda Óskarsdóttir	
		Year:	2019	
		Country:	Iceland and Canada	
		Title:	Special education centres as resource centres within the framework of an inclusive school: a review for discussion.	Redalyc
		Authors:	Susana Rojas Pernia Patricia Olmos Rueda	
		Year:	2016	
		Country:	Cantabria and Barcelona, Spain	
	Coordinación	Title:	General and special education teachers' relations within teamwork in inclusive education: socio-demographic characteristics.	Educational Source
		Authors:	Marina Radić-Šestić Vesna Radovanović Biljana Milanović-Dobrota Sanela Slavkovic Ana Langović-Milićević	
		Year:	2013	
		Country:	Serbia	

MACRO CATEGORY	SUBCATEGORY	ARTICLE	DATABASE
Role of Support and Resource Centres for Inclusive Education (CRAEI)	Coordination	Title: Analysing support in inclusive education systems – a comparison of inclusive school development in Iceland and Canada since the 1980s focusing on policy and in-school support.	International Journal of Inclusive Education
		Authors: Andreas Köpfer Edda Óskarsdóttir	
		Year: 2019	
		Country: Iceland and Canada	
	Intervention with pupils	Title: Special education centres as resource centres within the framework of an inclusive school: a review for discussion.	Redalyc
		Authors: Susana Rojas Pernia Patricia Olmos Rueda	
		Year: 2016	
		Country: Cantabria and Barcelona, Spain	
	Provision of resources and support	Title: Special education centres as resource centres within the framework of an inclusive school: a review for discussion.	Redalyc
		Authors: Susana Rojas Pernia Patricia Olmos Rueda	
		Year: 2016	
		Country: Cantabria and Barcelona, Spain	