OmniaScience

Journal of Technology and Science Education

JOTSE, 2024 – 14(3): 844-860 – Online ISSN: 2013-6374 – Print ISSN: 2014-5349

https://doi.org/10.3926/jotse.2595

CO-EDUCATION AND THE FEMINIST PERSPECTIVE IN CENTRES OF PEDAGOGICAL RENEWAL: A CRITICAL ANALYSIS

Paco Abril* D, Alba Castellsagué D

University of Girona (Spain)

*Corresponding author: francisco.abril@udg.edu alba.castellsague@udg.edu

Received December 2023 Accepted February 2024

Abstract

In the field of education, co-education has gained recognition as an approach that seeks to challenge gender stereotypes and promote egalitarian relationships. At the same time, the feminist perspective poses a profound critique of patriarchal structures and norms that perpetuate gender inequalities. The school institution has been represented in research from an ambivalent position: as a space for the reproduction of sexism and androcentrism, but also from the perspective of its transformative potential. This article proposes to analyse the intersection between co-education and the feminist perspective in the centres of pedagogical renewal, as these spaces question traditional educational models from a critical viewpoint that transcends the merely educational.

This article is based on a case study that evaluates the extent to which seven centres of pedagogical renewal have integrated a co-educational and critical feminist perspective into their project. Based on participant observation, interviews and focus groups with teachers, families, students and management teams, it explores the social and political commitment of these schools to the promotion of gender equality, inclusion and diversity.

Keywords – Co-education, Feminist perspective, Centres of pedagogical renewal, Gender equality, Inclusion and diversity.

To cite this article:

Abril, P., Castellsagué, A. (2024). Co-education and the feminist perspective in centres of pedagogical renewal: A critical analysis. *Journal of Technology and Science Education*, 14(3), 844-860. https://doi.org/10.3926/jotse.2595

1. Introduction

The need to take a gender perspective into account in educational research and practice has been pointed out for decades. A long road has been travelled to overcome segregated education systems. Research on gender and education in the 1970s and 1980s predominantly highlighted the gender inequalities inherent in school curricula and classroom dynamics, which resulted in educational policies to ensure girls' equal access to and participation in educational institutions (mixed schooling), as well as their representation in the curriculum (Lucke & Gore, 1992). Thus, from the absence of a gender perspective in education, progress was made towards models of co-education both internationally and in Spain, which are based on

the paradigm of equal opportunities for boys and girls. While mixed schooling has been shown to be a limited paradigm, as putting boys and girls in the same space has not in itself resulted in overcoming inequalities (Flecha, 2014; Subirats & Brullet, 1988; Venegas, 2010), the co-education paradigm has a deeper connotation of transforming all aspects of school culture for equality. Co-education has been established as an approach that seeks to challenge gender stereotypes and promote egalitarian relations. Pallarès-Piquer defines it as "a system that is committed to education without sexist biases, that is aware of the processes that underlie the construction of female and male identities, that observes and denounces discrimination, that seeks to do away with the limitations reflected by gender stereotypes and that promotes education in knowledge, attitudes, values and behaviours in the full development of individuals" (Pallarès-Piquer 2019: page 2). Co-education is nowadays the reference framework for public educational institutions.

Simultaneously, critiques of classical and traditional educational models have shaped different schools of critical and transformative pedagogy. In Spain, the particular phenomenon of the Movimientos de Renovación Pedagógica (Pedagogical Renewal Movements) represents a unique case study of commitment to the transformation of education and pedagogy with a clearly democratic, inclusive orientation (Esteban-Frades, 2016; Feu-Gelís, Besalú-Costa & Palaudàries i Martí, 2021). Internationally, this trend is identified with "critical pedagogy" or "critical studies in education" which has contributed to considering aspects related to power and discourse in schools (Luke & Gore, 1992).

Different feminist currents have repeatedly criticised the absence of gender as a category of analysis in pedagogy, justifying the need for feminist pedagogies (Shrewsbury, 1997; Webb, Allen & Walker, 2002). This body of knowledge has profoundly revised the conception of critical pedagogies from a gender perspective, highlighting theoretical, political and pedagogical dissonances with emancipatory projects (Luke & Gore, 1992).

This article aims to relate pedagogical renewal and the gender perspective. Despite the notable scientific production on critical pedagogies and gender abroad, little research has addressed the particular case of pedagogical renewal in Spain from this perspective. Feu-Gelís and Abril (2020) have pointed out the absence of a gender perspective in pedagogical renewal projects. This is a precedent that highlights the need to question the causes of this fact and to delve deeper into the particular dynamics between co-education and pedagogical renewal in Spain.

Based on a multiple case study in 7 centres of pedagogical renewal in Spain, we analyse the meaning and importance that gender acquires in the various projects and practices. Taking a qualitative approach, rather than quantifying the frequency of the appearance of gender, our research seeks to understand how gender is signified and what place it occupies in innovative educational contexts.

1.1. Gender and Education: Debates and Perspectives of Analysis

Feminist critiques of education have permeated significantly into both educational research and practice. In response to inequality and the demand for higher quality education for women, various academic disciplines, such as sociology of education and gender studies, have addressed this issue. Likewise, public institutions have also incorporated the gender perspective as an essential component of their agendas. In Spain, the Organic Law on Education adopts "an approach to gender equality through co-education and promotes the learning of effective equality of women and men at all educational stages" (3/2020, 29 December, on Education).

Debates on gender and education manifest themselves in two main approaches. One focuses on the quest for equality and addresses the structural barriers that have historically limited women's access and educational advancement. This perspective, influenced by the ideas of Acker (1987), focuses on equal opportunities in education. The other approach is concerned with subjective experiences in education, the perspective being social interactions, power dynamics and personal experiences related to gender. Both approaches intertwine to provide a solid theoretical framework. Addressing both structural barriers and

personal experiences is essential to advance towards a more inclusive and equitable education that benefits all people, regardless of their gender identity. Feminism, as defined by Hooks (2017) is a movement that aims to end systemic and institutionalised sexist exploitation and oppression. Feminist critique is therefore relevant to the analysis of inequalities in educational settings.

In the 1960s and 1970s, feminist critiques focused on exposing how the educational system perpetuated gender inequalities. In the 1980s, this perspective was extended to examine the role of the state in education and the 'modernisation' of gender relations, analysing government policies, media discourses and teachers' experiences. In the 1990s, postmodern and post-structural feminisms reconfigured the political focus on gender, highlighting the complexity in the formation of identities and subjectivities, which influenced the field of education, focusing more on the individual as an active constructor of her or his gender identity. In recent decades there has been a resurgence of interest in structural and materialist approaches to understanding persistent gender inequalities in an increasingly globalised and commodified world (Arnot, 2002).

The gender perspective in education has led to the analysis of many aspects of the school institution and culture from different perspectives. Gender differences in learning styles have been explored, showing that gender neutrality in schools is not reflected in practice (Arnot, 2006). The explanation for disparities in academic outcomes between boys and girls has been addressed, with a particular focus on boys' underachievement in the 1990s (Arnot, 2006; Daniels, Creese, Hey, Leonard & Smith, 2001; Wilkins, 2012; Keddie, 2006). Conceptual tensions between approaches have been identified, such as the structuralism of social reproduction versus cultural production (Acker, 1987; Luke & Gore, 1992), the simultaneous pursuit of gender equality and gender difference (Arnot, 2002), and affirmation strategies versus transformative policies (Arnot, 2006). To explain gender inequalities in education, concepts such as classical theories of socialisation and gender roles, gender codes (Arnot, 2002) and gender regimes (Kessler, Ashenden, Connell & Dowsett,1985; Connell, 1990) have been used. Venegas (2010) points out the dimensions of gender inequality in schools: the presence/absence of women in the educational system; the incidence of patriarchy in socialisation, language and curriculum; gender codes in schools; and sexist stereotypes in classrooms, in teaching materials and at the relational level.

Research on gender and education in Spain has paid special attention to working-class girls, ethnic minorities or intercultural contexts. Of particular note is the work of Fernández-Enguita (1997) who has analysed inequalities in class, gender and ethnicity, shedding light on egalitarian policies and their results. Ponferrada (2008) has explored academic, social and gender identities among young people in peripheral contexts, while Abajo and Carrasco (2004) have investigated the experiences of academic success in the Roma community in Spain. Carrasco (2003) has examined the schooling of children of foreign immigrants and ethno-cultural minorities, and Bonal and Tomé (1997) have focused on the construction of co-educational schools and teacher awareness. Pérez-Sánchez (2002) has analysed attitudes towards school among female students from subaltern backgrounds, while García-Pérex *et al.* (2010) have explored students' attitudes towards gender equality. Subirats and Brullet (1988) have studied the transmission of gender roles in co-educational schools and the limitations of such a model.

Despite the evident progress made by the co-educational school model and the growing transformation of curricula and school organisation, recent research insists on the persistence of gender inequalities in the field of education (Flecha, 2014), the limitations of educational policies for equality, and the existence of attitudes of resistance among students towards gender equality (García-Pérez, Rebollo-Catalán, Buzón-García, González-Piñal, Barragán-Sánchez & Ruiz-Pinto, 2010). For all these reasons, the co-education paradigm is taking on renewed importance in the debates on gender and education in Spain (Subirats, 2010).

1.2. From Co-Education to Feminist Education?

In their work, Mainer-Baqué, Cancer-Pomar and Martín-Valdunciel (2023) explore the evolution of education in Spain from the perspective of gender and social class, highlighting how the Spanish

educational system, rooted in the liberal revolution and the construction of the bourgeois state, perpetuated segregations based on gender and social class that influenced the educational system until the late 20th century. They point out that, despite changes in society and education, patriarchal structures persist in today's schools, which continue to reproduce gender roles and stereotypes. Although the 1980s were crucial for the feminist critique of co-education and the promotion of co-educational approaches, these approaches lost momentum in the 1990s due to neoliberal educational policies focused on evaluation and educational quality, marginalising gender issues in the educational agenda. These authors highlight that while critical sociology of education has investigated how educational institutions under capitalism have reproduced social differences, less attention has been paid to the gender segregation strategies employed by the school institution, largely excluding the feminist voice and perspective.

Thus, schools continue to reproduce gender stereotypes and inequalities in students' experience. Co-education is not seen as a priority in schools and its implementation is often left to the individual commitment of teachers and the policies of each school. Co-education is perceived as one of many proposals and is not always given priority (Saiz-Linares & Ceballos-López, 2021). Ugalde-Gorostiza, Aristizabal-LLorente, Garay-Ibañez-de-Elejalde and Mendiguren-Goienola (2019) identify three phases of implementation of co-educational projects in schools: the first phase where co-education is not a priority, the second phase with participation in specific campaigns, but without a clear structure, and the third phase where schools are fully involved in co-education.

In recent years, analytical perspectives have emerged that focus on co-education from a poststructuralist and transformative approach. These perspectives highlight the need to transform the values and beliefs deeply rooted in society to achieve an education free of sexist biases (Pallarès-Piquer, 2019). In this context, the importance of didactic content that promotes equality and freedom is emphasised, as well as the active participation of educational institutions and teaching staff in the process of co-education.

In the same vein, Bejarano-Franco, Martínez-Martín and Blanco-García (2019) propose feminist pedagogical approaches as tools for the depatriarchalisation of the curriculum, from an intersectional and transversal feminism that aims to transform the structures of inequality. They are based on Freire's critical pedagogy and consider that gender equality and feminism should be a fundamental part of the curriculum and the training of education professionals. The authors propose three key approaches to feminist pedagogies: an anti-patriarchal and decolonial "counter-pedagogy of power" that challenges hegemonic masculinity and competitive values; a "historical education of women's memory" that includes popular experiences and knowledge in education, fostering community education that challenges the values of the neoliberal system; and an "education in non-hegemonic masculinities" that makes visible how machismo also negatively affects men and addresses intra- and inter-gender violence. Similarly, Martínez-Martin (2016) reflects on what should be the main features of a feminist pedagogy: the approach from the struggles for social justice, incorporating both popular and women's experiences and knowledge, educating in a critical capacity, recognising and deconstructing the relationships between power and education, fostering the development of local and global citizenship, promoting the dialogical dimension and diversity in the collective construction of knowledge.

In the international arena, Shrewsbury (1997) defines feminist pedagogy as one that promotes a liberating environment, where both teachers and students act as subjects and transformation is facilitated. The author proposes three central concepts that should guide feminist pedagogies: empowerment, community and leadership. Similarly, Webb et al. (2002) propose basic principles of feminist pedagogy: reframing teacher-student relationships, empowerment, community, privileging student voices, respecting the diversity of experience and challenging traditional views and practices. Keddie (2006) highlights the need to democratise classroom relationships by promoting collaboration and dialogue, as well as including the affective and emotional dimensions. According to this author, transformative pedagogical processes provoke some discomfort and must explore difficult and/or uncomfortable knowledge.

Poststructuralist feminism applied to education contributes to challenging traditional norms and emphasises the need to question and transform traditional educational structures and practices to promote

gender equality and diversity in the educational sphere. Curieses (2017) proposes a postmodern feminist approach that questions the binary categories of gender and advocates overcoming patriarchal discourses that perpetuate inequalities, grounding her ideas on the theories of Judith Butler and Seyla Benhabib, to propose that gender boundaries should be porous, open to plurality and differences. Rebollo (2013) underscores the importance of incorporating a gender perspective in education as a driver of social and educational change, highlighting that this implies transforming beliefs deeply rooted in society. Marolla-Gajardo (2015) addresses diversity in education and proposes challenging gender stereotypes, promoting the democratisation of educational spaces and social justice. For this author, the co-education system is based on giving students a leading role, both in the construction of the curriculum and in the decisions taken in the classroom and the school. In the approach of Planella-Ribera, Jiménez-Jiménez and Ruiz-Ortega (2019), a pedagogy that seeks to challenge hegemonic norms and promote bodily and gender diversity is proposed, addressing trans diversity and exploring the relationship between queer theory and queer pedagogy, as well as the importance of incorporating sexual and gender diversity in educational policies and practices. The postcolonial perspective in education is also explored, challenging dominant discourses and promoting a more inclusive and less Eurocentric and normative vision (Morgade, 2017; Rodríguez-Salamanca, 2020).

1.3. Pedagogical Renewal and Feminist Perspective

The third impulse of pedagogical renewal in Spain emerged at the beginning of the new millennium and extends to the present day (Feu-Gelís et al., 2021). This third impulse is distinguished by its willingness to rethink school organisation, student grouping and learning environments, reflecting an interest in exploring and experimenting with new ways of conceiving "school grammar".

Esteban-Frades (2016) highlights that the Movements for Pedagogical Renewal (MRP) constitute social movements aimed at reforming both the educational sphere and society at large, through the adoption of alternative pedagogical approaches and a strong political and social commitment. In this sense, the MRPs are actively engaged in promoting the democratisation of education and the construction of a more equitable and inclusive educational model. Esteban Frades argues that these movements are not limited to introducing superficial changes in pedagogy, but pursue profound social transformations. Their purpose transcends mere teaching, aspiring to transform society as a whole.

The MRPs represent a unique phenomenon in the context of the Spanish state, without parallels or similar movements in the international sphere. However, these movements exhibit conceptual affinities with what have been labelled globally as "Critical Pedagogies". The latter are oriented towards achieving significant changes in society and embrace the perspective that education has a responsibility to foster the development of critical consciousness in students by unmasking the discourses and practices of power, as highlighted by Giroux (2003).

Few studies address the analysis of co-education and the feminist perspective in centres of pedagogical renewal in Spain. In their research on five Catalan centres of pedagogical renewal, Feu-Gelís and Abril (2020) highlight that, except for one of the centres examined, co-education is not considered a fundamental pillar for understanding democracy and social transformation in the centres of renewal. They observe the persistence of gender stereotypes due to a lack of training and awareness among both families and teachers. Their proposal consists of a bottom-up approach of reflection based on observation and self-observation, to revise discriminatory discourses and practices.

2. Methodology

This study is part of the project The fourth impulse of Pedagogical Renewal in Spain: a case study in early childhood-primary education centers in the Autonomous Communities of Andalusia, Madrid, Catalonia, and Valencia from a critical perspective funded by Spanish Ministry of Science and Innovation and carried out between 2020-2024. The project in general and this research, in particular, have adopted a qualitative ethnographic approach that has allowed us to enter the school context, to experience the educational

dynamics directly, to understand the functioning of the projects holistically and to contrast both discourse and everyday practices.

This methodological approach took the form of a multiple case study in 7 schools selected according to the following criteria of pedagogical renewal: i) progressive educational aims; ii) use of active methodologies; iii) organisation of open and flexible times and spaces; iv) less compartmentalised curriculum; v) less hierarchical educational roles; vi) transversal evaluation; vii) shared leadership; viii) promotion of participation and democratic practice; and ix) a close relationship with the environment.

The diversity of the centres selected was also taken into account, according to the criteria detailed below:

Territorial distribution	Comunidad Valenciana (1), Andalusia (1), Madrid (1), Catalonia (4)
Ownership	Public (5), Private (2)
Trajectory in renewal projects	5-6 years (2), 9-10 years (2), 17 years (1), +20 years (1), +60 years (1)
Renewal perspectives	Free education (2), learning communities (2), eclectic (3)
Environment	Rural (3), Urban (4)

Table 1. Selection criteria for centres

Concerning the socio-economic profile of the families, 4 of the centres are made up of families with a medium or medium-high socio-economic level, while three of them have a low socio-economic composition, with a notable percentage of pupils of immigrant origin and Roma ethnicity, which in some cases exceeds 40%.

The techniques used were as follows:

In-depth interviews	Management teams (7) and teachers (7)
Discussion groups	Families (6) and students (6)
Participant observation	3-5 days in each of the selected centres
Review of documentation	From each of the selected centres

Table 2. Qualitative techniques used in the research

It should be noted that special attention was paid to ensuring a gender-equitable composition in all discussion groups. Furthermore, questions related to gender and gender inequalities in the school context were incorporated in the indicators used for participant observation, as well as in the protocol for the interviews and discussion group sessions.

A deductive analysis was carried out based on the gender codes linked to the questions and indicators related to this category. Subsequently, an inductive analysis was carried out to explore the categories that emerged in the discourses and practices observed in relation to the subject of the study. Data analysis was carried out using the ATLAS.TI 22 programme, with a thematic categorisation approach, which allowed for the grouping of themes and the identification of patterns and concepts that emerged from the data collected. The methodological variety and variety of data sources allowed us to approach the phenomenon from different angles with different levels of triangulation enhancing the reliability of our findings.

3. Results

The theme of gender has emerged in all the centres analysed, both in the interviews, focus groups and observations, either through specific questions on these themes or spontaneously in the discourse and observation of practices. The seven educational centres show a variety of approaches and levels of commitment to gender mainstreaming in their educational work. Some centres are more committed and advanced in promoting gender equality, while others show less commitment or face resistance within the educational community.

We identified two fundamental approaches that are intrinsically related to the conception of the person and his or her role in society within each educational project. The first, called "Individual-Essentialist", is shared by two of the centres located in rural environments. These centres base their pedagogical references on the theories of Rebeca and Mauricio Wild, within the framework of the "non-directive school" approach. On the other hand, the second approach, labelled as "Structural-Social", encompasses the rest of the centres, although with nuances and different levels of awareness and adherence to this approach.

3.1. Individual-Essentialist Approach

This approach highlights the singularity and uniqueness of each individual. In the two centres that adopt this approach, it is based on the fundamental principle that each child is unique and singular. It advocates respecting and valuing each child as they are. Thus, the diversity of individual characteristics of students, such as their unique preferences, behaviours and personalities, is highlighted, without relating them to gender stereotypes or roles.

"Each child is different. Yes, we are all different, everyone is different. So, we respect each child as he or she is. And this child wears a dress, this child pees a lot, this child screams, the other child likes bugs. Each one has a characteristic". (Teacher discussion group, school 1)

In this perspective, the notion of gender is removed from the educational environment, with boys and girls seen simply as "children", without gender labels. The underlying premise is that by not focusing on gender, the individuality and freedom of choice of each student can be promoted.

"As an approach to gender work, we don't do it. We visually see children, there is no gender. They are not boys and girls". (Interview with the management team, school 4)

Based on these principles, the individual well-being of each student and their basic needs are prioritised. It is argued that addressing the individual needs of the children prepares them to interact harmoniously in their environment and their social relationships. This approach rejects any form of "indoctrination" and imposition of specific gender-related values, believing that such issues should be personal decisions and not institutional impositions. This educational philosophy is aligned with the belief in self-directed individual growth, where each student has the freedom to develop according to their own inclinations and preferences. Thus, they do not have a gender-differentiated approach to the activities and roles assigned to boys and girls. They reject the notion that girls should do special activities because of historical difficulties, or that boys should participate in jobs traditionally assigned to girls to achieve equal representation. Instead, they promote the idea that each individual should evolve according to their own inclinations and choices, without being constrained by preconceived gender stereotypes.

This conception reflects an uncritical view of gender dynamics and relationships, minimising the importance of gender inequalities. In this perspective, differences in gender socialisation patterns are perceived as natural and psychological. It is an individualistic and essentialist approach that does not address the structural, social and cultural dimensions of gender construction and inequalities. Gender separations in play activities are interpreted as a result of differences in mental structure and are seen as an individual emotional need.

'There is a certain tendency for students to group themselves into groups of boys and girls, although the accompanying staff members say that this depends on the time of day and the interests of each child. In this sense, at some times, they look for each other and mix to play outside, while at other times, they are more separated. From the director's point of view, this is quite natural because free play highlights the differences in mental structure between boys and girls". (Observation Notes, school 4)

3.2. Social-Structural Approach

The second approach is notable for addressing gender inequality as a systemic issue rooted in social norms and structures, rather than as a purely individual issue. It recognises that gender inequality is inherently structural. Practices and relationships in this context are "marked" by gender because these differences also occur in households and the social environment.

"But there are the practices, let's say, or the relationships that are established that are also very marked by gender because, well, this, the family, what they see in their environment". (Interview with the management team, school 5)

It should be highlighted that children are exposed to a variety of misogynistic and sexist content, especially on social media. This content is not always addressed critically and tends to reinforce the dynamics of gender inequality and violence.

In some centres, the gender issue is even more relevant due to the particular socio-cultural composition of their students. For example, two of the centres work with Roma families, while another has a high percentage of Muslim families. These centres recognise the need to address specific issues such as teenage pregnancy and early marriage, acknowledging that gender inequalities may manifest themselves in different ways in different cultural and social groups and highlighting the need for a contextual and intersectional approach.

This perspective recognises the significant role of the school as a key social institution in addressing gender inequalities.

From the two conceptions mentioned above, equally differentiated ways of understanding pedagogical action and the role of the school in accompanying children emerge. On the one hand, the idea that the school should be a neutral space for children to develop their potential and capacities. In this sense, rather than specific interventions, action is aimed at preparing the context for such development to take place. On the other hand, the conception that the school is a reflection of society and, therefore, of social inequalities. In this sense, a specific pedagogical intervention is necessary to address inequalities. Below, we present what we have identified as two different models of accompaniment.

3.3. "Neutral" Accompaniment and Contextual Intervention

The first conception maintains that the school should ideally be an isolated bubble protected from the outside world and its problems. In this sense, accompaniment is deliberately "neutral" and detached from individual ways of thinking.

"What we try to do here is that the accompaniment is the most neutral in this sense, as long as there is no disrespect, right? But I want to say that everyone at home has very different ways of thinking, that no one feels judged, right? One thing is what you think, what we think, another family, but then once we get here, how can we live with this, right?" (Interview with the management team, school 4).

Similarly, the gender perspective is perceived as a personal aspect, derived from individual beliefs or values.

"No, here we don't take a position on any [discourse]. That is, everyone has their own personal opinion, but here in [name of the school] it is not there (...) Our opinion is not reflected in the accompaniment, or in anything". (Interview with the management team, school 4)

Centres aligned with this conception qualify that intervention is necessary only when there is a lack of respect towards another person. Intervention is perceived as a very individual process, adapted to the characteristics and needs of each student.

"We nipped it [a sexist comment] in the bud. First, we nip it in the bud by saying, "This is upsetting. This comment you made to this person is upsetting. In [name of school] we don't bother other people, and you, what did you want to say to them? There is always an intention behind the words: either because I'm hored, or because I'm scared... There is something. [...] Then we also give the other person a chance: "Did they bother you", "How did you feel? It is a very

individual accompaniment; we know each child very well, [we make sure] that they can cry, or that they can express their feelings". (Interview with the management team, school 4)

Again, it is observed that the intervention focuses on the person and their feelings, considering them as the root of the comments or disrespect. In this context, except for situations of disrespect, it is understood that it is not necessary to intervene explicitly and directly in the field of gender equality in the educational environment.

"It's not about us instilling certain ideas in them: neither feminist nor non-feminist, but rather about them being able to form their own ideas through their experiences. [So, rather than telling them: "Think this or think that" or "This is right; this is wrong", that is what we try not to do". (Teacher interview, school 1)

This conception implies that inequalities, including gender inequalities, are external to the school and therefore it is not the role of the institution to make explicit interventions to address or counteract these inequalities.

"Children bring it from outside. We change what we experience here, but we can't change the children and nor do we want to change the children. Families have to change, society has to change and here we provide a different reference model, that is what we think is key". (Interview with the management team, school 1)

Families agree with this approach and feel that these issues should not be addressed unless they arise out of concerns expressed by children.

As an alternative, the emphasis is on providing a different model to serve as a reference within the school space and which shows an example to be followed.

"We don't believe in teaching values; we believe that they are learned from the model. We don't tell children [but] we have to be a different role model. We don't believe in indoctrination, we believe in me doing things differently". (Interview with the management team, school 1)

"At [name of school] we pay attention to the attitude we have towards the children, and among ourselves, don't we? Because this serves as a model. [...] It is not an intentional model because we are trying to educate them, it is a natural model of how healthy relationships are between adults and towards children. And with that attitude, we are already showing a model". (Teacher discussion group, school 4)

Therefore, the focus is on intervening in the context: relationships, school climate, dynamics and spaces; to offer an environment with egalitarian and respectful relationships that serve as an "alternative" model to reality, which at the same time protects them from the outside world and serves as an example for them to see another way of relating to each other. In other words, to build a micro-world within the educational centre where these inequalities are overcome.

3.4. Intervention and Specific Work on Inequalities

On the other hand, a second way of understanding pedagogical action has been identified, which derives from the more social conception of gender and inequalities described in the structural-social approach. Pedagogical projects adopting this approach implement specific interventions to address aspects related to gender inequalities observed at the centre. The teachers in Centre 2 emphasise that this issue "is very present" and is addressed and dealt with. At Centre 3, when asked about the challenges they face, teachers unanimously emphasise equality, adding emphatically that "we cannot deny the evidence", underlining the need to address it in their pedagogical action. Likewise, Centre 5 points out that, despite the progress made in equality, there is still a need to continue to insist on it in schools.

"Yes, there are still [gender stereotypes], it still shows. With kids and with children so young, you still see it. You still see the issue of pink, the rejection of pink by boys and these roles, and this fascination with princesses... These very basic things, that you say: you have families, with culture, with university education... You reflect on these things and you still see it, don't you? And you still have to talk and you still have to intervene..." (Teacher discussion group, school 5).

The following vignettes from conversations with students illustrate how current social and gender-related issues are addressed in the classroom:

"R TAT 5: [the teacher] told us some news.

R TAT 1: [teacher's name] told us a news item and we talked about it and what we thought. The women's football team had won the cup.

R TAT 5: From Barcelona.

P DOR 1: (...) What did you think about the women's club winning the cup?

R TAT 1: Very good.

R TAT 3: Very good.

P DOR 1: Yes?

R TAT 4: Good, but very sexist.

P DOR 1: Why?

R TAT 2: What?

R TAT 4: Because the women are paid very little.

R TAT 2: Ah.

P DOR 1: Who told you that?

R TAT 4: It's very easy to know: men get paid millions and play dirty.

P DOR 1: And do they play dirty?

R TAT 3: Yes.

P DOR 1: And what do we do to fix this?

R TAT 2: I don't know. We...

R TAT 4: Equality.

P DOR 1: Equality, but where did you learn this?

R TAT 3: Sometimes we also celebrate like Women's Day: we draw Women's Day pictures....

R TAT 1: Yes, on the 8th, which is...

DOR 1: On the 8th of...

R TAT 1: Of March, yes.

R TAT 2: Of March. We do art and creation. For example, a few years ago, we made like a kind of poster and they gave us like stencils and so on, and we could draw whatever we wanted."

(Student discussion group, school 5)

"R TAT 3: In an assembly this issue came up because one boy said another one was gay, (...) and we were talking about it for a while.

R TAT 1: That, at school, we have talked a lot about feminism, that there are many things that are happening with women, that men sometimes don't respect them and all that. And, well, there are children who don't understand it and continue...

R TAT 5: Saying that women can't do anything.

R TAT 1: Exactly. There was a boy who was at my table, his name was [name], who said that girls were not strong and things like that.

R TAT 5: I mean, they are not good for anything, they are only good for cooking and taking care of the children and that's it

P DOR 1: Yes, and what do you think of all this?

R TAT 3: It's a lie.

R TAT 6: Well, it's not true.

R TAT 2: Not true".

(Student discusion group, school 7)

When we asked about the way in which gender issues are intervened and worked on, we detected actions at different levels. The most common way of "working" this type of content is through projects and activities. Centres 3 and 7 have specific projects and programmes to work on gender inequalities. The activities are usually carried out throughout the year, although on commemorative dates (8th March, 25th November, etc.) the work is more intense. Workshops and talks are another recurrent activity, often promoted by the PTAs and conducted by professionals and companies from outside the centre. They focus on a variety of subjects, although sex-affective education and co-education stand out. Other work resources are readings and books, which centres often use as an "opportunity" for conversations to arise more spontaneously and to be able to design subsequent activities.

The second most relevant form of intervention concerning gender equality is related to play and gender groupings.

"A tendency towards gender grouping at play-time and a differentiation between boys playing football and those using other play-time spaces has been observed". (Observation notes, school 5)

While some schools perceived such differentiation as "natural" and did not intervene, there are other schools that decided to intervene in such situations.

"You're in the playground and they say: "No, they won't let me play because they say I can't play football". You stop it in its tracks. Not here, oh no... We have an assembly about what has happened. We work constantly. And the roots of violence prevention were about all of this: we analyse songs, what backpacks... And we break away from all of this". (Teacher discussion group, school 7).

"Yes, yes, we do talk about it and we do things. However, I can tell you that it is a difficult issue because there are many roles, very well defined, very integrated, and it is difficult. And the preferences too: playing as boys and playing as girls, unavoidable. Today I was doing some dances with boys and girls, and when the boy and the girl had to hold hands, well, it's a big problem, you know? And well, what do you try to do? Well, to do boy-girl, boy-girl, so that they get used to it... It's not that they don't have differences between them, but we have a lot of work to do here". (Interview with the management team, school 5)

The tendency to group by gender also occurs when working in the classroom, in a more formal context of interaction.

R TAT 2: Ah! When we arrive on the first day, there are like tables set up and, for the first two weeks or so, we sit as we like; and then [teacher name] lets us sit down a bit too, but of course, we have to mingle because otherwise it's always the same people.

R TAT 6: Yes, because it's always the girls on one side, the boys on the other....

(Discurrsion group, school 5)

Another form of intervention relates to the context and atmosphere of the school. For example, Centre 3 contacted an association to paint a mural on the theme of gender equality, and Centre 5 included references to women scientists and researchers and their contributions to society in the school diary. Although we have highlighted that this was the best intervention in the case of projects without specific interventions, it is also an area of action for those who do make more targeted interventions. In this sense, Centres 5 and 7 insist on the importance of gender mainstreaming in pedagogical action.

"Yes, it is more a question of incorporating it, of making it the school's habitual way of working. So, taking a story at a specific moment, carrying out a specific activity can be useful for reflection, but, of course, it should be incorporated into the assemblies, it should be incorporated into the emotional education project..." (Interview with teachers, school 5).

Thus, rather than carrying out specific activities or on specific occasions, the challenge would be to take it into account in the life of the centre. One of the aspects is mainstreaming in the organisational structure.

We have identified that gender is mainstreamed in some of the centres. For example, Centre 2 and Centre 6 have a specific equality commission.

"The equality commission, in which we work on all types of equality, although it is true that we focus a little on gender because we found (when we entered the first year of the management team) that it was a pending task and something we had to work on because there was a great need to talk openly with the children about certain issues such as these. And from there, we have organised workshops to work on Women's Day, sexual diversity, etc.". (Interview with the management team, school 2)

Similarly, Centres 3 and 5 have the figure of an "equality coordinator or reference". In Centre 5, this coordinator is working to review the curriculum, materials and language in the centre's documentation and procedures.

Q DOR 1: Have you checked the curricular materials, the images, that there are no stereotypes or things...?

R TAT 1: We are trying, we are very much on the case. We have a person in the faculty as a point of reference, we put her there last year, and she is very aware of everything. And yes, we do try. Look, the other day we were reviewing the items in the reports, and we were changing them...

P DOR 1: Why do they reproduce these...?

R TAT 1: Well, with the sentences sometimes, with the masculine, feminine, all this..., you know? Or talking with more words... Instead of saying "students", talk about the student body and so on.

(Interview with the management team, school 5)

This research has allowed us to identify two different ways of understanding pedagogical action among the participating centres: one focused on the context and aligned with the idea of "neutral" accompaniment and the other oriented towards specific intervention on inequalities. In this case, the most common forms of intervention are projects and activities, gender groupings in classrooms and the playground, intervention in the school context and environment and, finally, the incorporation of equality in the organisational structures of schools. However, it is worth mentioning that even in schools that claim to have a specific gender equality intervention, actions are often only tangential. Equality is usually not central to the pedagogical renewal project.

3.5. Difficulties and Resistance

This research has also been devoted to examining the obstacles and barriers that arise in the integration of the gender perspective in centres for pedagogical renewal. The analysis has identified difficulties and resistance expressed by various educational agents.

One of the difficulties reported by almost all the renewal centres is the low diversity of the teaching staff, as the teaching bodies in the centres are highly feminised. Not only is the presence of men in the teaching teams limited, but they also tend to play specialised roles that reinforce gender stereotypes, such as physical education. In addition, both horizontal and vertical segregation is observed in the composition of the teams involved in pedagogical renewal projects, as men, when present, tend to occupy more leadership and management positions, in proportion. While it is true that the concern for the masculinisation of the teaching staff is a reflection present in all the centres, those more aligned with the individual-essentialist approach have shown less concern, as the teaching methodologies and roles are not as marked (for example, the team works horizontally and does not have specialists). Also, some resistance to the implementation of measures to reduce gender inequalities arises from male teachers. In Centre 7, for example, the management reports that some male teachers expressed objections to the banning of football during recess because of the conflicts it could generate.

In Centre 2, there is a notable lack of participation of male teachers in gender issues, underlining the need to broaden the perspective of gender work by including a focus on masculinities. In line with this, in Centre 5, it is also noted that there is a strong need for work on gender issues to also involve boys and to address masculinities. In this centre, it is observed that girls show a greater awareness of gender inequality

and take a more assertive approach to combating it. This behaviour could be related, according to teachers, to the fact that many of them look to their mothers as a point of reference, as they face the task of supporting the family alone and challenging gender conventions.

Another challenge has been identified in some centres in addressing the gender perspective: the disparity between the cultural and religious values of certain families and the principles of gender equality that the school seeks to promote. In particular, in Centre 2, it is noted how the religious values of Islam and the subordinate position of women in Muslim families in the school prevail over the principles of equality. In this context, the PTA organised a course for Muslim mothers to improve their email communication skills and to broaden their Spanish language skills. However, although the computer room was full on the first day, only one woman attended on the second day due to restrictions imposed by their husbands. On other occasions, when activities involve beach outings or an overnight stay away from home, Muslim girls choose not to participate. It is crucial to consider that, in addition to cultural and religious values, economic and political dynamics can play a crucial role in some families' resistance to gender equality. However, we must recognise the limitations of our data, as it is based only on the perceptions of some families and teachers concerning certain Muslim families. It is essential to highlight that within Islam there are various currents, including Islamic feminism (Latte-Abdallah, 2010). Furthermore, it is important to bear in mind that within Muslim families themselves there is a diversity of gender ideologies which, unfortunately, are not captured by this research.

In Centre 7, they are confronted with the cultural values of certain Roma families who tolerate absenteeism and promote early marriages of girls.

"There is significant absenteeism and then, when they leave here at the age of twelve, they start to consider who they will marry, right?" (Interview with management team, school 7).

In the case of Roma families, the intersection between cultural values and economics, among other aspects, must also be considered. It is crucial to stress, once again, the existence of the diversity of gender ideologies within Roma families.

It is important to note that these "difficulties" are recurrent in centres where the ethnic and/or cultural diversity of families and pupils is more evident. Whereas, for other schools, this aspect is not so relevant and is not perceived as "problematic".

Another of the difficulties identified is the existence of certain resistance on the part of some families to the incorporation of content related to gender identity and sexual-affective orientation. It is worth mentioning that such experiences have been reported more frequently in centres that specifically address inequalities, while centres characterised by "neutral accompaniment" have not mentioned explicit resistance. Some examples are given below:

"The whole issue of sex education, the LGTBI movement, all this... I think there is a direct indoctrination here, and I don't agree with that. [...] I mean, just as I was indoctrinated in a very powerful sexual repression, right? In the seventies, eighties. I think they are indoctrinated in the other extreme, but in an uncritical way, right? That anything goes. [...] For me, everything does not go, and they tell them directly that everything goes, and I don't think that's right". (Family discussion group, school 6)

"Damn, why some things and not others, right? What criteria do we have for influencing these social values? Why do some things go in and others don't? Well, it's true that we can't do everything, right? In other words, it is a relative criticism. The sexual issue is something more personal, and I do believe that there is indoctrination here". (Interview with families, school 7)

Teachers at Centre 6 also express concern about a certain "over-saturation" of students in gender equality activities.

"Well, it seems that students are starting to get fed up with so many talks, round tables, lectures, workshops, another workshop... But it is something that is being worked on a lot in secondary schools". (Discussion group, school 6)

Although these opinions are not generalised, it is relevant to consider the resistance, as they introduce a social discourse that has gained strength in recent years, questioning the implementation of education for equality and sexuality education that has been attempted to be promoted in the educational sphere in recent decades. It is therefore necessary to reflect on whether the format and content of these activities and projects should be revised, updated and organised more effectively throughout the various educational stages. Although this objective is beyond the scope of the present research, it certainly constitutes a line of analysis that deserves to be explored in future projects, to assess whether the issue of equality is being adequately addressed in the educational sphere and how to deal with the emerging resistance, albeit minority, towards this perspective.

4. Discussion and Conclusions

This research has explored the extent to which pedagogical renovation projects incorporate co-education and the feminist perspective in their principles and practices, based on a qualitative approach in 7 centres of renewal in Spain.

The results have made it possible to identify two distinct trends, both in terms of the conception of gender inequalities and in the pedagogical action taken by the schools in the face of these inequalities. Firstly, what we have called an individual-essentialist approach that focuses on the individual and their individual characteristics without taking into account gender issues, understood as more social aspects. In this sense, they understand pedagogical action as a "neutral" accompaniment to guarantee the free development of the child and to promote an environment with respectful relationships that serve as an "alternative" model to the external reality. On the other hand, a structural-social approach, which understands gender issues as being a structural inequality that is the responsibility of the school. Consequently, the pedagogical action they practice is oriented towards working on these inequalities, with different levels and forms of intervention, as the results of the research show.

The research shows the emergence of new approaches linked to certain so-called "free" or "alternative" pedagogical renewal projects, with a certain tendency to naturalise gender differences and the conception that educational institutions should stay out of such social issues. This position could be called gender-blind, as it resembles the colour-blind logic of "see no race, see people" (Bonilla-Silva, 2006). However, at the same time, these centres would comply with other principles of feminist education, such as the democratisation of classroom relationships (Keddie, 2006), the deconstruction of teacher authority and the curriculum (Wilkins, 2012), the validation of student voices and perspectives, and the inclusion of the emotional dimension and personal growth (Keddie, 2006).

Centres that recognise gender inequalities as systemic problems and therefore feel motivated to carry out pedagogical interventions do so to varying degrees and with varying levels of commitment. Of the five centres studied, three are in what Ugalde-Gorostiza et al. (2019) have called the second phase of implementation of co-educational projects, participating in specific campaigns, but lacking a clear structure. In contrast, two of the centres would be in the third phase, fully committed to co-education and moving in the direction of feminist, anti-patriarchal, decolonial and counter-hegemonic pedagogies, although not fully immersed in them.

It is relevant to note that we expected the centres of pedagogical renewal, whose mission involves reforming the educational sphere and, in some cases, influencing social and collective transformation, would demonstrate a more pronounced commitment to the feminist perspective. In this context, we anticipated that the construction of more equitable and inclusive models would be encouraged. However, our findings are somewhat discouraging in this regard, coinciding with previous research indicating that

co-education is not among the priorities in most schools in general (Saiz-Linares & Ceballos-López, 2021), nor in centres of pedagogical renewal in particular (Feu-Gelís & Abril, 2020), although a greater level of awareness and progress in incorporating the gender perspective has been observed compared to previous studies.

Finally, this research has identified obstacles to the implementation of co-education and gender mainstreaming in education. These challenges include the feminisation of the teaching staff, and the lack of consideration of the masculinities dimension in co-educational approaches and proposals. In addition, some schools perceive cultural differences as a difficulty, pointing to the lack of an intercultural perspective in dealing with gender inequalities. To a lesser extent, resistance on the part of some families to the efforts of schools in the field of co-education has been reported, questioning the need to continue to support this type of paradigm.

Declaration of Conflicting Interests

The authors declare that they have no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

This research has been carried out in the framework of the project "El cuarto impulso de Renovación Pedagógica en España: un estudio de caso en centros de educación infantil-primaria en las C.C.A.A. de Andalucía, Madrid, Cataluña y Valencia desde una perspectiva crítica", financed by the Spanish Ministry of Science and Innovation, during 2020 and 2004.

References

- Abajo, J.E., & Carrasco, S., (2004). Experiences and trajectories of school success of gypsies and gypsies in Spain. Crossroads on education, gender and cultural change. Madrid: Instituto de la Mujer.
- Acker, S. (1987). Feminist Theory and the Study of Gender and Education. *International Review of Education*, 33(4), 419-435. https://doi.org/10.1007/BF00615157
- Arnot, M. (2002). Reproducing Gender? Essays on Educational Theory and Feminist Politics. London and New York: Routledge. https://doi.org/10.4324/9780203994344
- Arnot, M. (2006). Gender equality, pedagogy and citizenship. Affirmative and transformative approaches in the UK. *Theory and Research in Education*, 4(2), 131-150. https://doi.org/10.1177/1477878506064539
- Bejarano-Franco, M.T., Martínez-Martín, I., & Blanco-García, M. (2019). Coeducating today. Reflections from feminist pedagogies for the depatriarchalization of the curriculum. *Tendencias Pedagógicas*, 34, 37-50. https://doi.org/10.15366/tp2019.34.004
- Bonal, X., & Tomé, A. (1997). Construir la escuela coeducativa. La sensibilización del profesorado. *Quaderns per a la Coeducació*, 12. Barcelona, ICE UAB.
- Bonilla-Silva, E. (2006). Racism without Racists: Color-Blind Racism and the Persistence of Racial Inequality in America. Lanham, MD: Rowman and Littlefield.
- Carrasco, S. (2003). La escolarización de hijos y hijas de inmigrantes extranjeros y minorías étnico-culturales. Revista de Educación, 330, 99-136.
- Connell, R.W. (1990). The state, gender, and sexual politics. *Theory and Society*, 19, 507–544. https://doi.org/10.1007/BF00147025
- Curieses, P. (2017). For an Inclusive School. The Frontiers of Gender. *International Journal of Education for Social Justice (RIEJS)*, 6(2), 63-79. https://doi.org/10.15366/riejs2017.6.2.004

- Daniels, H., Creese, A., Hey, V., Leonard, D., & Smith, M. (2001). Gender and learning: Equity, equality, and pedagogy. *Support for Learning*, 16(3), 112-116. https://doi.org/10.1111/1467-9604.00201
- Esteban-Frades, S. (2016). La renovación pedagógica en España: Un movimiento social más allá del didactismo. *Tendencias Pedagógicas*, 27, 259-284. https://doi.org/10.15366/tp2016.27.012
- Fernández-Enguita, M. (1997). Los desiguales resultados de las políticas igualitarias: clase, género y etnia en la educación. In Fernández-Enguita, M. (Coord.), *Sociología de las instituciones de educación secundaria* (107-122). Horsori.
- Feu-Gelís, J., Besalú-Costa, X., & Palaudàries i Martí, J.M. (2021). La renovación pedagógica en España. Una mirada crítica y actual. Madrid: Ediciones Morata.
- Feu-Gelís, J., & Abril, P. (2020). Gender perspective as a dimension of democracy in schools. *Profesorado:* Revista de Curriculum y Formación del Profesorado, 24, 1, 1-21. https://doi.org/10.30827/profesorado.v24i1.8237
- Flecha, C. (2014). Desequilibrios de género en educación en la España Contemporánea: causas, indicadores y consecuencias. *Areas. International Social Science Journal*, 33, 49-60.
- García-Pérez, R., Rebollo-Catalán, M., Buzón-García, O., González-Piñal, R., Barragán-Sánchez, R., & Ruiz-Pinto, E. (2010). Actitudes del alumnado hacia la igualdad de género. Revista de Investigación Educativa, 28(1), 217-232.
- Giroux, H.A. (2003). Public Pedagogy and the Politics of Resistance: Notes on a Critical Theory of Educational Struggle. *Educational Philosophy and Theory*, 35(1): 5-16. https://doi.org/10.1111/1469-5812.00002
- Hooks, B. (2017). Feminism is for everyone. Madrid: Traficantes de sueños
- Keddie, A. (2006). Pedagogies and critical reflection: Key understandings for transformative gender justice. *Gender and Education*, 18(1), 99-114. https://doi.org/10.1080/09540250500195184
- Kessler, S., Ashenden, D.J., Connell, R.W. and Dowsett, G.W. (1985). Gender Relations in secondary schooling. *Sociology of Education*, 58, 34-38. https://doi.org/10.2307/2112539
- Latte-Abdallah, S. (2010). Le féminisme islamique, vingt ans après: économie d'un débat et nouveaux chantiers de recherche. *Critique Internationale*, 46, 9-23. https://doi.org/10.3917/crii.046.0009
- Luke, C., & Gore, J. (1992). Introduction. In Luke, C., & Gore, J. (Eds.), Feminisms and Critical Pedagogy (1-14). Oxon and NY: Routledge.
- Mainer-Baqué, J., Cancer-Pomar, P., & Martín-Valdunciel, M.E. (2023). Feminismo y educación. Situando el problema históricamente: de la escuela segregada a la escuela mixta. *Con-Ciencia Social (second period)*, 6, 71-96.
- Marolla-Gajardo, J. (2015). Education for equality, difference and the teaching of women's history: reflections and challenges. *Journal of History and Geography*, (32), 101-115.
- Martínez Martin, I. (2016). Construcción de una pedagogía feminista para una ciudadanía transformadora y contra-hegemónica. Foro de Educación, 14(20), 129-151. https://doi.org/10.14516/fde.2016.014.020.008
- Morgade, G. (2017). Contra el androcentrismo curricular y por una educación sexuada justa. Revista Internacional de Educación para la Justicia Social (RIEJS), 6(2), 49-62. https://doi.org/10.15366/riejs2017.6.2.003
- Pallarès-Piquer, M. (2019). Conquistar la igualdad: la coeducación hoy. *Tendencias Pedagógicas*, 34, 1-4. https://doi.org/10.15366/tp2019.34.001
- Pérez-Sánchez, C.N. (2002). Posiciones frente a la escuela por parte de alumnas de origen subalterno. Revista de Educación, 329, 463-486.

- Planella-Ribera, J., Jiménez-Jiménez, & Ruiz-Ortega, L.A. (2019). Cuerpos, educaciones y géneros. Reflexiones sobre la anestesia y lo sensible en pedagogía. *Tendencias Pedagógicas*, 34, 5-15. https://doi.org/10.15366/tp2019.34.002
- Ponferrada, M. (2008). Chicas y poder en la escuela. Identidades académicas, sociales y de género entre jóvenes de la periferia. Universidad Autónoma de Barcelona.
- Rebollo, M. Á. (2013). La innovación educativa con perspectiva de género. Retos y desafíos para el profesorado. Editorial. Revista de Currículum y Formación de Profesorado, 17(3), 3-8.
- Rodríguez Salamanca, V. A. (2020). Coeducación: Aproximación a una epistemología feminista en el aula. Revista de Estudios de Género, La Ventana, (51), 32-52. https://doi.org/10.32870/lv.v6i51.7073
- Saiz-Linares, Á., & Ceballos-López, N. (2021). Hemos aprendido que los hombres no son más importantes que las mujeres. Una investigación sobre la construcción de una escuela coeducativa en Cantabria (España). *Cuadernos Pagu*, (61), 1-18.
- Shrewsbury, C.M. (1997). What Is Feminist Pedagogy? Women Studies Quarterly, 25(1/2), 166-173.
- Subirats M., & Brullet, C. (1988). Rosa y Azul. La transmisión de los géneros en la escuela mixta. Madrid: Instituto de la Mujer.
- Subirats, M. (2010). ¿Coeducación o escuela segregada? Un viejo y persistente debate. Revista de la Asociación de Sociología de la Educación (RASE), 3(1), 143-158.
- Ugalde-Gorostiza, A.I., Aristizabal-LLorente, P., Garay-Ibañez-de-Elejalde, B., & Mendiguren-Goienola, H. (2019). Coeducación: un reto para las escuelas del siglo XXI. *Tendencias Pedagógicas*, 34, 16-36. https://doi.org/10.15366/tp2019.34.003
- Venegas, M. (2010). La igualdad de género en la escuela. Revista de la Asociación de Sociología de la Educación (RASE), 3(3), 388-402. https://doi.org/10.59057/iberoleon.20075316.201520433
- Webb, L.M., Allen, M.W., & Walker, K.L. (2002). Feminist pedagogy: Identifying basic principles. *Academic Exchange*, 6(1), 67-72.
- Wilkins, A. (2012). The spectre of neoliberalism: Pedagogy, gender, and the construction of learner identities. *Critical Studies in Education*, 53(2), 197-210. https://doi.org/10.1080/17508487.2012.672332

Published by OmniaScience (www.omniascience.com)

Journal of Technology and Science Education, 2024 (www.jotse.org)



Article's contents are provided on an Attribution-Non Commercial 4.0 Creative commons International License. Readers are allowed to copy, distribute and communicate article's contents, provided the author's and JOTSE journal's names are included. It must not be used for commercial purposes. To see the complete licence contents, please visit https://creativecommons.org/licenses/by-nc/4.0/.