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Feminist trends in distance and hybrid higher education: a scoping review

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Abstract

Higher distance education models can be described from the theoretical and practical foundation of feminist pedagogy. The objective of this work is to know what feminist approaches are identified in the pedagogical models adopted by distance and hybrid education at the University and what curricular characteristics they have. The scoping review is carried out on a total of 126 journals bringing together 60 indexed, 30 specialized in gender and 6 in education. The final sample is made up of 10 papers that meet the established inclusion criteria. The review method is based on three phases of collection, description, and analysis with different tasks and the PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) protocol is followed. The results obtained from mixed methodology applied show three perspectives that set trends in distance and hybrid higher education models from feminist approaches: (a) feminist-pragmatist, (b) eco-dialogical feminist and (c) intersectional-technofeminist. These trends show the application of feminist principles to curriculum design and their implementation in distance and hybrid higher education.

Keywords: Distance education, Hybrid education, Feminist approaches, Scoping review, Higher education

Introduction

There is little scientific literature that addresses distance education in intersection with feminist pedagogy (Koseoglu, 2020). The scientific literature (Koseoglu et al., 2020; Migueliz et al., 2020) points to the need to develop more studies from a critical perspective that help to overcome this gap in knowledge, helping to deepen the theoretical and practical interactions between feminist perspectives and distance education models. These interactions between both fields of knowledge have been classified as "conflictive relationships" (Aneja, 2017, p. 851). According to Herman and Kirkup (2017) we would contend that feminist pedagogy as generally understood has a particular historical location and new theoretical approaches need to be developed to take account of modern technology-mediated learning environments as well as new practices of learning design.

The scientific literature has pointed out limitations in the incorporation of traditional feminist pedagogy into distance education, but it also points out that it can open new opportunities for equality (Patterson, 2009). Murray et al. (2013) suggest that feminist

pedagogy can mitigate inequalities related to conventional gender structures by constituting the basis for the design of learning and approaching distance training from a constructivist perspective centered on the learner.

For Lambert (2019) one of the main issues of concern for higher education institutions is to expand and guarantee the equitable participation of students in online distance education, but research has yet to develop conceptual models that guide the development of the plan of studies. According to Lambert (2019), studies often develop recommendations synthesized from interviews with staff and students and offer information on what higher education institutions can do to be more supportive and equitable in online participation. However, while the recommendations can help universities plan and structure their services in a better way, they are not finely grained enough to guide the design of curriculum (Lambert, 2019, p. 162). An example is the study of Nyaruwata (2018). In this study feminist theory was chosen to help the researcher understand how dual mode enhances equal access to higher education. Specifically, feminist theory helped to understand how the provision of conventional and online distance learning modes of learning increased access to higher education.

In this sense, feminist pedagogy can be an opportunity. Chick and Hassel (2019, p. 198) explain that if we do not make an effort to show what feminist pedagogy consists of and the benefits it brings, "it will remain a concept understood only by feminist educators, misunderstood by our colleagues, and invisible to our students. Furthermore, failing to outline the many ways feminist pedagogy is applicable to online environments will ensure that myths and misconceptions about online teaching flourish and that only the worst versions of online pedagogy persist".

Online, hybrid and HyFlex models in higher education

Distance education (DE) and hybrid education has evolved alongside social, educational, and technological changes. In the last decades and, above all, in digital acceleration times that we live in, distance education models had acquired multiple facets and had become more complex.

In distance and hybrid education, pedagogy and technology play a critical role. And the "distance", more than geographical, is psychological, social, and cultural-historical (Herman & Kirkup, 2017). The overcoming of distance, through mediated technological practices founded in pedagogical principles, led to the development of a wide range of educational possibilities.

In line with Bates (2020), it is crucial differentiating criteria that distinguish online distance education from blended education and, within the scope of blended education, differentiating hybrid and HyFlex education. If online distance education models, a form of distance learning, privilege time and space flexibility, assure learning autonomy via the Internet, blended learning models can range from the digitization of in-person learning contexts to the design of new courses that promote flexible learning, recombining in-person and online modes of learning.

Within the blended models, we highlight the hybrid and HyFlex models. The HyFlex models provide students the opportunity to combine different learning models, according to their personal agenda (Bates, 2020). For He et al. (2015) the most important challenges to HyFlex design and implementation is ensuring that online students can

be (and are encouraged to be) engaged in interactive learning experiences that lead to the achievement of important learning outcomes. For Beatty (2019) HyFlex courses are characterised by a mixture of online and face-to-face learning components. In particular, students are allowed to choose to complete any part of the course in online and/or face-to-face mode.

For Herman et al. (2019) in examining flexibility, they found very little evidence of programmes that were able to support student choice in flexibility of the blend, something that has been hailed as a potential benefit for blended learning. There is also evidence that the use of blended learning can be used to support programmes of learning targeted at women.

From critical digital pedagogy to feminist digital pedagogy

Critical digital pedagogy is an emerging concept in education (Bontly et al., 2017). For these authors critical digital pedagogy is the intersection of critical cultural pedagogy, culturally responsive pedagogy, and digital pedagogy. According to Rodríguez and Denoyelles (2014) the objectives of critical digital pedagogy are: (a) to make the environments more dialogical, inclusive, and student-centered, (b) to make online learning experiences more adapted to the student, c) to make the students can express in a richer way what they have learned autonomously. These goals are common to feminist pedagogy.

However, other objectives and characteristics identify feminist digital pedagogy. For Aneja (2017, p. 852), the main objective of feminist pedagogy that shows more resistance on the digital plane is "to establish personal contact, and its lack of space for validation of individual, subjective experiences which may emerge in synchronous, participatory classroom discussions". For Cox et al (2021), radical compassion for their students is practiced from feminist pedagogy, doing everything possible to alleviate the burdens of their students, promote their safety and well-being.

There are authors who insist such as Chick and Hassel (2009) and Rodríguez and Denoyelles (2014) that the embodiment of feminist pedagogy within the digital realm is indispensable and that we must critically consider how the technology selected mediates the experiences of learners. A selection of pedagogical principles enables this challenge to be addressed. The key pedagogical principles that guide the structure of courses or training actions from critical digital pedagogy are: (a) breaking of the hierarchy (teachers and students jointly establish the study plan) (Hutchinson, 2021; Rodríguez & Denoyelles, 2014), (b) participatory learning (focused on interests and goals of the students) (Rodríguez & Denoyelles, 2014), the curriculum represents women's interests, needs (Koseoglu, 2020), (c) social construction of knowledge, which implies developing a sense of community and working in networks and support teams (Rodríguez & Denoyelles, 2014), the curriculum provide social connectedness and opportunities for networking (Koseoglu, 2020), (d) centering emotion, (implies emotional attention not only cognitive of the students and the development of the pedagogy of care) (Hutchinson, 2021), (e) the curriculum is based on "established bodies of knowledge that reflect a female point of view" and ways of delivery (Koseoglu, 2020) and the curriculum is designed for the imaginary self-directed and independent learner (Koseoglu, 2020).

There are specific studies that suggest that there should not be a "one size fits all" model for blended learning and that further research is required so that distance education models can be adapted to the specific needs of groups of students (Herman et al., 2019).

Challenges for distance and hybrid higher education from a feminist digital pedagogy

Rethinking Transactional Distance Theory. For Moore (1997, p. 22) the transactional distance (DTT), is "a psychological and communications space to be crossed, a space of potential misunderstanding". Bolliger and Halupa (2018, p. 209) collect the criticism of Kang and Gyorke (2008, cit. in Bolliger & Halupa, 2018), about Moore's DTT that does not address the critical social characteristics of students. These authors introduce the idea derived from Leontiev and Vygotsky's sociocultural theory of "sociocultural position" to revise the traditional Transactional Distance Theory that is controversial for feminist pedagogy. According to their considerations, technology serves as the artifact that mediates transactions between students, as well as with the teacher in online learning. In addition, culture and history are critical components that provide the foundation for the way students interact in online courses. Herman and Kirkup (2017, p. 784) argue that:

> *The solution to the problems of transactional distance is not always to create the opportunity for more interaction between people if that interaction brings unequal power with it. The stress on the importance of group learning in some distance learning models can imply that students perhaps have a greater obligation for the learning of fellow students than they have for themselves and their own comfort, and it can ignore the gendered or other power dynamics, even within an online learning environment.*

Various authors such as Aneja (2017) argue that feminist contributions have already reviewed transactional distance and that it is overcome by the fact that physical and virtual distance are intertwined and merged into a single interaction experience sustained.

Avoid reinforcement and polarization of existing gender roles

International literature has indicated that distance education can be a way of empowering women (Afolayan, 2015; Amin et al., 2020; Anbalagan, 2018). However, as Lazou and Bainbridge (2019) indicates, although there is a promising trend regarding the number of women enrolling in higher education online, there are four important variables identified and analyzed as challenges that are disempowering them, namely: (a) the conflict of roles; (b) investment of time; (c) domestic affairs and relationships; and (d) the design of the learning and tutoring structure. The work of Lazou and Bainbridge (2019) concludes that these barriers can be overcome to the extent that a feminist pedagogy is the basis for designing learning and for offering support and encouragement through a constructivist approach centered on the student.

Research still requires progress to identify what factors limit women from distance education (Murray et al., 2013). Distance university studies can be a claim for women due to its flexibility, and that is, its training offer can be interpreted as an opportunity for women. However, as indicated by Murray et al. (2013) distance education facilitates

personal development and allows greater choice, but also perpetuates conventional gender structures by facilitating women to remain in the private sphere. And in this sense, it is necessary to review if a feminist pedagogy can be "an accomplice of the relegation of women" to the home (Murray et al., 2013, p. 344) due to the offer of distance education. For Aneja (2017) offline inequities (such as gender, race, and class) may remain not neutralized in the virtual world, drawing attention to the need for permanent vigilance from the ethics of care and care pedagogies.

Hyflex models in higher education and challenges for feminist digital pedagogy

The global pandemic has forced many teachers to practice the HyFlex models. Among them, feminist educators have experimented with the development of feminist pedagogical principles in these teaching models (Moorhouse & Tiet, 2021). One of the main challenges is to incorporate flexibility into the design. In a systematic review of the blended learning literature, Boelens et al. (2017) suggest that this is a key challenge in designing blended learning. That is, how to incorporate flexibility. When examining flexibility, they found very little evidence of programs that were able to support students' choice in combination with flexibility, something that has been hailed as a potential benefit for blended learning. Flexibility has risks when choice leads to inequities. For Binnewies, and Wang (2019) it implies how to ensure that online students are not at a disadvantage with respect to opportunities for interaction and knowledge acquisition.

For these authors, despite the benefits of greater flexibility especially for adult learning, HyFlex comes with another unique challenge, in addition to those inherent in individual online and face-to-face instruction. First, students should have the same learning opportunities in any mode and should not be disadvantaged by choosing one mode over the other. Specifically, students must have equitable access to learning resources, tools to complete learning tasks, and learning support. We lack comparative studies from a gender perspective regarding the benefits for men and women of HyFlex models. However, the HyFlex models could represent a solution to the need for feminist pedagogy of face-to-face contact for the construction of knowledge in a dialogic way compared to an exclusively online modality. This aspect is the one that has been most resistant for digital feminist pedagogy (Aneja, 2017).

Materiality of the platforms from a culturally critical approach

Digital technologies and teaching and learning platforms used in higher education can limit the feminist response and reproduce dominant structures and discourses that reinscribe power relations along the axes of gender, race, sexuality, nationality, and class (De Hertogh, et al., 2019). For these authors, study centered in materiality of platforms can and will lead to nuanced conversations, major breakups, and productive interventions.

Shivers et al. (2019) emphasize the interconnectedness of technological practices and gender, race, class, and sexuality, as well as their co-constitution and conformation with each other. These authors constantly examine the intersections of identities related to race and culture, in their work to build technologies and platforms that reflect the communicative strengths and practices of linguistically and ethnically diverse communities.

Objective and research questions

Our research is specifically concerned with conducting a scoping review of scientific contributions that address this intersection between feminist pedagogy and distance education to delimit trends and theoretical-practical approaches that allow providing keys for the design of the curriculum in distance and hybrids educational models. The results will allow progress in the emerging critical digital pedagogy from a feminist approach. Therefore, the following research questions are posed:

1. What feminist perspectives are identified in the cases of distance and hybrid higher education?
2. What are the curricular characteristics of these distance and hybrid education models?

These questions are the object of interest in this work and to address them we undertake a scoping review of scientific literature that analyzes specific cases in the international context.

The objective of this work is to know what feminist approaches are identified in the pedagogical models adopted by distance and hybrid education at the University and what curricular characteristics they have.

Method

The study presents a scoping review of case studies published in the last 5 years (2015–2020) that show online and hybrid teaching practices at their intersection with feminist pedagogy.

We indicate the number of sources of evidence examined evaluated for eligibility, and included in the review, with reasons for exclusions at each stage, using a flow diagram following the guide adapted from Trico et al. (2018) for scoping review (PRISMA-ScR) and based on recommendations of Peters et al., (2020a, 2020b, p. 2125) for scoping review. The flow chart is made in accordance with PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Moher et al., 2009). For Peters et al. (2020b) the flowchart should clearly detail the review decision process, stating the search results, elimination of duplicate citations, source selection, full retrieval, and additions from a third search and presentation of final abstract.

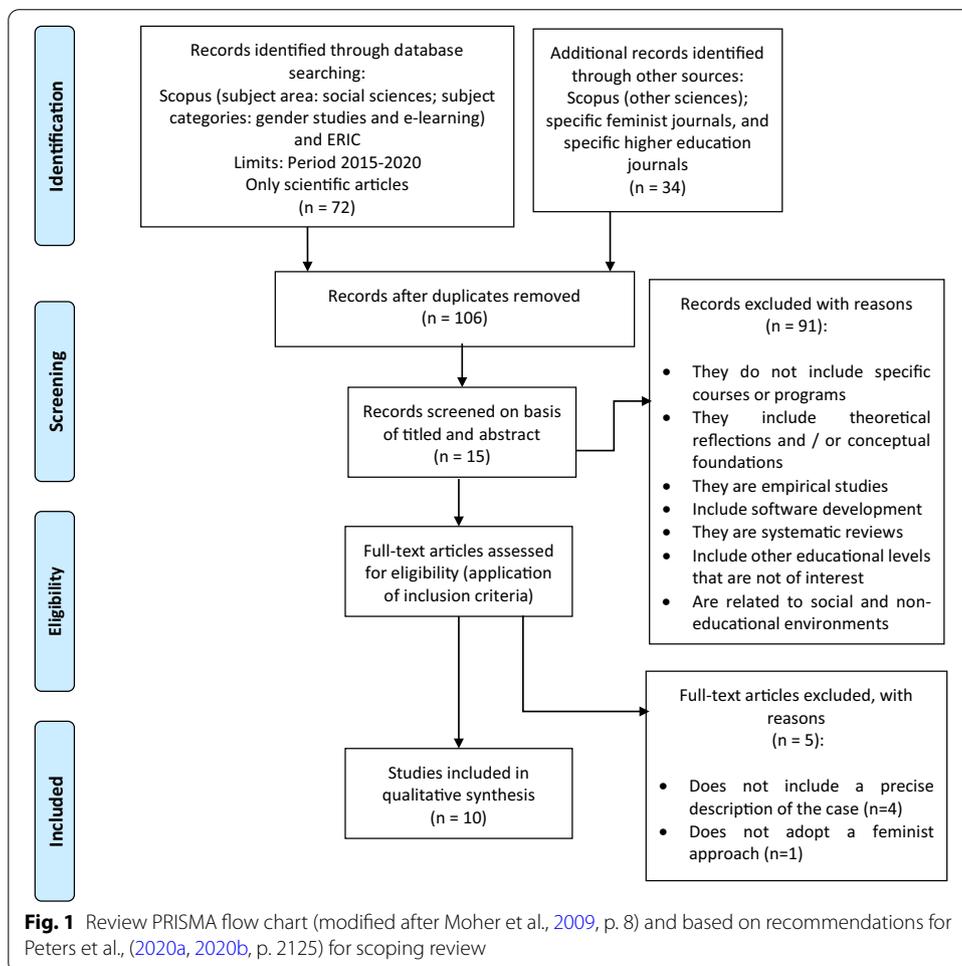### Search strategy and selection procedure

According to Peters et al., (2020a, 2020b) additional sources should be detailed, such as manual searching for specific journals, including journal names and years searched. Searching for a scoping review can be quite iterative as reviewers become more familiar with the evidence base. Taking these considerations into account three review phases are carried out: (a) a total of 60 journals indexed with the SCOPUS are reviewed in the fields of "gender studies" (18 journals) and "e-learning" (42 journals), thus as 6 feminist journals with peer review not indexed in SCOPUS but of special relevance to the topic (the focus and scope criteria are followed for their selection,

discarding those that are generalist or that deal with fields such as philosophy or economics); (b) the database ERIC is reviewed, due to their exclusively educational nature.

According to Peters et al., (2020a, 2020b) additional keywords and sources, and potentially useful search terms, can be discovered and incorporated into the search strategy. The combined search terms used "feminist" AND "pedagogy" AND "digital" and "higher education" and "case study".

The inclusion criteria imply that the contributions include illustrations and/or case studies, are specifically developed in Higher Education and analyze courses, programs or subjects raised from online or hybrid models. Empirical research works from a gender perspective and with results disaggregated by sex, which highlight differences between men and women in higher education practices, are discarded (see more exclusion criteria in Fig. 1). The selection is carried out following a method in three stages, leaving the sample made up of 10 papers.

The search strategy has been carried out exhaustively following an adaptation of Appendix 11.1 JBI template source of evidence details, characteristics, and results extraction instrument (Peters et al., 2020b) (Table 1).

Fig. 1 Review PRISMA flow chart (modified after Moher et al., 2009, p. 8) and based on recommendations for Peters et al., (2020a, 2020b, p. 2125) for scoping review

Data extraction process and analytical procedure

The method used to guide this scoping review forms a structure of three sequential stages aimed at the collection, description and analysis of feminist trends and approaches in open and distance education, through a series of specific tasks that are described in Fig. 2. The collection phase includes four tasks that complete the sampling of key cases from the scientific literature, the description phase involves three tasks through which the approach of each case is deepened thematically and finally the analysis allows apply a series of techniques to treat the information and cover the research objective.

Cases characteristics

Following the improved recommendations of Levac et al., (2010, pp. 4–8) a numerical summary and a qualitative thematic analysis are incorporated.

The specific analytical procedures involve a qualitative exploratory analysis using the MAXQDA v.2021 software and a hierarchical cluster analysis, cross tables and analyzes based on the contingency coefficient with SPSS v.26. Qualitative and quantitative processes are combined in a sequential design.

The exploratory study with MAXQDA makes it possible to establish and determine the emerging category system by first applying a thematic analysis that combines inductive and deductive processes. To do this, the analysis that allows the word cloud to be extracted from all the documents is applied, it proceeds with segment autocoding and the debugging and elimination of superfluous words. Second, the MAXDICTIO tool is used for each document looking for combinations of words (classificatory expressions) resulting in the delimitation of key constructs. This process allows to develop the system until reaching the theoretical saturation. Emerging hypotheses related to emerging codes and their relationships are contrasted using visual tools such as the code relationship matrix. Based on this procedure, a definitive system of categories is established that is used as an observational grid for each document (Table 2).

The refined category system is applied as an observational grid to each case. In this way, the measurement of the constructs (feminist principles and sense of student's participation) is made operational on a Likert-type scale with a notation system indicating 1. The trait is not observed, or it is observed in a minimal way, 2. It is observed of moderate form, 3. It is observed in a high and explicit way. A hierarchical cluster analysis is performed (after a collinearity study) following Ward's method, and the Euclidean distance
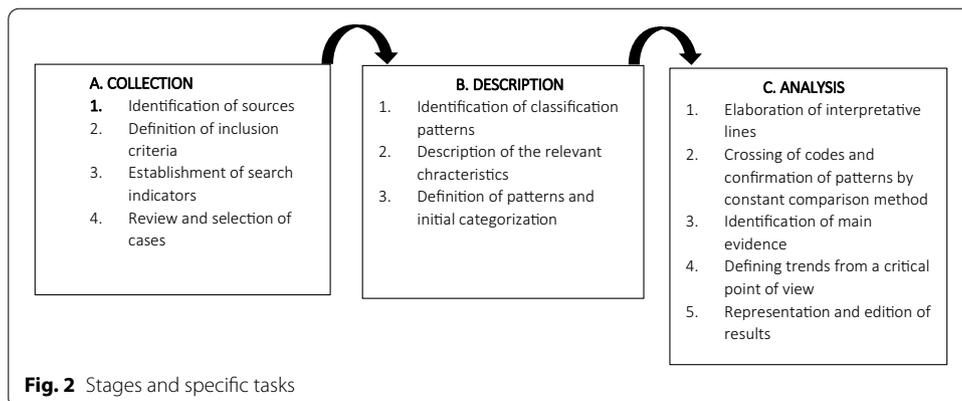

Fig. 2 Stages and specific tasks

Table 1 Selection of cases

CASES	Authors/Year	Title	Sources	Training scope on gender	Distance educational model
CASE 1	Vivakaran and Maraimalai (2019)	Networked Learning and Learning Analytics: A Study on the Employment of Facebook in a Virtual Training Program	Learning Environments, 27(2), 242–255	Transversal	Online model
CASE 2	Herman et al. (2019)	Using a blended learning approach to support women returning to STEM	Open Learning: The Journal of Open, Distance and e-Learning, 34 (1), 40–60	Transversal	Hybrid model
CASE 3	Mathews (2019)	Teaching Art Librarianship in Critical Praxis: Feminist Pedagogy in the Online LIS Classroom	Art Documentation 38(2), pp. 185–216	Transversal	Online model
CASE 4	Hutchinson and Novotny (2018)	Teaching a Critical Digital Literacy of Wearables: A Feminist Surveillance as Care Pedagogy	Computers and Composition 50, 105–120	Transversal	Hybrid model
CASE 5	Ringrose (2018)	Digital feminist pedagogy and post-truth misogyny	Teaching in Higher Education, 23(5), 647–656	Transversal	Online model
CASE 6	Nyaruwata (2018)	The dual-mode provision: successes and challenges. A case study of Women's University in Africa (WUA)	Distance Education, 39(2), 194–208	Specific	Hybrid model
CASE 7	Aneja (2017)	Blending in reconciling feminist pedagogy and distance education across cultures	Gender and Education, 29(7), 850–868	Specific	Hybrid model
CASE 8	Gajjala et al. (2017)	Epistemologies of doing: Engaging online learning through feminist pedagogy	Higher Education, 135	Transversal	Online model
CASE 9	Herman and Kirkup (2017)	Combining feminist pedagogy and transactional distance to create gender-sensitive technology-enhanced learning	Gender and Education, 29(6), 781–795	Specific	Hybrid model
CASE 10	Chung (2016)	A feminist pedagogy through online education	Asian Journal of Women's Studies, 22(4), 372–391	Specific	Online model

(Vilà-Baños et al., 2014), as well as comparison of means for group description and cluster validation with one-way ANOVA and calculation of eta squared for effect size. Cluster graph is generated through factorial analysis (identifying 2 factors with varimax rotation). As the correlation matrix is not defined positive, this means that its determinant is 0, with which there is collinearity between the variables considered, which does not make it necessary to check the sphericity of the variables (by means of the Bartlett test), nor the calculation of the KMO coefficient.

Table 2 Category system

Dimensions of feminist pedagogy as critical digital pedagogy	Feminist principles	Body
		Voices
		Lives
		Empowerment
		Dialogue/community
		intersectionality
	Sense of student's participation	Participation as a means of transformation and empowerment
		Participation as a form of expression of diverse and embodied experience
		Participation as an opportunity to access
	Role of feminist educators	Breakdown of hierarchies in roles
		Creating a sense of community
		Development of skills in the creation of networks, security, and trust
		Flexible adaptation of the learning environment to meet needs
		Provision of routes for participants to receive other specialized help
	Sense of content and materials	Content and reference materials with the power of transformation
		Co-produced content and materials
	Methodological strategies	Asynchronous forums
		Synchronous forums
		Social media
		Brainstorming,
		Collaborative idealizations,
		Problem solving

Results and discussion

Question one: What feminist perspectives are identified in the cases of distance and hybrid higher education?

The application of cluster analysis generates three feminist approaches in distance higher education.

Feminist approaches in distance higher education, finding three well differentiated groups. While the cases in group 1 focus on empowerment (M = 2.75, F = 0.700, p = 0.528, $\eta^2 = 0.167$) and participation as an opportunity to Access (M = 1.75, F = 1.718, p = . 247, $\eta^2 = 0.329$); those in group 2 focus on two feminist principles such as voices (M = 3, F = 8167, p = 0.015, $\eta^2 = 0.700$) and dialogue and community (M = 3, F = 7.827, p = . 016, $\eta^2 = 0.691$), and the students' sense of participation as a means of transformation and empowerment (M = 2.75, F = 0.457, p = 0.651, $\eta^2 = 0.115$); in group 3 the body (M = 3, F = 6.300, P = 0.027, $\eta^2 = 0.643$), the lives (M = 3, F = 2.100, p = 0.193, $\eta^2 = 0.375$), intersectionality (M = 3, F = 38.033, p = 0.000, $\eta^2 = 0.916$) and participation as a form of expression of diverse and embodied experience (M = 3, F = 24.500, p = 0.001, $\eta^2 = 0.875$). The ANOVA test shows that the differences found are significant in the five variables involved and, in the others, an intermediate effect size is observed and high (according to Cohen´s criteria). Its practical significance is

maintained given the sample size, the object of study of maximum specificity and the type of review study. Table 3 shows the sample results split into three clusters Table 3. Results split into three clusters, exploratory ANOVA and effect size.

The interpretation of the most characteristic features of each approach allows us to name the clusters. Cluster 1, named as *Feminist-pragmatist perspective*, includes cases 1, 2, 6 and 9. The cluster 2 named as *Eco-dialogical feminist perspective* includes cases 3, 7, 8 and 10. And the cluster 3 named *Intersectional-technofeminist perspective* includes cases 4 and 5 (see Fig. 3). These theoretical perspectives are included in two tendencies that characterize the models of higher education at a distance.

Trend 1 (factor 1) aimed at offering an embodied online learning experience and trend 2 (factor 2) aimed at empowering women as an opportunity to access distance education (see Table 4). These two trends explain 67.34% of the variance.

Cluster 1: feminist-pragmatist perspective

This perspective highlights the usefulness of distance education for women due to its flexible nature and focuses on the empowerment opportunity provided by distance education models. The opportunity to access higher education at a distance becomes the main value and meaning of participation in these training models, especially in very specific countries and cultural contexts. Nyaruwata (2018) presents the successes and challenges faced in implementing the dual-mode strategy in higher education in the context of feminist theory. Her work focuses on a case study design at Women's University in Africa.

> *However, most dual-mode universities have not stressed the need to expand access to HE by women; as a result, in most of these universities, specifics the majority*

Table 3 Results split into three clusters, exploratory ANOVA

	Ward method/ cluster				ANOVA				ETA squared (η^2)
	1	**2**	**3**		**Mean square**	**Df**	**F**	**Sig**	
	Mean								
Feminist principles									
Body	1	1.5	3	1.6	2.700	2	6.300	0.027	0.643
Voices	1.5	3	1	2	3.500	2	8167	0.015	0.700
Lives	1.5	2.5	3	2.2	1.800	2	2.100	0.193	0.375
Empowerment	2.75	2	2	2.3	.675	2	.700	0.528	0.167
Dialogue/Community	1.75	3	1	2.1	3.075	2	7.827	0.016	0.691
Intersectionality	1	2.75	3	2.1	4.075	2	38.033	0.000	0.916
Sense of students participation									
Participation as a mean of transformation and empowerment	2.5	2.75	2	2.5	0.375	2	0.457	0.651	0.115
Participation as a form of expression of diverse and embodied experience	1	2.5	3	2	3.500	2	24.500	0.001	0.875
Participation as an opportunity to access	1.75	1	1	1.3	0.675	2	1.718	0.247	0.329

Fig. 3 Cluster dispersion and cases
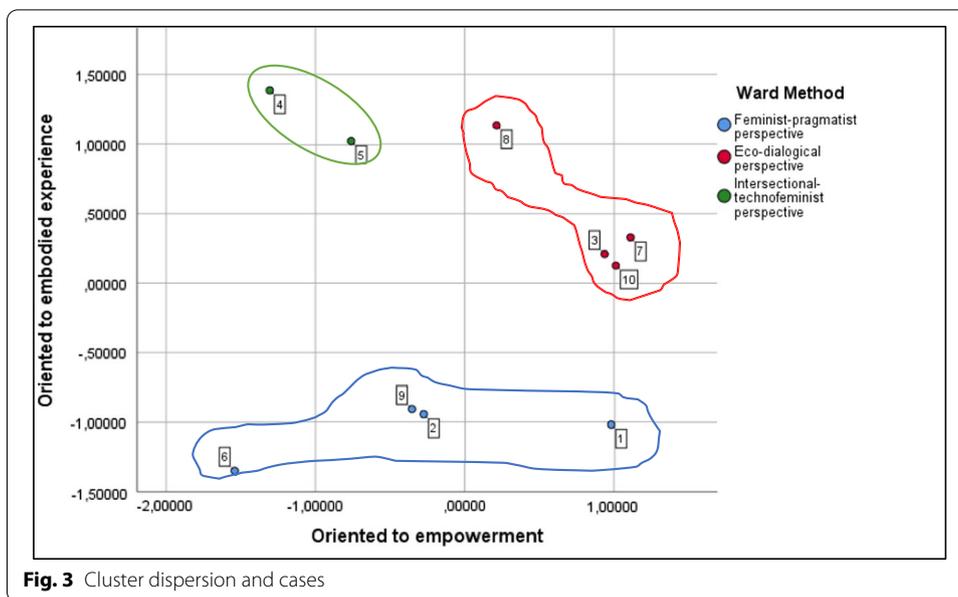
Table 4 Matrix of rotated components

Categories	Factor 1	Factor 2
Body	0.816	− 0.427
Voices	0.165	0.895
Lives	0.641	− 0.057
Empowerment	− 0.322	− 0.158
Dialogue/community	0.074	0.909
Intersectionality	0.928	0.155
Participation as a means of transformation and empowerment	− 0.159	0.716
Participation as a form of expression of diverse and embodied experience	0.954	0.053
Participation as an opportunity to access	− 0.593	− 0.566

> *of the students are still men. Thus, development of most dual-mode institutions is not influenced by feminist theory, which advocates gender equality at all levels of life (Case 6, p. 197)*

This perspective includes cases (1, 2, 6 and 9) (mainly hybrid models) oriented to a distance education model focused on the search for empowerment. In case 1, the bases of the didactic methodologies that contribute to creating an empowered learning space are observed, as well as the foundation of case 2.

> *The synonymous nature of feminist pedagogy with the networked learning ideologies that focuses on the connections, relationships and collaborations makes it ideal for creating an empowered learning space that was required for the workshop (Case 1, p. 246).*
>
> *Feminist principles in e-learning are needed to take account of power relations between learners and students, empower users (Case 2, p. 42).*

In general, there is a clearly determined interest in international politics to democratize distance education and make it accessible to certain vulnerable groups. For example, this is expressed by Aneja ([2017](#)) when referring to the master's program in India, Women's & Gender Studies (MAWGS), the need for which is justified in the democratization mandate of Open and Distance Learning (ODL) in general and by Specific institutional needs to obey policies for the empowerment of women and for breaking digital gaps.

Cluster 2: eco-dialogical feminist perspective

This perspective includes cases 3, 7, 8 and 10 (mainly online models) and is aimed both at empowerment and at generating in students a diverse and embodied experience linked to their experiences. The feminist principles that characterize distance higher education models are voices, dialogue, and the creation of community. This is how Mathews ([2019](#)) explains it:

> *The author empowered students by analyzing processes and experiences such as applying for jobs, professionalization, and workplace expectations, using as many authentic situations as possible to illustrate concepts (Case 3, p. 201).*

From this perspective, distance higher education focuses on the experiences of students and tries to create an open learning community where mutual exchange and empathy are valued. Students must not only take responsibility for their own learning progress, but also support each other in jointly creating the content and context of learning. It is a model that is open to the community:

> *Specific examples of assignments, strategies, and communications that reinforced principles outlined above emphasized active learning, diversity, and respect. The first assignment of the course asked students to record a short video introducing themselves, with the instructor's own video as an example. This promoted the ability to see one another and to establish community (Case 3, p. 201)*

Contact with others constitutes a basic tool for the collective work of ideas and the generation of knowledge as a continuous and dynamic process. This perspective requires distance education models to confront voices and requires collaboration in carrying out work in university classrooms. This is how Chung ([2016](#)) explains it:

> *Each student voices an individual opinion, depending on whether she is a housewife with children, a wife in a two-income household, a childcare instructor, a daycare center director, a civil servant and so on. However, hearing each other's opinions gives students practice in arriving at a consensus (Case 10, p. 380)*

This dialogic feminist perspective seeks to raise awareness about social inequalities, including gender discrimination:

> *After hearing lectures on "motherhood ideology" and "patriarchal family ideology" it is not infrequent for students to present contradictory opinions, as seen in such comments such as "I gained a new appreciation for my mother's sacrifices" an "Our society is based on the extended family, and we've always lived according to nature. (Case 10, p. 381)*

The models that incorporate this perspective focus on the collaborative construction of knowledge and use specific resources in virtual spaces that are usually used to generate confrontational discourses and debates. Student participation is key to learning. Interaction and dialogue start from one's own experience and is reconstructed in contact with other voices through intertwined dialogues as ways of promoting collaborative knowledge and stimulating participation (Aneja, 2017).

Community engagement is observed in the collaboration of professionals, experts, or entities from the environment in virtual spaces. In such a way that they act as training resources and as elements for dialogue, support, and interaction in the process of active construction of learning. The distance higher education proposals that use social networks and asynchronous forums offer opportunities to students due to their flexibility and possibilities for interaction and collaborative dynamics (Murray et al., 2013). In this sense, from this perspective the theory of transactional distance is reconceptualized where culture and history are critical components that provide the foundation for the way students interact in online courses. Specifically, from this perspective, online models of distance education would be concerned with being sensitive to the "sociocultural position" (Bolliger & Halupa, 2018).

Cluster 3: intersectional technofeminist perspective

The cases that are grouped in this perspective are 4 and 5 (an online model and another hybrid). Both are characterized by conceiving distance education aimed at living an embodied experience based on personal experiences, authentic situations, and particular positions.

Feminist pedagogy from this perspective highlights three principles: body, lives, and intersectionality.

Hertogh et al. (2019) discuss the application of a feminist lens and a feminist ethic to the study of technologies and objects. For these authors, this also means questioning the gender implications embedded within the materiality of those objects, and therefore the materiality of such proposed studies and theoretical frameworks. This perspective is related to techno-feminism as a theoretical framework that academics can use to critique the socio-technological problems that contribute to oppression and inequality and initiate creative and activist possibilities for the breakdown of these oppressive structures. This translates into distance higher education proposals based on the pedagogy of care. Thus, in case 4, Hutchinson and Novotny (2018, p. 113) argue that "a feminist surveillance as care pedagogy teaches professional writing students a user-centered design practice that supports consent and user agency, and resists ubiquitous, non-consensual surveillance of user's bodies."

> *This framework offers an explicitly feminist approach to addressing the current collection of bodily data in wearable health technologies. (…) The critique portion of the framework actively interrogates the rhetorical interplay between what a mobile health app hosted on a wearable technology promises and what it does when it collects information off the body. (Case 4, p. 113)*

Shivers et al. (2019) argue that Wajcman (2004) offered techno-feminism as an approach to understand the ways in which technology generates and is a consequence

of gender relations. This implies that applying a feminist perspective changes our understanding of what technology is, which means expanding the concept to include not only artifacts but also the cultures and practices associated with technologies. From this perspective the affective, the material and the semiotic are intertwined, the feminist materialist critique assumes (Staunæs & Brogger, 2020). These aspects are observed in distance higher education practices where participation as a form of expression of diverse and embodied experience: To later advocate for more critical approaches to wearables, students must first feel how their bodies are involved in digital spaces. (Case 4, p. 118).

For Clinnin and Manthey (2019), techno-feminists examine how incarnated and culturally situated rhetorical subjects produce, circulate, and give meaning to discursive texts, with special emphasis on intersectional identity. The fact that the theoretical frameworks underlying distance education account for diverse identities will provide a new way of rethinking differences and proposing critical interventions in distance higher education. This techno-feminist approach with intersectional analytics has become a flourishing subfield of posthumanism (De Hertogh et al., 2019) and that we see reflected in the proposals for distance higher education. As Shivers et al. (2019) by placing intersectional feminism at the core of the framework of experiences, an awareness is generated about the interactions that community members experience between the use of language, cultural practices, positions of power and the use of technology.

Question 2: what are the curricular characteristics of these distance and hybrid education models?

The curricular characteristics of the analyzed cases are defined based on three categories identified in the qualitative analysis: (a) the role of feminist educators, (b) the sense of content and materials, and (c) the methodological strategies.

The role of feminist educators

In relation to the role of feminist educators, feminist pedagogy (also the feminist pedagogy online) lacks rigid roles of power or hierarchy between the instructor and the students. Educators adopt the role of facilitators of experiences, reflections, and ways of thinking as the main resources for learning. The hierarchy break is observed more highly in online models (50%) compared to hybrid models (25%). However, the differences are not significant (C.C. $= 0.298$, p $= 0.615$).

The feminist educators have a speech characterized by creating a sense of community. For Vivakaran and Maraimalai (2019) the Distributed Open Collaborative Courses (DOCC) can be considered as a recent initiative to bring the ideologies of feminist pedagogy in the virtual sphere. The synonymous nature of feminist pedagogy with networked learning ideologies that focuses on connections, relationships, and collaborations makes it ideal for creating an empowered learning space that especially characterizes online models (83.3%) compared to hybrid models (25%). However, these differences are not significant (C.C. $= 0.522$, p $= 0.153$). For Cox et al. (2021) the feminist digital pedagogies foster accessible and inclusive online environments, create interpersonal connections, and embrace the innovative possibilities that technology affords. For these authors, the educators practice radical care and compassion for

their students, doing everything they can to ease their students' burdens, promote their safety and well-being, and help them survive the semester.

Also, the provision of routes for participants to receive other specialized help is a more characteristic feature of online models (50%) compared to hybrid models (25%). However, these differences are not significant (C.C. = 0.277, p = 0.659). In these models, teachers look for people with experiences that allow them to offer students a diverse perspective on the content. In addition, they fulfill the function of acting as references for training. This is how case 9 shows it:

> *'Visiting experts' from industry were invited to question and answer sessions in an asynchronous online forum. This all demonstrates that role models can be successfully presented at a distance through texts, audio, and video and that engaging synchronously and face-to-face with them is not a necessary requirement. (Case 9, p. 789).*

It is characteristic that feminist educators incorporate social networks such as LinkedIn to provide a sense of community and specialized advice to students:

> *It could indicate a shortcoming of the platform used for communication (LinkedIn), and points to the need for an alternative mechanism for participants to share the expertise, opinions and perspectives they develop during the project and beyond (Case 2, p. 56)*

The development of skills in the creation of networks, security, and trust, can be observed both in online models (50%) and in hybrid models (50%). About security, studies such as the one by Kyoto and Mwangi (2009) question the possibility of creating a secure online space. These authors wonder about the forms of creation and who has the power and authority to create it. On the contrary, the flexible adaptation of the learning environment to meet needs is observed more in the hybrid models analyzed (50%) compared to the online models (16.7%). However, these differences are not significant (C.C. = 0.378, p = 0.435).

The sense of content and materials

Feminist praxis reinforces the idea of social engagement. The training contents are based on personal experience but seek to explore larger structural problems. This process that leads to contextualize life experiences in the context of major structural problems is controversial for students. Although in specific models in feminist content this aspect is more present. As seen in case 7:

> *Many of the MAWGS courses provoke critical engagements with received knowledge systems, 'eye-openers' in the words of one learner (…) At the level of content, normative institutions, such as marriage, family, and motherhood, are interrogated from a cross-cultural, feminist perspective (Case 7, p. 861)*

In case 5 analyzed, it is observed that Ringrose (2018) uses digital platforms like Twitter to investigate power, privilege, and positionality. For Couture and Ladenson (2017), the concepts involved in gender studies, and more specifically those of

intersectionality and the understanding of structural problems related to privilege and oppression, are especially controversial for first-year students.

Different approaches are appreciated in the cases and models analyzed.

Distance education models use content and materials that have the power of personal transformation. Content and reference materials with the power of transformation promote reflection on different facets of life. In this sense, the case 9 shows the characteristics of these materials with very different formats:

> *The 'Return to SET' course materials included stories of nine women returners, and illustrated their experiences using audio clips and photos, covering practical as well as psychological/emotional issues that they had encountered. (Case 9, p. 789).*

This transformative characteristic of content and materials is highly observed in 80% of the cases analyzed that correspond to online models compared to 20% of the cases that correspond to hybrid models. However, the differences are not significant (C.C. 0.378, p = 0.197).

In these distance education models sensitive to feminist pedagogy; the contents and materials are co-produced. Collective collaboration in its elaboration is a characteristic of feminist pedagogy in distance higher education. In this sense, we observe in case 5 that refers to an online model how students collaboratively create digital content:

> *Maria's course modeled care when students acted as caregivers for the larger community, teaching their peers about surveillance as care through a series of co-created products, including digital health safety workshops and web content. (Case 5, p. 118)*

However, in the cases analyzed, the co-creation of content in the hybrid education models (66.7%) is observed to a high degree compared to the online education models (33.3%). However, these differences are not significant (C.C. 0.336, p = 0.260).

The methodological strategies

In the different cases analyzed, the use of diverse methodological strategies such as asynchronous forums, synchronous forums, social media, brainstorming, collaborative idealizations, selfies, and problem solving is identified. The methodological strategies are aimed at developing self-regulation skills in students to help them take control of their learning process, promoting self-directed learning and supporting reflection and metacognition. Only from reflection on lives does consciousness develop. This aspect is key for the methodological strategies in the different models of distance higher education as indicated by Chung (2016) (Case 10):

> *Open the door to the possibility of other lives and lead to awakening for change. As seen in the following examples, selected from comments posted on the student bulletin board, the course often leads students to reflect on their lives, make new commitments, and gain new understanding about themselves (Case 10, p. 380)*

The cases analyzed show a methodological engagement to the epistemologies of doing, as observed in case 8:

> *Whatever the technology, if we focus these explorations through an engagement with epistemologies of doing, class, access, literacy, and multiple cultures of entry, the*

next moments in learning through digital technologies. (Case 8, p. 137).

The development of novel methodological strategies such as the use of selfies for the creation of meanings and the use of the body and personal representation as an emerging form of social exchange in distance higher education (Gajjala et al., 2017).

Limitations

Among the limitations that we can highlight, it is possible that not all the relevant studies have been identified, since the scoping reviews do not pretend to be as exhaustive or complete. It may be that the review may have missed some relevant studies. This limitation can be attributed to database selection (i.e. searching other databases may have identified additional relevant studies), exclusion of gray literature from the search, time limitations, or exclusion of studies published in a language other than English.

Publication bias can especially occur. Publication bias occurs when results of published studies are systematically different from results of unpublished studies.

Conclusions

This scoping review shows feminist trends in distance education and suggests progress in reconciling both areas. Feminist pedagogy makes its way into higher education through online and hybrid models and can create a space for reflection and research around the possibilities of HyFlex models.

The influence of feminist pedagogy as a critical digital pedagogy in distance and hybrid education models is shown in the identification of three perspectives: (a) a *Feminist-pragmatist perspective* that seeks the empowerment of women and considers access as an opportunity in relation to democratizing guidelines distance higher education. This perspective is akin to hybrid models; (b) an *Eco-dialogical feminist perspective*, which points to the need for critical construction of knowledge through dialogue in virtual environments and which addresses the challenge of revising the traditional theory of transactional distance. Contact with others constitutes a fundamental tool for the collective work of ideas and the generation of knowledge as a continuous and dynamic process. The adoption of this perspective in distance education implies the revision of the transactional distance theory from the introduction of the concept of "sociocultural position". And (c) an *Intersectional technofeminist perspective* concerned with the techno-pedagogical design of technological platforms and applications, the possibilities of digital technologies from a critical analysis of the materiality of the objects involved in distance education and sexed bodies in virtual environments learning from the intersectional character (gender, race, class …) of the learner. From this perspective, distance education models address the challenge of the materiality of the platforms that limit uses, and place conditions apply a culturally critical approach to how such data implies bodies and their cultural histories.

This scoping review makes it possible to characterize the feminist pedagogy in distance and hybrid higher education. In this sense, it shows the adaptation of the roles of feminist educators in online and hybrid models and the efforts to implement the curriculum from feminist principles, taking experience as the main content and working from the traditional breakdown of hierarchies of power in the classrooms.

The bases of collaborative learning for the co-construction of knowledge with others, the creation of a sense of community and the reference to experts in the classroom opens new channels in distance and hybrid higher education from the personal lives to the social and political world from different feminist approaches.

Authors' contributions
RJ conceived of the presented idea. RJ y LA developed the theory and RJ performed the computations. RJ verified the analytical methods. LA supervised the findings of this work. All authors read and approved the final manuscript.

Availability of data and materials
Not applicable.

Declarations

Competing interests
As authors, we declare that there are no possible competing interests.

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