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Training future teachers to teach history from a gender perspective. Effects of the project "Prehistory and Gender"

Formación del futuro profesorado para enseñar Historia con perspectiva de género. Efectos del proyecto "Prehistoria y Género"

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Abstract

One of the challenges that teachers are currently facing is that of bringing to their classes a historical narrative free of androcentric biases and for this purpose, it is necessary that they receive specific training. The aim of this research was to evaluate the effectiveness of the "Prehistory and Gender" project in initial teacher training, verifying whether there have been differences between the ideas of participating and non-participating students on the teaching of History from a gender perspective. A total of 471 students from the Primary and Early Childhood Education Degrees at the University of the Basque Country took part in the study. A questionnaire of 34 items, divided into 3 dimensions, was used. The results suggest that the project was effective, as the experimental group increased their knowledge of gendered history and the importance of its teaching, and

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changed to some extent the stereotypical conceptions they had about gender roles in prehistory. We conclude that there is a need for further training on how to teach history from a gender perspective to future teachers through this type of classroom projects.

Keywords: history education; teacher training; gender equity; women's studies.

Resumen

Uno de los retos a los que se enfrenta actualmente el profesorado es el de llevar a las aulas un relato histórico libre de sesgos androcéntricos y para ello es preciso que reciba una formación específica. El objetivo de esta investigación ha sido evaluar la efectividad del proyecto "Prehistoria y Género" en la formación inicial del profesorado, verificando si se han producido diferencias entre las ideas del alumnado participante y no participante sobre la enseñanza de la historia con perspectiva de género. Han participado 471 estudiantes de los Grados de Educación Primaria e Infantil de la Universidad del País Vasco. Se ha utilizado un cuestionario de 34 ítems, agrupados en 3 dimensiones. Los resultados sugieren que el proyecto fue efectivo, ya que el grupo experimental aumentó sus conocimientos sobre la historia con perspectiva de género y la importancia que brindan a enseñarla, y cambió en cierta medida las concepciones estereotipadas que tenían acerca de los roles de género en la Prehistoria. Se concluye la necesidad de seguir ofreciendo formación sobre cómo enseñar historia con perspectiva de género al futuro profesorado a través de este tipo de proyectos de aula.

Palabras clave: enseñanza de la historia; formación docente; igualdad de género; estudios de mujeres.

Introduction

Women's (pre)history versus taught (pre)history

In recent decades, feminist archaeology has made visible multiple functions traditionally associated with the female role, highlighting some activities and forms of work that had previously received little interest when studying prehistoric societies, despite constituting an important part of the archaeological record (Rueda et al., 2021). For example, the creation of the concept of maintenance activities has been a relevant theoretical and methodological contribution to vindicate the importance of those activities related to the preparation and preservation of food, care, etc., which reinforced the stability, cohesion and permanence of human groups over time (Alarcón, 2010).

The revisionism promoted by feminist archaeology has also resulted in a broad critique of the presentist and androcentric discourse from which the almost purely masculine representation of the period had been constructed, questioning the stereotypical role assigned to women: dependent, passive, limited, domesticated, and without notable contributions to human development (Moser, 1993). Indeed, problematising gender as an analytical category has revealed the bias that the theoretical-ideological assumptions of

male and female researchers, which have legitimised androcentrism when interpreting the past, have brought to research (Sánchez-Romero, 2019).

Although scientific production has been gradually balancing the protagonism and overthrowing gender attributions, the didactic transfer of these new visions of prehistory is proving slow and difficult. Thus, the iconographic representations created to disseminate different milestones of the period either in museums (Campos-López et al., 2023; Querol and Hornos, 2011) or in films and the media (Lombo, 2019), continue to reflect the shortcomings and oversights of traditional archaeology with respect to the imaginary of prehistoric women. The same is true of many teaching materials used in formal education, such as works of children's literature (San Martín and Ortega-Sánchez, 2022) or textbooks (Marín, 2020).

In the visual conventions of the devices aimed at disseminating knowledge about prehistory, loaded with symbolic content, the human is still defined in masculine terms. A paradigmatic example would be the popular succession of images of men with which the process of hominisation is frequently represented. Men and women are treated differently, associating them with skills and functions such as hunting, the development and mastery of certain technologies, the implementation of abstract thinking skills and artistic creation, or the management and transformation of ways of life in society. The representation of women, on the other hand, is more concise and is mostly associated with the function of child-rearing and the "domestic" (González-Marcén, 2008).

Thus, a stereotypical view of prehistory is disseminated and taught, permeated with preconceptions about the original roles of men and women that have no scientific basis. For example, the iconography of many textbooks implies that men left the camp to hunt, while women gathered food in the surrounding area. However, there is no archaeological evidence to suggest that this was the case. So should students learn such unscientific accounts (Marín, 2020)?

This problem does not only affect prehistory, but can also be generalised to other periods. Indeed, curricula in Spain and other countries continue to prioritise content related to political history, leaving aside a more social approach to the past, with the result that women and their contributions in different periods are often made invisible (López-Navajas, 2014; Vaíllo, 2016).

In fact, research on the treatment of women in History textbooks continues to criticise the persistence of a discourse with clear androcentric biases (Farrujia, 2022). In general, textbooks suffer from a lower presence of women in the textual and iconographic discourse, and tend to offer a stereotypical view, representing them frequently associated with the domestic sphere and roles traditionally considered to be in the "feminine" area (Schmeichel, 2014). Their prominence as historical actors is often limited to queens or other exceptional figures, or to their role in the suffragette movement. Moreover, the past is rarely approached from a gender perspective, explaining situations, spaces, absences or other contents emanating from women's history (Castrillo et al., 2021, 2023; Díaz-López

and Puig-Gutiérrez, 2020; Fernández-Valencia, 2005).

Evidently, these stories can have an impact on the imaginary that students create about the past, to which they can transfer reductionist and sexist stereotypes, to the point of thinking that women did not play "important" roles. Not surprisingly, recent studies have verified that students apply the gender stereotypes and roles currently in force to the societies of other times (Castrillo et al., 2019; Gómez-Carrasco and Gallego-Herrero, 2016). In the case of Prehistory, a study carried out with ESO students has found that, for the most part, they represent the period under the action-man-passivity-woman contrast, identifying action above all with hunting (González-Marcén, 2008). Another study has emphasised that students of the Degree in History make traditional gender assignments, associating prehistoric men with hunting, the invention of tools or defence, and women with the house, the family and care (Pastor-Quiles and Mateo-Corredor, 2019).

This not only implies the assumption of a "deformed" historical narrative by students, but also the transmission of discriminatory patterns and very limited models of identification, which can influence important decisions on how they construct their personal biography and act in society (Bian et al., 2017). It is therefore necessary to insist on the convenience of bringing to the classroom narratives nourished by female historical references that also offer a more diverse view of the roles played by men and women in different periods. Indeed, if the subject of History should advocate for students to acquire citizenship skills, the approach to issues related to gender and its repercussions should be placed in a central position (García-Luque and Peinado, 2015).

However, there are obstacles to bringing women's history into the classroom, such as a lack of teaching materials and a lack of specific teacher training. It seems that few teachers integrate women's history into their classes on a regular basis, and furthermore, those who do address it do not always do so from an accurate perspective (Scheiner-Fisher, 2013), and may relegate it to a kind of complement to "official history" conceived in masculine terms (Marolla and Pagès, 2015). It also seems that teachers are not always able to detect inequality and discriminatory attitudes (Heras-Sevilla et al., 2021). In this regard, it has been suggested that teachers' beliefs are a decisive element, as it seems that only those with a critical feminist vision are able to create truly transformative programmes (Apaolaza-Llorente et al., 2023; Stevens and Martell, 2018).

Integrating women's history and the gender perspective into initial teacher training programmes is therefore a challenge that many universities are currently facing. Unfortunately, there are studies that point to the fact that the curricular model of continuing education degrees invisibilises women (Resa-Ocio, 2021), and that trainee teachers continue to suffer from a lack of competences to carry out educational practices applying the gender perspective (Bejarano-Franco et al., 2023).

From this arises the need to explore possibilities for training in gender equality and coeducation. For this reason, at the University of the Basque Country we have designed and implemented the Prehistory and Gender project in initial teacher training classrooms

(Castrillo et al., 2022). The general objective of the present study is to analyse its effectiveness, verifying whether there have been differences between the perceptions of the participating and non-participating future teachers. The following research questions derive from it:

1. What is your knowledge of gendered history?
2. What importance do you attach to teaching history from a gender perspective?
3. What are your representations of the roles played by men and women in prehistory?

Ultimately, the hypothesis to be confirmed is whether the "Prehistory and Gender" project contributes to the training of future teachers to teach history from a more inclusive perspective.

Method

Design

This is a quasi-experimental design study, with pre- and post-intervention data collection and a control group.

Participants

In order to obtain the sample size, a selection by convenience was made and 471 teachers in initial training at the University of the Basque Country participated: 352 women (74.7%), 118 men (25.05%) and one non-binary person (0.2%). The experimental group (EG) consisted of 336 participants and the control group (CG) of 135. They were enrolled in the Prehistory and Gender project, which was implemented in the framework of several subjects of social sciences didactics in the 3rd year of the Primary Education Degree and 2nd and 4th years of Infant Education, during the academic years 2019-2020 and 2020-2021.

Instrument

The main outcome measure has been the change in the three variables analysed: knowledge about gendered history and its teaching; importance of teaching gendered history; roles attributed to people from prehistory (Table 1). To operationalise them, a 34-item questionnaire with a Likert response format (1 = very little, 5 = very much) was used, the psychometric characteristics of which are shown below.

Table 1

Variables, dimensions and items

Variable	Dimension	Items
1. Knowledge	Knowledge of gendered history and history education	1, 2, 3, 4, 5

Importance	Integrating history with a gender perspective in the classroom	26, 27, 28
	Reviewing history teaching from a gender perspective	6, 7, 29, 30, 31, 32, 33, 34
3. Gender roles in prehistory	Activities outside traditional roles	8, 10, 11, 13, 15, 18, 21, 24
	Activities that coincide with traditional roles	9, 12, 14, 16, 17, 19, 20, 22, 23, 25

The first variable *Knowledge* inquires into the knowledge that participants believe they have about important concepts about gendered history and how to teach it. It consists of 5 items that showed adequacy for factoring ($KMO = .70$; $\chi^2(10) = 345.077$; $p < .001$) and an underlying unidimensional structure that explains 43.4% of the variability and high reliability ($\alpha = .81$).

The second variable *Importance* ($KMO = .83$; $\chi^2(55) = 1701.6$; $p = .000$) inquires into the importance participants attach to teaching history from a gender perspective. It is distributed in two dimensions: Integration of gendered history in the classroom, consisting of 3 items ($\alpha = .71$) that measure the importance they attach to bringing women's history into the classroom; and Review of history taught from a gender perspective, consisting of 8 items ($\alpha = .83$) that probe how much participants think it is important to review discourses and materials brought into the classroom from a gender perspective. Together they explain 53% of the total variance and have high consistency ($\alpha = .77$).

The third variable *Gender roles in prehistory* explores the roles that participants attribute to the people of that historical period, trying to detect whether they project traditional gender stereotypes. It consists of 18 items ($KMO = .81$; $\chi^2(153) = 5564.9$; $p = .000$) and is distributed in two dimensions: Activities outside traditional roles, consisting of 8 items ($\alpha = .89$), and Activities matching traditional roles, consisting of 10 ($\alpha = .81$). Together they explain 51% of the total variance and have a high consistency ($\alpha = .84$).

Procedure

The classroom project "Prehistory and Gender" lasted five two-hour sessions. During the first three sessions, the emergence of women's history and its impact on the historical narrative was addressed from a theoretical point of view, paying particular attention to prehistory. At the same time, students were shown, through a *Powerpoint* presentation, examples of androcentric and stereotypical narratives present in some common educational materials. This was completed with the reading and analysis in dialogue of a scientific article on the subject, and with the viewing of an audiovisual conference. In the last two sessions, group dynamics were used to create the criteria with which the presence of sexism in textbooks should be reviewed. With them, the future teachers analysed a didactic unit on Prehistory from a 4th year Primary school textbook, and the Infant Education teachers focused on the materials collected in a blog about a Prehistory project

developed in a school in Madrid. Organised in groups, they wrote a report explaining, among other things, whether these resources under-represented women numerically, whether they suffered from stereotypes regarding the roles assigned to men and women, and whether they undervalued roles traditionally considered "feminine".

After signing the informed consent, the questionnaire was administered under routine teaching conditions before and after the intervention.

Data analysis

After checking for the absence of outliers and non-random missing value patterns, validity was assessed by exploratory factor analysis and reliability by Cronbach's alpha coefficient for each dimension. To study before/after mean differences, as they did not meet the parameters of normality, Mann-Whitney U and Wilcoxon tests were used, together with the corresponding effect size calculations. IBM SPSS Statistics 27 was used.

Results

First variable: Knowledge

The results of the variable *Knowledge* before participating in the classroom project showed no statistically significant differences ($U=20185.5$, $p=.067$) between the SG and CG, with the SG scores (Mdn=2; Range=3.2) and CG scores (Mdn=2; Range=2.8). In contrast, after participation in the project, the results showed statistically significant differences ($U=3148$; $p<.001$), with SG scores being higher (Mdn=4; Range=3.2) than CG scores (Mdn=2.4; Range=3.2), with a very large associated effect size ($d=1.824$).

The GE results showed a statistically significant increase in the measured indicators of the variable *Knowledge* among the participating students before (Mdn=2; Range=3.2) and after (Mdn=4; Range=3.2) the intervention ($Z=15.735$; $p<.001$), with a very large associated effect size ($d=1.528$).

In order to illustrate in greater detail some of the changes produced in the *Knowledge* variable, we present the data obtained in the most significant questions of the questionnaire. For example, statistically significant differences of large size were evident in the SG responses to item 1 ($Z=15.062$; $p<.001$; $d=1.428$), on the knowledge that participants believe they have about the term androcentric history (Table 2); to item 2 ($Z=15.146$; $p<.001$; $d=1.44$), on their knowledge of applying a gender perspective to historical interpretation (Table 3); and to item 4 ($Z=14.149$; $p<.001$; $d=1.303$), on their ability to create didactic materials and sequences on historical topics with a gender perspective (Table 4).

Table 2

Item 1. Knowledge of the term androcentric history

Response	PRE		POST	
	n	%	n	%
Very little	200	59.5	12	3.6
Little	53	15.8	13	3.9
Enough	48	14.3	34	10.1
A lot	28	8.3	150	44.6
Very much so	7	2.1	127	37.8

Table 3

Item 2. Knowledge of how to apply a gender perspective to historical interpretation

Response	PRE		POST	
	n	%	n	%
Very little	112	33.3	2	0.6
Little	117	34.8	12	3.6
Enough	81	24.1	39	11.6
A lot	25	7.4	162	48.2
Very much so	1	0.3	121	36

Table 4

Item 4. Ability to create didactic materials and sequences on historical topics with a gender perspective

Response	PRE		POST	
	n	%	n	%
Very little	63	18.8	1	0.3
Little	119	35.4	9	2.7
Enough	95	28.3	60	17.9
A lot	47	14	179	53.3
Very much so	12	3.6	87	25.9

Second variable: Importance

Statistical contrasts of mean differences in the variable Importance according to group type showed that before the intervention there were statistically significant differences ($U=17427.5$; $p<.001$), with SG scores being lower ($Mdn=4.2727$; $Range=2.91$) than CG scores ($Mdn=4.5455$; $Range=2.6$), and the effect size small ($d=0.365$). After the project, statistically significant differences remained ($U=18011.5$; $p<.001$), but with SG scores being higher ($Mdn=4.5455$; $Range=1.64$) than CG scores ($Mdn=4.3636$; $Range=3$), and the associated effect size small ($d=0.323$).

The results, before and after participating in the project for the EG, showed a statistically significant increase in the measurement indicators of the variable *Importance*

($Z=8.384$; $p<.001$), as the Pre-test scores (Mdn=4.2727; Range=2.91) were lower than the Post-test scores (Mdn=4.5455; Range=1.64), with an associated moderate effect size with a tendency to large ($d=0.684$).

The variable *Importance* is composed of two dimensions: *Integration of history with a gender perspective* and *Review of history taught with a gender perspective*, the results of which we present below.

In the dimension Gendered History Integration there were statistically significant differences ($U=15306$; $p<.001$; $d=0.526$) between the two groups before the educational intervention, with the GE scores (Mdn=3.6667; Range=4) being lower than those of the CG (Mdn=4.3333; Range=4). After the intervention, the significant differences between SG (Mdn=4; Range=4) and CG (Mdn=4; Range=3.33) disappeared ($U=20894.500$; $p=.193$).

The GE results show statistically significant differences ($Z=3.586$; $p<.001$) between Pre-test (Mdn=3.6667; Range=4) and Post-test (Mdn=4; Range=4), with a small associated effect size ($d=0.279$).

Below, we show the results of the three dimension items for the GE before and after participating in the activity, to better illustrate the changes. All items presented statistically significant differences with a small associated size effect: item 26 ($Z= 2.385$; $p=.017$; $d=0.185$), regarding the importance participants attach to the integration of women's history in Primary School classrooms (Table 8); item 27 ($Z= 2.966$; $p=.003$; $d=0.23$), on the importance they attach to integrating political history (Table 9); and item 28 ($Z= 3.724$; $p<.001$; $d=0.29$), on the importance of integrating the history of everyday life (Table 10).

Table 5

Item 26. It is important to integrate women's history in primary school classrooms.

Response	PRE		POST	
	n	%	n	%
Very little	30	8.9	19	5.7
Little	63	18.8	63	18.8
Enough	57	17	36	10.7
A lot	57	17	58	17.3
Very much so	129	38.4	160	47.6

Table 6

Item 27. It is important to integrate political history into primary school classrooms.

Response	PRE		POST	
	n	%	n	%
Very little	20	6	17	5.1
Little	40	11.9	24	7.1
Enough	68	20.2	61	18.2

A lot	99	29.5	92	27.4
Very much so	109	32.4	142	42.3

Table 7

It is important to integrate the history of everyday life in primary classrooms.

Response	PRE		POST	
	n	%	n	%
Very little	18	5.4	13	3.9
Little	41	12.2	23	6.8
Enough	92	27.4	76	22.6
A lot	100	29.8	111	33
Very much so	85	25.3	113	33.6

In the dimension Review of history taught with a gender perspective, the results showed no significant differences ($U=21300$; $p=.321$) before participating in the activity, with SG scores being lower (Mdn=4.6250; Range=2.75) than CG scores (Mdn=4.7500; Range=2.58). In contrast, after the project there were statistically significant differences ($U=16648.500$; $p<.001$), with SG scores being higher (Mdn=4.8750; Range=1.75) than CG scores (Mdn=4.6250; Range=3), and the associated effect size moderate ($d=0.42$).

The results for the GE, before and after participating in the Prehistory and Gender project, showed a statistically significant increase ($Z=9.289$; $p<.001$) of the measurement indicators of the dimension Review of history taught with a gender perspective, being the Pre-test scores (Mdn=4.6250; Range=2.75) lower than the Post-test scores (Mdn=4.8750; Range=1.75), and the associated effect size moderate with a tendency to large ($d=0.768$).

In the dimension Reviewing the history taught from a gender perspective, we found statistically significant differences with a moderate effect size in item 30 ($Z=5.592$; $p<.001$; $d=0.442$), on the importance that the participants give to reviewing the teaching material from a gender perspective before using it (Table 5); in item 32 ($Z=7.003$; $p<.001$; $d=0.561$), on the importance they attach to assessing the number of men and women reflected in the texts and images of the books (Table 6); and in item 33 ($Z=5.367$; $p<.001$; $d=0.423$), on the importance they attach to assessing whether male and female characters are represented through traditional gender stereotypes (Table 7).

Table 8

Item 30. It is important to review learning materials from a gender perspective before use.

Response	PRE		POST	
	n	%	n	%
Very little	2	0.6	1	0.3
Little	4	1.2	1	0.3

Enough	19	5.7	4	1.2
A lot	69	20.5	35	10.4
Very much so	242	72.0	295	87.8

Table 9

It is important to assess that the number of women and men reflected in the text and images of the materials is equal.

Response	PRE		POST	
	n	%	n	%
Very little	4	1.2	0	0
Little	8	2.4	3	0.9
Enough	36	10.7	9	2.7
A lot	82	24.4	48	14.3
Very much so	206	61.3	276	82.1

Table 10

It is important to assess whether male and female characters are portrayed through traditional gender stereotypes.

Response	PRE		POST	
	n	%	n	%
Very little	13	3.9	5	1.5
Little	8	2.4	4	1.2
Enough	34	10.1	19	5.7
A lot	85	25.3	47	14
Very much so	196	58.3	261	77.7

Third variable: Gender Roles in Prehistory

This variable did not present statistically significant differences ($U=21753.500$; $p=.487$) before participating in the activity between the SG and the CG, being the scores of the SG ($Mdn=3.6111$; $Range=3.28$) and those of the CG ($Mdn=3.6667$; $Range=3.33$). In contrast, after activity, there were statistically significant differences ($U=19052.500$; $p=.007$), with SG scores ($Mdn=3.7222$; $Range=2.11$) being higher than CG scores ($Mdn=3.6667$; $Range=3.11$), and the associated effect size being small ($d=0.252$).

Similarly, there were statistically significant differences ($Z=6.954$; $p<.001$) on the variable *Gender Roles in Prehistory* for the GE after participating in the classroom project, with the Pre-test scores ($Mdn= 3.6111$; $Range=3.28$) being lower than the Post-test scores ($Mdn= 3.7222$; $Range=2.11$), and the associated effect size large ($d=0.557$).

The variable is divided into two dimensions: *Activities outside traditional roles* and *Activities matching traditional roles*, and both produced statistically significant differences, as explained below.

The dimension *Activities outside traditional roles* showed no statistically significant

differences between the EG (Mdn=2.75; Range= 3.88) and the CG (Mdn=2.75; Range= 3.63) before participating in the activity ($U= 22373.5$; $p= .857$). After the project, statistically significant differences were shown ($U=18599.5$; $p=.003$), with GE scores (Mdn=3.25; Range= 4) being higher than CG scores (Mdn=2.875; Range= 3.63), and the associated effect size small ($d=0.281$).

Regarding the differences for GE before and after participating in the classroom project, we found statistically significant differences ($Z=6.220$; $p<.001$) between the Pre-test (Mdn=2.75; Range=3.88) and the Post-test (Mdn=3.25; Range=4), with a moderate effect size close to large ($d=0.494$).

Below, to illustrate some of the changes in more detail, we show the data obtained on some of the items of the dimension. The results of the EG, before and after the intervention, showed statistically significant differences in size between small and large in the changes related to the responses to item 18 ($Z= 7.622$; $p<.001$; $d=0.615$), on the link that the participants establish between women in prehistory and hunting (Table 11); to item 10 ($Z= 3.812$; $p<.001$; $d=0.297$), regarding the degree to which they link them to the creation of lithic tools (Table 12); and to item 15 ($Z= 7.956$; $p<.001$; $d=0.645$), on the link they establish between men in Prehistory and breeding (Table 13).

Table 11

Item 18. Assesses the link between women in prehistoric times and hunting.

Response	PRE		POST	
	n	%	n	%
Very little	149	44.3	91	27.1
Little	86	25.6	56	16.7
Enough	64	19	88	26.2
A lot	24	7.1	63	18.8
Very much so	13	3.9	38	11.3

Table 12

Item 10. Assesses the link between women in prehistoric times and the creation of lithic tools.

Response	PRE		POST	
	n	%	n	%
Very little	51	1.2	50	14.9
Little	88	26.2	53	15.8
Enough	111	33	105	31.3
A lot	58	17.3	72	21.4
Very much so	28	8.3	56	16.7

Table 13

Item 15. Values the link between men in prehistoric times and child rearing.

Response	PRE		POST	
	n	%	n	%
Very little	195	58	121	36
Little	83	24.7	58	17.3
Enough	27	8	75	22.3
A lot	19	5.7	40	11.9
Very much so	12	3.6	42	12.5

The dimension *Activities matching traditional roles* showed no statistically significant differences ($U=21777.5$; $p=.530$.) between the GE (Mdn=4.3; Range=3.1) and the CG (Mdn=4.3; Range=3.3) before participating in the activity. In contrast, there were statistically significant differences after participating in the activity, with a small associated effect size ($U=19770$; $p=.033$; $d=0.198$).

Similarly, there were statistically significant differences with a small associated effect size ($Z=3.918$; $p<.001$; $d=0.306$) in GE before and after the educational intervention, with Pre-test scores (Mdn=4.3; Range=3.1) being lower than Post-test scores (Mdn=4.4; Range=2).

To illustrate some of the changes produced in the *Activities dimension that coincide with traditional roles*, we present the data obtained in some of its items. There were statistically significant differences with small associated effect sizes in item 14 ($Z= 3.912$; $p<.001$; $d= 0.305$), relating to the link that participants establish between prehistoric men and hunting (Table 14); and in item 17 ($Z= 3.089$; $p<.001$; $d= 0.24$), on the degree to which they link them to the creation of weapons (Table 15). On the other hand, there were no statistically significant differences in item 9 ($Z= 1.952$; $p=.051$), relating to the linking of women in prehistoric times to child-rearing (Table 16).

Table 14

Item 14. Assesses the link between men in prehistoric times and hunting.

Response	PRE		POST	
	n	%	n	%
Very little	3	0.9	1	0.3
Little	3	0.9	1	0.3
Enough	10	3	38	11.3
A lot	54	16.1	75	22.3
Very much so	266	79.2	221	65.8

Table 15

Item 17. Assesses the link between men in prehistoric times and the creation of weapons.

Response	PRE		POST	
	n	%	n	%
Very little	0	0	0	0
Little	2	0.6	0	0
Enough	26	7.7	46	13.7
A lot	87	25.9	101	30.1
Very much so	221	65.8	189	56.3

Table 16

Item 9. Assesses the link between women in prehistoric times and child rearing.

Response	PRE		POST	
	n	%	n	%
Very little	2	0.6	0	0
Little	10	3	2	0.6
Enough	17	5.1	43	12.8
A lot	61	18.2	67	19.9
Very much so	246	73.2	224	66.7

Discussion

The general objective of this study was to evaluate the effect that the *Prehistory and Gender* project has had on future teachers of Primary and Infant Education, who are currently in their training period at the University of the Basque Country. It is clear that, in a society clearly affected by gender inequalities, training in this respect should constitute one of the pillars of the citizenship education offered within the framework of the subject of social sciences and history (García-Luque and Peinado, 2015). To this end, teacher training is considered a priority, starting with the initial training received at university, especially when there are studies that postulate that the latter continues to be deficient in gender issues (Bejarano-Franco et al., 2023; Resa-Ocio, 2021).

From the data collected, it can be concluded that, thanks to the project, the future teachers involved have acquired key knowledge related to history from a gender perspective and that they have increased the importance they attach to teaching it. Furthermore, changes have been detected in the ideas they had about the gender roles of prehistoric peoples, as some of the stereotypical roles and chores that applied, before the project, to the men and women of those societies have been softened. Thus, the results obtained suggest that the *Prehistory and Gender* programme had a positive impact.

Even before the intervention, the participants attached great importance to the *integration of gender-sensitive history in the classroom*. Consequently, the changes detected in

this dimension were significant, but with small effect sizes between the pretest and the posttest of the EG. This result may be an indication of the awareness that the majority of participants have regarding equality between men and women, having adopted the discourse in favour of including content on women's history, as well as content on the history of everyday life, which is generally not worked on much in textbooks and in which women acquire a greater presence as historical subjects (López-Navajas, 2014; Vaíllo, 2016). On the other hand, content related to political history, in which men are generally the protagonists and which tend to have a greater presence in teaching, continues to be of great importance to the participants both before and after the intervention. Therefore, while realising that integrating women's history into the classroom can be a timely measure to redress existing inequalities, the study shows that the future teacher participants also continue to prioritise the teaching of political history content, which is androcentric in nature, probably due to the history teaching model they have known throughout their school career.

Despite this awareness of the need to work with history from a gender perspective, the results have shown a lack of knowledge among those who participated in the study about how to implement it in the classroom, as has been pointed out in some studies on trainee teachers at other universities (Bejarano-Franco et al., 2023) and on active history teachers (Marolla and Pagès, 2015; Scheiner-Fisher, 2013). However, the data obtained after carrying out the *Prehistory and Gender* project suggest that the intervention has had a positive impact on this training deficit, since in the GE there have been significant changes in the variable *Knowledge about history with a gender perspective and its teaching*. For example, the understanding of key theoretical terms such as *androcentric history* and the self-perception of the ability to create didactic materials and sequences on historical topics with a gender perspective has improved.

Another aspect that showed a statistically significant change in the GE between the Pre-test and the Post-test was the importance given to the *Review of the history taught from a gender perspective*. Thus, after the didactic intervention, the participants have come to attach greater importance to reviewing the didactic materials at the level of their textual and visual content, to verify that the number of male and female characters is equal, and that they do not contain sexist stereotypes. From this, it can be inferred that, through the project, the trainee teachers have acquired some basic notions on how to examine the historical narrative emanating from school materials from a gender perspective.

It can also be considered that the majority of participants have realised that the didactic materials in use are not neutral and contain clear androcentric biases, as shown by multiple studies that continue to criticise this fact, such as those by Castrillo et al. (2021), Díaz-López and Puig-Gutiérrez (2020), Vaíllo (2016) and others. Either because they do not show passages of women's history, because fewer women than men appear in them, or because past societies are represented with clear gender stereotypes.

Another of the most evident fruits of the *Prehistory and Gender* project has been that the

participants of the GE, after working in the classes on the deconstruction of some stereotyped ideas about men and women in Prehistory, have mitigated the projection of gender prejudices to those societies without any scientific basis whatsoever. In fact, they have shown statistically significant differences between the Pre-test and the Post-test in the assignment to these men and women of a series of *activities outside traditional roles*. For example, after the intervention, an increase was perceived in the degree to which prehistoric women were linked to hunting or to the creation of lithic tools, and men to child-rearing. This could be understood as a reversal of the usual androcentric and unscientific representation of Prehistory that often appears in textbooks (González-Marcén, 2008), and seems to point to the effectiveness of the project. However, with regard to the *Activities that coincide with traditional roles*, it has been found that the participants have very internalised ideas, such as the naturalisation of the relationship between women-motherhood-nurturing, which do not show significant differences after the project; and that, therefore, they need more specific deconstruction work to come to be understood as activities that are the responsibility of the whole community.

These results seem to indicate that, by working on it in the classroom, it is possible to gradually reverse the remarkably stereotyped imaginary regarding past eras that teachers in training have, and which is also common to students at other educational stages (Castrillo et al., 2019; Gómez-Carrasco and Gallego-Herrero, 2016). A reality that, of course, affects representations of Prehistory, as students usually assign current gender roles and stereotypes to the women and men of the period (Castrillo et al., 2022; Pastor-Quiles and Mateo-Corredor, 2019). This is possibly the result of the way in which the period is disseminated, both through dissemination devices such as museums (Campos-López et al., 2023; Querol and Hornos, 2011), and through school teaching materials (Marín, 2020; San Martín and Ortega-Sánchez, 2022). Usually, while men appear as active agents who hunt, create lithic tools and perform artistic manifestations, women are represented with greater passivity and associated above all with the performance of domestic-reproductive functions (Gonzalez-Marcén, 2008). These are functions to which, moreover, no value is attributed, despite the fact that the scientific literature analyses and values them as maintenance activities (Alarcón, 2010).

In conclusion, it can be stated that the *Prehistory and Gender* project has had a positive impact on the knowledge and skills to integrate the gender perspective in history teaching. Thus, after its implementation, the participants of the GE have given greater importance to the introduction of women's history in their classes, while at the same time they have reduced the stereotypical role assignments they carry out with regard to past societies. Despite this, we are aware that the impact of the project has been limited, as there are beliefs that are difficult to banish and the change towards a co-educational model of history teaching requires more cross-cutting work, not only involving university education.

One of the limitations of the study is the quantitative nature of the methodology used. For this reason, in future studies, we believe that it would be interesting to delve

deeper into the students' perceptions by means of a qualitative analysis of what was expressed in the group work they produced within the framework of the *Prehistory and Gender* project, as indicated in the Method section.

All in all, we believe that the findings of the study support the relevance of implementing educational projects that promote equality and the critical revision of history teaching. Indeed, teacher training is key to providing teachers with the tools to change the paradigm of history teaching through the introduction of the gender perspective.

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