

Article

Sustainable Food in Teacher Training: Evaluation of a Proposal for Educational Intervention

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Abstract: The sustainability of the food system is a particularly relevant issue today as it is a challenge to ensure environmental sustainability and the need to guarantee access to food in all parts of the world to promote social equity. Given this, the need to promote a sustainable food transition in consumption habits becomes imperative. It is crucial that teachers be sensitised to this issue so that they can try to develop a critical and globally aware student body that is committed to a social transformation towards sustainability. The main objective of this study is discovering the opinions of preservice teachers (PSTs) on sustainable food. It also has two specific objectives: (1) analyze the initial opinions of prospective teachers on sustainable food before and after carrying out an educational intervention on this topic, and (2) study the relationship between the opinions of PSTs and variables related to their personality or their relationship with nature, among others. A longitudinal pre-test-intervention-post-test design using quantitative methods was carried out to explore the opinions of 49 pre-service teachers studying for a degree in Primary Education before and after the educational intervention. The results show changes in the opinions of future teachers after the application of the educational intervention and differences towards food sustainability according to some socio-demographic variables such as gender.

Keywords: educational intervention; environmental sustainability; higher education; preservice teachers; sustainable development; sustainable food



Citation: Ortega-Quevedo, V.; Santamaría-Cárdaba, N.; Gil-Puente, C. Sustainable Food in Teacher Training: Evaluation of a Proposal for Educational Intervention.

Sustainability **2023**, *15*, 9673. <https://doi.org/10.3390/su15129673>

Academic Editors: Andreas Ch. Hadjichambis, Ping Dong and Long Yu

Received: 21 March 2023

Revised: 9 June 2023

Accepted: 13 June 2023

Published: 16 June 2023



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1. Introduction

The sustainability of the current food system is a particularly relevant issue today as it is a challenge to ensure environmental sustainability and the need to guarantee access to food in all parts of the world while promoting social equity [1,2]. This raises the need to promote a sustainable food transition in food consumption habits, as it is of increasing concern that impoverished countries continue to suffer from famine and malnutrition [3,4]; while in developed countries, there is an increase in nutrition problems related to being overweight and obesity in populations of all ages [5,6].

The Food and Agriculture Organisation of the United Nations, better known as FAO, in its study published in 2020 on the state of food security and nutrition in the world, has confirmed that the Sustainable Development Goals established in the 2030 Agenda [2] on hunger and malnutrition are not going to be solved in ten years' time. Authors such as Sanahuja and Tezanos [7] and Lee [8] agree that a profound reform of the current economic system is necessary. Furthermore, they suggest that this reform should be approached from a cosmopolitan perspective, promoting a true "global governance" to ensure a fair distribution of opportunities and responsibilities in the development of humanity as a whole.

Therefore, the need to promote an urgent and crucial transformation in the food distribution and production system is clear, making this research's subject highly relevant to ensure social and environmental sustainability. Solving this challenge will be a fundamental issue in securing the future of the twentieth century [1]. Facing these questions requires training in this area for PST because if they are sensitised to the importance of food sovereignty and achieving sustainable transitions, they will be able to promote a transformative education. This is because education is key to forming behaviours and attitudes in favour of sustainability [9].

Despite the unquestionable urgency of addressing these issues to ensure a sustainable future, there is a paucity of research on food systems education and there is a need to promote critical studies on this topic [10,11]. Our study aims to make a novel contribution that seeks to help alleviate the lack of research on education for a sustainable food transition.

1.1. Food Consumption Habits of Young People

The food consumption habits of the population have been modified over time as they have been incorporating products into their diet and modifying their behaviour in a very different way than in the past [12,13]. In this way, a nutritional transition is taking place in which people are changing their eating habits, generally characterised by a shift from traditional meals to high-calorie, high-fat, and refined foods [14]. However, other authors such as Wang et al. [15], Cardona et al. [16], or Paul et al. [17] consider that there has also been a growing concern for health, which is reflected in the increased consumption of dietary products.

Despite this, the diet of university students is characterised by a high consumption of meat and dairy, resulting in an excess of saturated fats, cholesterol, and animal proteins, and an insufficient intake of fruits and vegetables. Therefore, the quality of their diet is poor and a food transition towards sustainable and balanced consumption should be made. [18]. In addition, Ruiz et al. [19] focused their analysis on the pattern of beverage consumption, which also allowed them to verify that the diet of young university students does not follow the recommendations of experts or those of the Mediterranean Diet.

This situation shows that the current population is suffering from a loss of food culture, displacing the Mediterranean Diet with a less healthy diet, as stated by authors such as Jacques and Jacques [20] and Bárbara and Ferreira-Pêgo [21]. In this way, globalisation has thus been gaining ground in markets, displacing local products, and transforming eating habits in many rural populations, leading to an imbalance between food intake and calorie consumption [22]. In this context, education plays an essential role in training people for food sovereignty and a healthier and more sustainable diet transition [10]. Indeed, education for food sovereignty must be understood as transformative ethical practice [23].

In summary, it is essential to train teachers who are aware of sustainable development, as they will be able to transmit these values to their students and stimulate a change towards sustainable food, thus improving their own eating habits. What do we mean, though, by responsible transition? Why is it important to include this issue in teacher training?

1.2. Responsible Transitions in Teacher Training: The Way to a Sustainable Food Future

The current food system is showing the effects of globalization, causing changes in diets, in the foods that are most consumed and sold, and even in the jobs linked to this sector, which are increasingly weakened. Because of this, as Garcés [24] explains:

We need to rediscover and revalue the agricultural and food knowledge and practices of our countries and, at the same time, respond to the major contemporary challenges: job creation and the fight against poverty, sustainable management of natural resources and the fight against climate change, and the preservation of cultural heritage. (p. 261)

The need to promote responsible food transitions that ensure a more sustainable future for everyone, regardless of where they live, is readily apparent nowadays. Rastoin [25,26] highlights that there have been five food transitions: (1) the beginning of the use of fire modified the consumption of raw products; (2) the emergence of agriculture and

the domestication of animals; (3) large cities began to emerge, leading to a division of labour; (4) the industrialisation of the production, processing, and distribution of food products; (5) during the twentieth century, consumer demand for certain products has led to changes in the production and distribution of food. Therefore, collective efforts towards a sustainable and responsible diet transition are key to shaping future food systems.

Based on the Sustainable Development Goals and taking as a basis the words of authors Mello-Théry [27] or Giunta and González [28], it is essential to think about a change in the system that promises a transition towards sustainability. This would be the way to ensure that all beings on the planet can survive while respecting the environment and avoiding increasing levels of degradation.

The future of the planet is in the hands of the new generations. Therefore, working on this issue in teacher training is essential for them to commit themselves to the social transformation towards sustainability and to transmit it to their future students [29]. In other words, PST will not be able to educate for sustainable development if they themselves do not have the necessary sustainability awareness and competences [30]. International organizations such as the World Commission on Environment and Development (WCED) have emphasized the importance of education to promote sustainable development and encourage responsible attitudes towards food consumption. Therefore, one of the main goals of education is to achieve an appropriate balance between current and future needs, so that current demand can be met without compromising the ability of future generations to meet their own needs [31].

2. Research Objectives

Based on the above, promoting education for sustainable development that promotes a food transition makes it necessary for trainee teachers to be aware of this issue so they can transmit it to their students; this is where the present study is framed, whose general objective is to analyze the opinions of PST on sustainable food. This objective is specified in the following specific objectives:

- To analyze the opinions of trainee teachers before and after taking a subject that deals with sustainable food.
- To study the relationship between PSTs' opinions and variables related to their personality, such as their relationship with nature, leisure activities in the natural environment, links with the cultivation of the land, and the size of their place of residence.

3. Materials and Methods

3.1. Design of the Study

This study is a quasi-experimental study, which is a study of a real situation (far from the control of variables typical of a laboratory) and with a non-random sample selection. The study design is longitudinal, as the evolution of the participants is analyzed over time. The methodology used in the design is quantitative. Consequently, a structure was established that initially evaluates the participants (pre-test), allows an intervention to be carried out in which content related to the objectives of the study is worked on and, finally, evaluates the evolution of the participants (post-test).

This design has been established, as it allows the general objective to be met—to analyse the opinions of PSTs on sustainable food. It also meets the specific objectives: (1) To analyse the opinions that PSTs have before and after taking a subject that deals with content on sustainable food; (2) to study the relationship between the PSTs' opinions and variables related to their personalities, such as their relationship with nature, leisure activities in the natural environment, links with the cultivation of the land, and the size of their place of residence.

The data were collected through an online questionnaire provided to the PSTs before the beginning of a class on the subject of Didactics of Experimental Sciences in a Spanish university.

3.2. Participants

In this study, 49 students participated in the Degree in Primary Education, 35 women and 14 men. This difference is based on the data published by the Ministry of Universities [32], which show that the percentage of female enrolments is 67.7% compared to 32.3% of male enrolments in Primary Education Degrees in Spain. Participation in the study was voluntary because the students had previously signed an informed consent form.

The participants were selected according to so-called convenience sampling. This type of sampling moves away from the randomness of probability sampling. It is carried out based on subjective criteria related to the research objectives and the possibilities of the research group. Specifically, the sampling was guided by the ease of access to the participants and by its simple execution. The only limitation may have been the number of participants, as not all those selected completed the questionnaire.

This study was carried out during one academic year on a group of students as a pilot to assess the impact of the proposal on PSTs. This, together with the fact that not all students agreed to publish their data, results in a very small sample.

3.3. Context

The subject in which the activity is framed belongs to the field of social sciences, more specifically educational sciences, and is based on specific didactic knowledge about the teaching–learning methods in experimental sciences with a dual purpose: to describe and explain these processes and to design, develop, and evaluate proposals for improving science education. One of the main challenges facing this discipline is facing the difficulties posed by the creation and dissemination of alternative proposals to the traditional way of teaching science and the school failure that this generates.

The didactic approach chosen not only in this activity, but also in the subject, in general, is based on activities that attempt to answer questions and problems of a professional and significant nature for the future teacher, as is the case with the study presented here.

The educational intervention was developed in three phases. The first was where students had to reflect on and analyze the content of documentary sources based on the use of vegetable gardens as a teaching resource (the documents were selected by the teachers of the subject). A second was where they visited vegetable gardens near the natural environment of the faculty to assess the importance of field activities for the learning of natural sciences and to learn about the contributions of this type of activity in the teaching–learning process. Finally, the students, organized in small groups, produced podcasts (one per group) with the aim of exploring, in depth, the use of vegetable gardens as a didactic resource in an informative way.

The evaluation procedure aligns with the didactic model and educational principles, as it aims to be comprehensive, formative, participatory, and continuous. This implies that the evaluation is integrated with the rest of the didactic process and the educational context, promoting continuous improvement of the teaching–learning process.

The work carried out by the students is assessed by the teachers (hetero-assessment) and in parallel by the students (self-assessment) based on a rubric containing the assessment criteria. These criteria are set in advance and are known to the students before the start of the activity.

3.4. Instrument and Data Collection

The data used in this research were collected via an online survey as part of a larger study that measured sustainable development. Although the questionnaire was conducted via an online platform, it was carried out in one of the class sessions. Therefore, the researchers were present in case any doubts arose during its development. This format was used because of the ease of data collection and analysis.

A higher number of participants was expected (the total number of students in the subject was 80). However, when the database was compiled, it was observed that many

students had not taken the post-test, so the sample was reduced to those participants who had taken part in both assessment sessions.

The survey has three parts. The first part collects the questions that measure the opinion of the PSTs on sustainable development. This is a scale from one to six where one is identified as strongly disagree and six is identified as strongly agree (the response options ordered from lowest to highest value are: strongly disagree, do not agree at all, slightly agree, agree, quite agree, totally agree). The second gathered simple socio-demographic information. The third part consists of a scale from one to ten, which provides information on the personal background of the participants. Table 1 lists the questions from the three parts of the survey applied to this study. As can be seen, the questions in the first part of the survey selected for this study respond to the theme of sustainable food.

Table 1. Questions from the three parts of the survey applied to this study.

Part one. Opinion on...	It saddens me to see out-of-season products in the shops. For me it is important to choose food that pollutes the environment the least. I understand what food sovereignty means. Farmland is invaluable to me.
Part two. Socio-demographic questions	Gender Size of the municipality of residence
Part three. Questions on personal background	For one reason or another in my family we have been very close to the natural environment. I practice leisure activities related to nature (hiking, climbing, rafting, etc.). People close to me have cultivated the land. I am influenced by social networks when choosing my diet. The education I received at school has influenced the way I eat. I am concerned about achieving a sustainable society.

3.5. Data Analysis

Quantitative analysis was implemented using IBM SPSS Statistics software version 26.0. First, the Kolmogorov–Smirnov test was applied. The p -values < 0.01 (significant for all variables) were obtained, indicating a violation of the normality assumption. Consequently, the use of non-parametric statistics was determined. The Wilcoxon’s test for two related samples was used to study the comparison between medians on the study variables. Hedges’ G was applied to calculate the effect size of the intervention. Pearson’s Chi-square was applied to contrast numerical and nominal variables. Spearman’s test was applied to study the correlations between scale variables.

4. Results

The purpose of this study was to explore the opinions of PSTs on sustainable food. This was approached through the analysis of four variables: the consumption of seasonal products, the consumption of products that pollute the environment less during their production, processing and marketing, the concept of food sovereignty, and the importance of farmland.

4.1. Consumption of Products out of Season

As can be seen in Table 2, PSTs answer whether they are sad to consume seasonal products more often in the pre-test phase by marking the answers “slightly agree”, “agree”, or “quite agree”. In terms of descriptive statistics, the mean value of 3.8, the median value of 4, and the standard deviation of 1.247 should be noted. In contrast, the same table shows a change in the frequency of responses in the measurement after the intervention. In this phase, the answers most frequently used by the participants are “agree”, “quite agree”,

or “totally agree”. Consequently, the value of the mean increases to 4.31, the value of the median remains at 4, and the value of the standard deviation is 1.194 (Figure 1).

Table 2. Results of the statement “I am sad to see out-of-season products in shops” in the pre- and post-test phases.

		It Saddens Me to See Out-of-Season Products in the Shops						
		Strongly Disagreed (1)	Do Not Agree at All (2)	Slightly Agree (3)	Agree (4)	Quite Agree (5)	Totally Agree (6)	Total
Pre-test	<i>f</i>	3	5	9	17	12	3	49
	%	6.1	10.2	18.4	34.7	24.5	6.1	100
Post-Test	<i>f</i>	0	5	5	18	12	9	49
	%	0	10.2	10.2	36.7	24.5	18.4	100

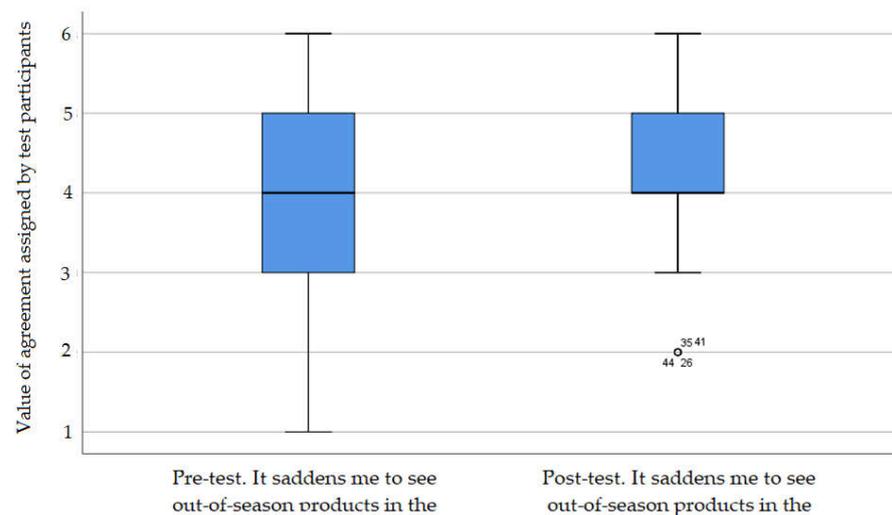


Figure 1. Boxplot of the statement “It saddens me to see out-of-season products in the shops”.

After the descriptive study, the Wilcoxon’s test was applied to determine whether the difference between the results of the measurement phases was significant. The *p*-value resulting from this test is 0.025. Therefore, significance is demonstrated. We then calculated the effect size of the intervention using Hedges’ *G*, obtaining a value of 0.413, which we should interpret as small, although close to what is considered moderate (0.049) following Cohen’s proposal [33].

There is a correlational study between item “It saddens me to see out-of-season products in the shops” and those items belonging to the scale that determined the participants’ personal background. It should be noted that when applying Spearman’s test between the results of the pre-test phase and the rest of the variables, correlation coefficients with significant values were obtained with the following items:

- For one reason or another in my family, we have been very close to the natural environment (correlation coefficient 0.378, *p*-value 0.007).
- I practice nature-related leisure activities (hiking, climbing, rafting, etc.) (correlation coefficient 0.454, *p*-value 0.001).

However, these significant correlations disappear when applying Spearman’s test in the post-test measurement with the variables of the personal baggage scale.

When analyzing the study variable in the pre-test in contrast to the relationship with nature variable, it is observed that the mean (degree of agreement) with the statement increases as the relationship with nature increases, except in the maximum value of relationship with nature, where the value of the mean drops (for example, for a value of 6, the

mean is 2.4, in value 9, the mean rises to 4.43, in value 10, the mean drops to 4.18). Finally, in the case of the variable consumption of seasonal products (pre-test) in contrast to the practice of leisure in nature, an increase in the mean of the degree of agreement is observed as the practice of leisure in nature increases (for example, at value 5 of the practice of leisure in nature, the mean takes a value of 2.25, increasing progressively until acquiring a value of 4.67 at the maximum value of the relationship with nature).

4.2. Consumption of Food That in Its Production and Marketing Has Polluted the Environment Less

The PSTs have shown their opinion on whether it is important for them to consume food that is less contaminated in its production, preservation, and marketing process (Table 3). From their answers in the pre-test phase, a majority slightly agree or agree. Specifically, a mean of 3.9, a median of 4, and a standard deviation with a value of 1.358 were obtained. In contrast, in the post-test phase, a greater environmental awareness was shown, as most of the responses were in the agree or quite agree range (Figure 2). In this second measurement, the median rises to 4.29, the median remains at 4, and the standard deviation takes a value of 1.19.

Table 3. Results of the statement “For me it is important to choose food that pollutes the environment the least”.

		For Me It Is Important to Choose Food That Pollutes the Environment the Least						
		Strongly Disagreed (1)	Do Not Agree at All (2)	Slightly Agree (3)	Agree (4)	Quite Agree (5)	Totally Agree (6)	Total
Pre-test	<i>f</i>	2	6	10	15	9	7	49
	%	4.1	12.2	20.4	30.6	18.4	14.3	100
Post-Test	<i>f</i>	0	5	6	16	14	8	49
	%	0	10.2	12.2	32.7	28.6	16.3	100

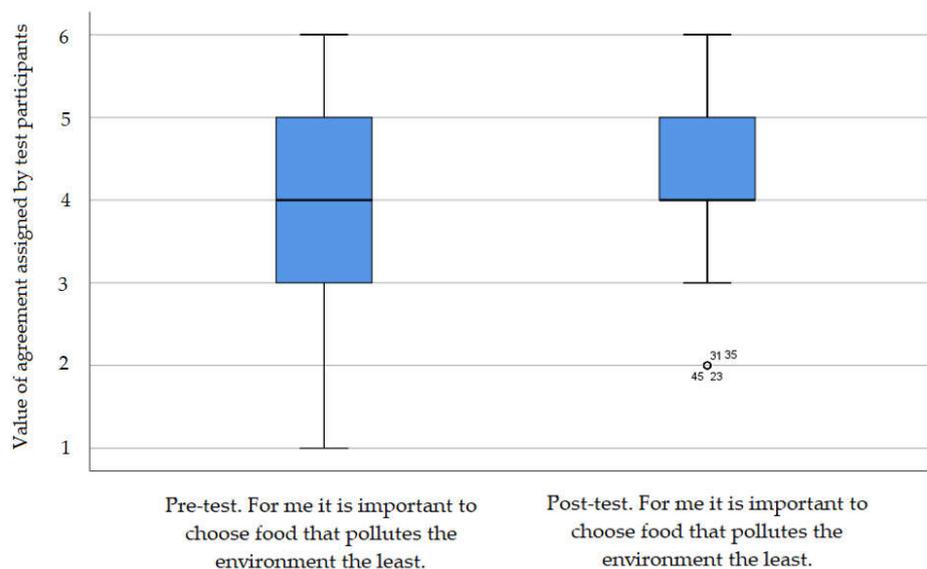


Figure 2. Boxplot of the statement “for me it is important to choose food that pollutes the environment the least”.

Wilcoxon’s test was applied to assess the significance of the improvement detected between the measurement phases. The *p*-value obtained in this test is < 0.05 (*p*-value 0.043), which demonstrates significance. Next, the effect size of the intervention is calculated using Hedges’ *G*, which gives a value of 0.305, indicating a small effect.

Finally, it should be noted that in the correlational analysis (Spearman's test) between the study item and the personal baggage items, only one correlation was detected in the pre-test phase. This correlation is between the study item and the relationship with the natural environment (correlation coefficient 0.378, p -value 0.007). However, this relationship disappears after the intervention. When studying this correlation, it is observed that the mean of the agreement is higher when the relationship of the PSTs with nature is higher, except in the maximum value of relationship with nature where the mean decreases (e.g., for value 6, the mean is 3.67, for value 9, the mean is 4.64, and for value 10, the mean decreases to 4.09).

4.3. Understanding the Concept of "Food Sovereignty"

In this case, as seen in Table 4, the highest frequencies of answers given by PSTs are strongly disagree and agree. This indicates that 38.9% of the participating PSTs were unaware of the concept of food sovereignty at the time of the pre-test. However, the opinions of the PSTs show a change after the intervention, and the response with the highest frequency becomes agree, followed by slightly agree/do not agree at all. In the case of the pre-test values, 2.69 for the mean, 2 for the median, and 1.673 for the standard deviation were obtained. This is in contrast with the values obtained in the post-test, with a mean of 3.39, a median of 3, and a deviation of 1.565 (Figure 3). Applying the Wilcoxon's test to check the significance of these differences, a p -value of 0.017 was obtained, thus demonstrating significance. In the effect size study, the Hedges' G test 0.43 was applied, showing an effect size close to moderate.

Table 4. Results of the statement "I understand what food sovereignty means".

		I Understand What Food Sovereignty Means						
		Strongly Disagreed (1)	Do Not Agree at All (2)	Slightly Agree (3)	Agree (4)	Quite Agree (5)	Totally Agree (6)	Total
Pre-test	<i>f</i>	19	7	4	10	7	2	49
	%	38.9	14.3	8.2	20.4	14.3	4.1	100
Post-Test	<i>f</i>	7	9	9	11	8	5	49
	%	14.3	18.4	18.4	22.4	16.3	10.2	100

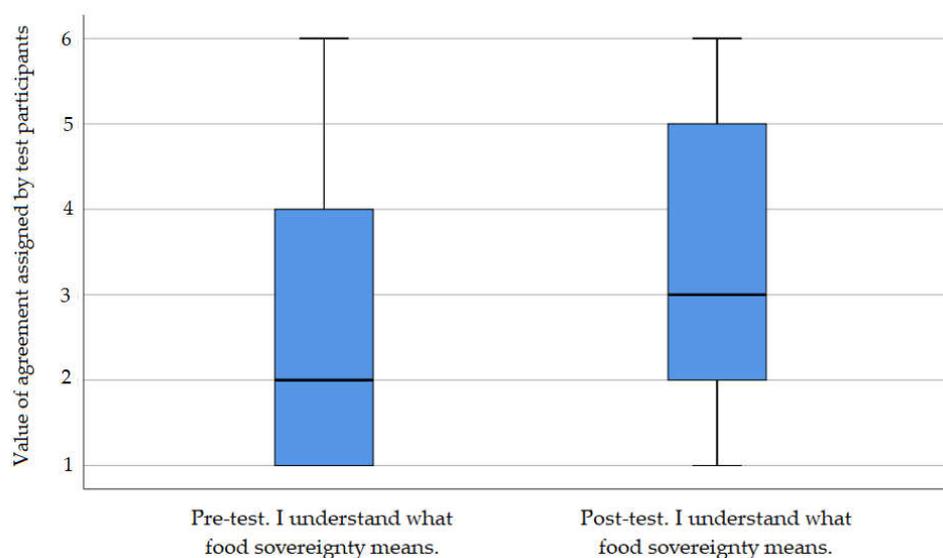


Figure 3. Boxplot of the statement I understand what food sovereignty means.

As for the correlation observed when applying Spearman's test between this item and those included in the personal baggage scale, it is worth noting that when applying the test to the pre-test results, significant correlations appear between the understanding of the concept of food sovereignty and the relationship with the environment (correlation coefficient 0.546, p -value 0.000); as well as between the understanding of the concept of food sovereignty and whether people close to the PSTs have cultivated the land (correlation coefficient 0.340, p -value 0.017). However, when applying the test in the post-test results, only the relationship between the understanding of the concept and the participating FSWs claiming to be connected to their natural environment is maintained (correlation coefficient 0.364, p -value 0.01).

When analysing the results in the pre-stage in contrast to the cultivation of the land, it is observed that the mean of the degree of agreement increases as the relationship between the social environment of the PSTs and the cultivation of the land increases (e.g., for value 5, the mean is 1.5, and for value 10, the mean rises to 3.29). However, there is an exception in those PSTs that value the relationship of their social environment with the cultivation of the land with 6 points. In this case, the average of the degree of agreement rises to 4.

4.4. The Value of Farmland

The PSTs have given their opinion on the importance of farmland for them (Table 5). The most frequent responses in the pre-test phase are "agree" and "totally agree". The mean obtained in this phase is 4.59, the median 5, and the standard deviation 1.258, i.e., the PSTs attach a certain value to farmland. However, in the post-test phase, the degree of agreement with the statement increases, with the most frequent responses being "totally agree" and "quite agree". In this case, the mean rises to 5.04, the median remains at 5, and the standard deviation is 1.117 (Figure 4).

Table 5. Results of the statement "Farmland is of inestimable value to me".

		Farmland Is of Inestimable Value to Me						
		Strongly Disagreed (1)	Do Not Agree at All (2)	Slightly Agree (3)	Agree (4)	Quite Agree (5)	Totally Agree (6)	Total
Pre-test	<i>f</i>	1	3	3	15	13	14	49
	%	2	6.1	6.1	30.6	26.5	28.6	100
Post-Test	<i>f</i>	0	2	3	8	14	22	49
	%	0	4.1	6.1	16.3	28.6	44.9	100

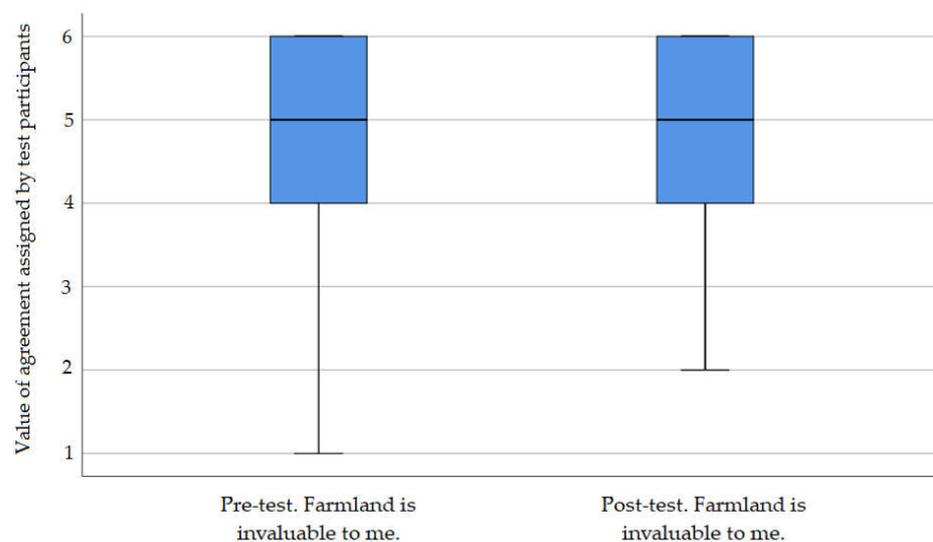


Figure 4. Boxplot of the statement Farmland is invaluable to me.

The study of the significance of the differences indicated using Wilcoxon's test determines that the differences are significant (p -value 0.01). The effect size is studied using the Hedges' G -test, which gives a value of 0.38, indicating a small effect size.

The study of this variable in contrast to the students' place of origin (whether they come from a small, medium, or large town or city) using Pearson's chi-square test shows no significant relationship between variables in the pre-test phase. However, there is a significant relationship between the variables in the post-test phase $c2$ 21.5 with a p -value of 0.04. As seen in Table 6, PSTs, both in the pre-test and post-test phase, value farmland more highly if their origin is from a smaller locality.

Table 6. Descriptive statistics of "Farmland is of inestimable value to me" by habitat.

	Habitat	N	Media	Median	SD *
Pre-test	City	18	4.33	4	1.085
	Small locality (<10,000 inhabitants)	16	5.13	5.5	0.957
	Medium-sized locality (<10,000 inhabitants)	9	4.56	5	1.33
	Large locality (commercial head with small or medium-sized localities under its responsibility)	6	4	5	2
Post-test	City	18	4.67	4.5	1.188
	Small locality (<10,000 inhabitants)	16	5.5	6	0.632
	Medium-sized locality (<10,000 inhabitants)	9	5.11	6	1.269
	Large locality (commercial head with small or medium-sized localities under its responsibility)	6	4.83	5	1.472

*SD (Standard Deviation)

Regarding the study of the correlation between this variable in the pre-test phase with the personal baggage scale using Spearman's test, it should be noted that significant correlations are obtained between the value given to farmland and proximity to the natural environment (correlation coefficient 0.485, p -value 0.000) and whether people close to the PSTs have cultivated the land (correlation coefficient 0.333, p -value 0.02). In the comparison between the study variable in the post-test phase with the items of the personal baggage scale, the same correlations are detected as in the pre-test phase with proximity to the natural environment (correlation coefficient 0.675, p -value 0.000) and whether people close to the PST have cultivated the land (correlation coefficient 0.46, p -value 0.001).

However, at this stage, a further correlation is added with the item "I practice leisure in nature" (correlation coefficient 0.401, p -value 0.0004). When studying the results of the variable in the pre- and post-test phase by proximity to the natural environment, higher means are observed the more value is given to the relationship with nature (for example, in the pre-test phase, for a valuation of their relationship with nature of 6, a mean of 3.4 is obtained, in contrast to PSTs who value their relationship with nature with 10, who present a mean of 5.45).

5. Discussion

PST participants broadly agree, both in the pre-test and post-test, that seeing out-of-season products in the shops makes them feel sad. These feelings show a certain awareness of the issue of globalized agricultural trade, which, as several studies indicate, is a relevant issue from the perspective of sustainable food transitions due to its environmental and social consequences [34–36].

In the pre-test phase, PSTs showed significant relationships between sadness at seeing out-of-season products with family attachment to the natural environment and leisure in nature. However, in the post-test phase, these relationships disappear. In this sense, the significant relationship of family attachment to the environment is in line with the results of other studies that have already highlighted the importance of the family in forming

citizens who understand the importance of sustainable development [37–39]. For example, the study by Molinario et al. [37] concludes that the family is of great importance in the development of children’s sensitivity to nature. Something similar happens with people who practice leisure in nature, since, as already indicated by authors such as Horka and Hromádka [40], they tend to be more aware of the importance of caring for the environment. These significant relationships slow down in the post-test, which indicates that after the intervention was carried out with the PSTs, the awareness shown by these people does not show more affinity in terms of any of the contrast variables, not even with the aspects mentioned above.

PSTs broadly agree that it is important for them to choose foods that pollute the environment as little as possible. However, it should be noted that after the intervention, the percentage of PSTs who agreed or strongly agreed with this issue increased. Education on the importance of achieving sustainable food is key to choosing the products we buy. In their studies, Magnuson et al. [41] or Raptou and Manolas [42] also found that purchasing organic products is strongly related to awareness of both their benefits for human health and climate change. The increase in awareness of the need to change our attitudes to more sustainable ones after the intervention in our research does not correlate with any of the contrast variables. This allows us to conclude that the intervention boosts awareness regardless of the background and personal situation of the PSTs.

Regarding the concept of food sovereignty, 38.9% of the participating PSTs were unaware of the concept of food sovereignty at the time of the pre-test. However, the opinions of PSTs show a change after the intervention. This reveals that it is not a widespread concept and that without prior training, people do not understand what it is and why it is important [43,44]. The correlational analysis indicates that, initially, people who are closer to the natural environment and those who have people close to them who have cultivated the land perceive that they have a better understanding of the concept of food sovereignty. This again underlines the importance of the role of families in raising awareness of these environmental sustainability issues [37], as they are a key pillar in the formation of responsible citizenship [45,46]. Though, after the intervention, only the affinity between the understanding of the concept and the connection with the immediate environment remains, which indicates that training is an important element in raising awareness [47].

The value given to farmland by the PSTs is high and is especially remarkable in the post-test. This reveals that after appropriate training, the participants understood the importance of farmland and generally “totally agree” with its importance. Several studies such as the one conducted by Nous-Heen et al. [48] or Eugenio-Gozalbo et al. [49], conclude that PSTs who have received training on this topic value the garden as a resource that benefits them in their training and future teaching practice.

It is worth noting that the results revealed new positive correlations between the importance given to farmland, those who had a relationship with nature, and those who had people close to them who cultivated the land. In fact, in the post-test, this relationship was stronger and even showed a new positive correlation in terms of people who spend their leisure time in nature. These data are in line with those obtained in other studies, showing that when PSTs are trained in the importance of achieving environmental sustainability and a sustainable food transition, they show increasing environmental awareness and sensitivity [49,50]. Therefore, there is no doubt that teachers can significantly impact sustainability education because if they adopt sustainable attitudes in their daily behaviour, they can inspire their students and serve as role models on their way to sustainability [50].

6. Conclusions

To study the opinion of PSTs involved in the study on sustainable food, the opinion of participants on the following issues was investigated: “Consumption of products out of season”, “Consumption of food that in its production and marketing has polluted the environment less”, “Understanding the concept of food sovereignty”, and “The value of farmland”. It is concluded that:

PSTs involved in the study initially have an above-average opinion regarding negative feelings about the consumption of out-of-season products, the consumption of products that pollute more in the marketing process, and the importance of farmland. This average opinion improves after the intervention, which indicates a greater awareness of these issues after working on them. Likewise, the PSTs' knowledge of the concept of "food sovereignty" is below average before the intervention, indicating that they reach the third year of their degree in Education with little or no knowledge of this concept either in Higher Education or in Compulsory Education. However, after the intervention, their self-perception of their understanding of the concept increases.

As for the study of the relationship of the research variables with the scale of personal baggage of the participants, it is found that there are no differences in terms of gender in any of the variables and only in the case of the importance of farmland is a relationship with the locality of origin of the PSTs detected both in the pre- and post-test phase. In the variables consumption of products out of season and consumption of food that in its production and marketing has polluted the environment less, affinity is observed in the pre-test phase with the relationship of the PSTs involved in the study with nature and the practice of leisure in nature, and relationship with nature, respectively. However, this relationship is lost after the intervention, which serves to compensate for personal baggage when forming an opinion on these variables. In the variable on the understanding of the concept of "food sovereignty", affinity is found in the relationship with the natural environment and the connection of people close to the earth in the pre-test phase. This relationship is maintained in the case of connection with nature for the post-test phase. Regarding the last variable importance of farmland, affinities were detected in the pre-test phase with the connection with nature and the connection of close people with the cultivation of the land. In this case, the intervention highlights these connections, as they are more significant in the post-test phase. A further affinity variable is added, the practice of leisure in nature.

Consequently, it is concluded that the participants' views on sustainable food could initially be described as correct, but significantly improved after the intervention.

Finally, we would like to highlight as a strong point of the article the contribution it makes to the scientific literature on education for sustainable food. This is a subject that has been identified as needing study, although research is still limited. It also highlights the fact that this study not only analyses the opinion of PSTs involved in the study but also studies how this opinion changes after an intervention is carried out. It is considered that showing the evolution of the participants, after explicitly addressing the contents of the study in class, may motivate teachers to include these reflections on food sustainability in the classrooms of university degrees, especially in education degrees. As an example, based on the theoretical references cited in the study and our own results, it can be seen that activities such as these didactic proposals that connect students with local production, seasonal products in the area and the cultivation of the land favor the promotion of a reflection that contributes to sustainable awareness. On the other hand, it is pointed out that the small sample size does not allow for generalisations to be made and that the data are only representative of the participants in this study. That is, the study only allows us to get to know the reality studied and to understand the need to act in favour of sustainable awareness. As a result, it is proposed as a future line of research to extend the sample with students from different degrees and, if possible, institutions, to obtain generalisable results. In addition, once the sample and changes with the proposed intervention have been scaled up, other interventions will be explored that can further contribute to the development of responsible and sustainable attitudes among university students (belonging to degrees in Education and degrees in other areas of knowledge).

Author Contributions: Conceptualization, N.S.-C. and V.O.-Q.; methodology, V.O.-Q. and C.G.-P.; software, V.O.-Q. and N.S.-C.; formal analysis, V.O.-Q. and N.S.-C.; investigation, V.O.-Q., C.G.-P. and N.S.-C.; data curation, V.O.-Q., N.S.-C. and C.G.-P. writing—original draft preparation, V.O.-Q., N.S.-C. and C.G.-P.; writing—review and editing, V.O.-Q., N.S.-C. and C.G.-P. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The institution did not consider the evaluation of the ethics committee necessary as long as the voluntary participation of students was ensured, and the intervention did not affect the development of the contents registered in the degree's verified report.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available upon reasonable request to the authors.

Acknowledgments: Thanks are due to the teaching innovation project “#PensaCiencia rethinking school science. University-school rapprochement” for its support for this study.

Conflicts of Interest: The authors declare no conflict of interest.

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