



Food citizenship as sustainable assessment tool for higher institutions: The Case of the University of the Basque Country"





FARMAZIA FAKULTATEA

Jon Esparta



The SDSN (2017) provides five steps to reinforce universities' engagement with the SDGs:

- 1) Mapping what universities are already doing
- 2) Building capacity and ownership of the SDGs
- 3) Identifying priorities, opportunities and gaps
- 4) Integrating, implementing and embedding the SDGs within university strategies, policies and plans
- 5) Monitoring, evaluating and communicating universities' actions on the SDGs.

Teachers perspective

• Idoiaga, 2023

Students perspective

Food citizenship

The use of food citizenship as a mapping tool will make it possible to detect weaknesses in the campuses/faculties, in terms of knowledge and behavior of the student body with regard to sustainability

INTRODUCTION

OBJECTIVE

MATERIAL AND METHODS

RESULTS AND DISCUSSION

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Including aspects of sustainability in the degree in Human Nutrition and Dietetics: An evaluation based on student perceptions



Virginia Navarro ^a, Olaia Martínez ^{a, *}, Jonatan Miranda ^{a, **}, Diego Rada ^b, María Ángeles Bustamante a, Iñaki Etaio a, Arrate Lasa a, Edurne Simón a, Itziar Churruca a

ARTICLE INFO

ABSTRACT

Article history:

Education is progressing towards having a more sustainable outlook. Numerous approaches to sus-

Table 1. Participants characteristics

	Araba	Gipuzkoa	Bizkaia	Total
Participant number	175	227	451	853
Mean age (SD)	21.5(3.40)	20.5(3.29)	20.6(3.65)	20.8(3.53)
Gender (%)				
Male	25.1	27.3	27.1	26.7
Female	73.1	72.2	71.8	72.2
Non binary	1.73	0.44	1.11	1.06
Distribution per year				
(%)				
1st	6.29	34.4	31.9	27.3
2nd	10.9	16.3	15.3	14.7
3rd	42.3	28.2	30.6	32.4
4th	30.3	17.2	18.8	20.8
Others	10.3	3.96	3.33	4.92
Number of faculties (take part/total)	7/7	9/9	9/9	25/25

SD: standard deviation.

Department of Pharmacy and Food Science, Faculty of Pharmacy, University of the Basque Country (UPV/EHU), Unibertsitateko Ibilbidea, 7, 01006, Vitoria-

b Department of Preventive Medicine and Public Health, Faculty of Pharmacy, University of the Basque Country (UPV/EHU), Unibertsitateko Ibilbidea, 7, 01006, Vitoria-Gasteiz, Spain

Table 2. Food citizenship -questionnaire based Sustainability Knowledge Summatory and Sustainability Intentional Behaviour Summatory analysis by faculty of different campuses.

	Ar	aba	Gipu	zkoa	Bizl	kaia			Ar	aba	Gipu	ızkoa	Biz	kaia	
Faculty	Mean	SD	Mean	SD	Mean	SD	p	Faculty	Mean	SD	Mean	SD	Mean	SD	p
Sustainability Know	ledge Summat	tory						Sustainability Intenti	onal Behavio	ur Summat	tory				
1	28.25	6.797	28.56	7.192	27.50	7.911		1	32.92	8.306	33.88	5.439	35.05	8.230	
2	28.43	9.307	29.93	6.853	28.59	7.202		2	35.86	5.900	35.12	8.362	37.59	7.314	
3	29.78	8.045	24.18	7.100	27.76	8.092		3	36.11	6.657	32.00	7.550	32.22	9.176	
4	31.90	7.204	25.88	8.492	28.88	9.062		4	34.76	8.366	33.59	9.401	32.31	7.939	
5	27.86	8.189	22.74	11.18	28.50	8.852		5	33.71	10.07	30.48	12.56	36.55	5.561	
6	28.60	7.836	29.25	4.093	29.11	7.177		6	35.47	8.228	37.92	3.919	32.18	7.751	
7	29.50	6.547	31.33	7.734	27.43	7.710		7	34.88	6.468	33.63	6.950	33.00	7.141	
8			24.83	10.54	27.07	10.85		8			32.28	9.423	35.38	9.977	
9			26.61	7.617	29.27	7.757		9			31.72	9.087	34.23	8.356	
Total Campus	30.35 ^a	7.588	27.85 ^b	8.313	27.96 ^b	8.695	0.003	Total Campus	34.94	7.924	33.67	8.603	33.84	8.888	0.362

Faculty Abbreviation, Araba 1: Engineering, Araba 2: Economics and Business, Araba 3: Education and Sport, Araba 4: Pharmacy, Araba 5:Letters, Araba 6: Labour Relations and Social Work, Araba 7: Medicine and Nursing, Gipuzkoa 2: Medicine and Nursing, Gipuzkoa 3: Computer Science, Gipuzkoa 4: Engineering, Gipuzkoa 5: Education, Philosophy and Anthropology, Gipuzkoa 6: Architecture, Gipuzkoa 7: Psychology, Gipuzkoa 8: Law, Gipuzkoa 9: Economics and Business, Bizkaia 1: Engineering, Bizkaia 2: Science and Technology, Bizkaia 3: Medicine and Nursing, Bizkaia 4: Law, Bizkaia 5: Fine Arts, Bizkaia 6: Economics and Business, Bizkaia 7: Labour Relations and Social Work, Bizkaia 8: Education, Bizkaia 9:Social Sciences and Communication.

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Organic food Food reuse Food sourcing Food sourcing Food sourcing Food sourcing Food production models (care for workers' working conditions, animal welfare, etc.) Food surpluses and their management Food production Food production Food surpluses and their management Food surpluses and their management Food surpluses and their management Food production and their management Food production and their management Food production and their management Food surpluses and their management Food production of 6 8 10 11 12 16 15 15 15 15 15 15 15 15 15 15 15 15 15			Low-levels responds percentage			
Food reuse Food reuse Food sourcing Food sourcing Food sourcing Food sourcing Food production models (care for workers' working conditions, animal welfare, etc.) Food surpluses and their management Food surpluses and their management Eating habits and nutrition education Energy and nutritional value of food Impact of environmental pollution on food Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account the origin when buying food (Km 0, place of production). When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the allergies, intolerances or pathologies of the others When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 11 1 14 12		Items	Araba	Gipuzkoa	Bizkaia	
Food sourcing Food production models (care for workers' working conditions, animal welfare, etc.) Food surpluses and their management Eating habits and nutrition education Energy and nutritional value of food Impact of environmental pollution on food Dietary advice Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food for a group, I take into account the allergies, intolerances or pathologies of the others When buying food for a group, I take into account the allergies, intolerances or pathologies of the others I use water sparingly when cleaning fruit and/or vegetables. I use water sparingly when cleaning fruit and/or vegetables. I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Organic food	13	14	12	
Food production models (care for workers' working conditions, animal welfare, etc.) Food surpluses and their management Eating habits and nutrition education Energy and nutritional value of food Impact of environmental pollution on food Dietary advice Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the age of the others. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the allergies, intolerances or pathologies of the others I use water sparingly when cleaning fruit and/or vegetables. I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Food reuse	8	12	13	
Impact of environmental pollution on food Dietary advice Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Food sourcing	9	14	11	
Impact of environmental pollution on food Dietary advice Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).	<u>-</u>	Food production models (care for workers' working conditions, animal welfare, etc.)	12	16	12	
Impact of environmental pollution on food Dietary advice Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Food surpluses and their management	9	11	9	
Impact of environmental pollution on food Dietary advice Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Eating habits and nutrition education	6	8	10	
Dietary advice Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the age of the others. I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Energy and nutritional value of food	24	21	19	
Diseases related to inadequate nutrition I choose seasonal products when designing my daily diet I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the allergies, intolerances or pathologies of the others When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Impact of environmental pollution on food	6	15	15	
I choose seasonal products when designing my daily diet I plan my shopping well so as not to waste leftovers I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the allergies, intolerances or pathologies of the others When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Dietary advice	25	26	26	
I plan my shopping well so as not to waste leftovers I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the allergies, intolerances or pathologies of the others When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		Diseases related to inadequate nutrition	14	19	18	
I take into account the price when I buy food I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the allergies, intolerances or pathologies of the others When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		I choose seasonal products when designing my daily diet	20	28	25	
I tend to take into account the origin when buying food (Km 0, place of production). I take into account production models (organic, fair trade, industrial products, etc.) when buying food When buying food I take into account the waste it will generate. When buying food for a group, I take into account the age of the others. When buying food for a group, I take into account the allergies, intolerances or pathologies of the others When buying food for a group, I take into account the economic situation of the others I use water sparingly when cleaning fruit and/or vegetables. I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).		I plan my shopping well so as not to waste leftovers	9	16	18	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 4 7 11 12 12		I take into account the price when I buy food	6	5	6	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 11 12		I tend to take into account the origin when buying food (Km 0, place of production).	30	35	34	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 4 7 11 12 12		I take into account production models (organic, fair trade, industrial products, etc.) when buying food	32	33	37	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 4 7 11 12 12		When buying food I take into account the waste it will generate.	40	45	43	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 4 7 11 12 12		When buying food for a group, I take into account the age of the others.	45	41	40	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 4 7 11 12 12		When buying food for a group, I take into account the allergies, intolerances or pathologies of the others	14	14	10	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 4 7 11 12 12		When buying food for a group, I take into account the economic situation of the others	17	18	18	
I use the cookers so as not to throw away those that are in good condition. I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass). 4 7 11 12 12		I use water sparingly when cleaning fruit and/or vegetables.	14	14	15	
		I use the cookers so as not to throw away those that are in good condition.	4	7	11	
10 15 14		I distribute all types of waste properly (paper, cardboard, plastics, oil, organic, glass).	11	14	12	
I reuse trying oil 18 15 14		I reuse frying oil	18	15	14	

Figure 1. Food citizenship questionnaire heat map of low-level responders.



OBJECTIVE

MATERIAL AND METHODS

RESULTS AND DISCUSSION

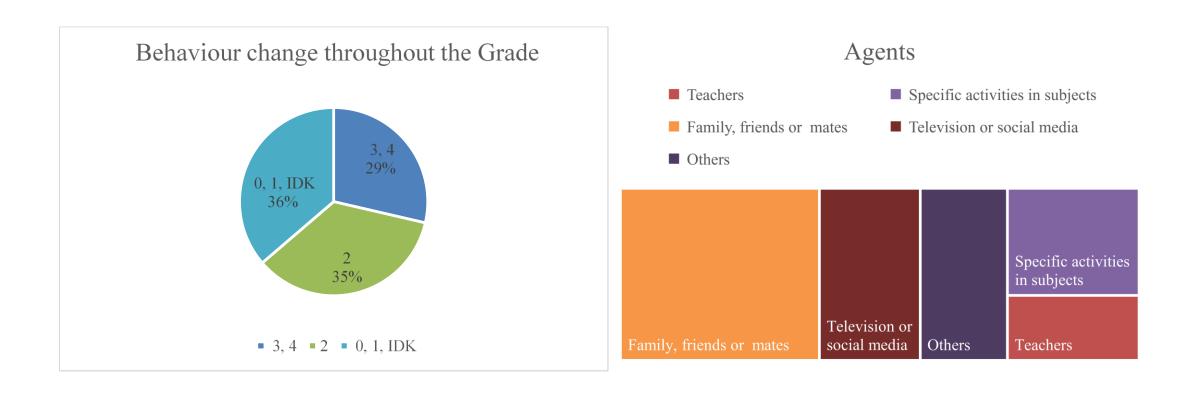


Figure 2. Distribution of behaviour-change responders and agents that influence high-level responders.

thank you for your attention



