

Article

# Adult Education and Globally Engaged Trainers: The Case of Vocational Training Institutes

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**Abstract:** Globalization provides access to people, services, goods, ideas, beliefs and values in a new way and poses fundamental challenges for all areas of education in every country. Education on global issues is a process of individual and collective growth which allows for transformation and self-transformation. In this vein, this quantitative study seeks to investigate the perspectives of 310 adult educators on global education training. The accessible population of the study was adult educators working in the public and private vocational training institutes in the region of Western Greece during the academic year 2021–2022. The random sampling technique was applied. Research findings show that teachers recognize the necessity and importance of training on global competence and most of them have attended one or more courses mostly during their undergraduate or postgraduate studies or during their participation in training programs. They also regard the University as the most appropriate training actor, and they are in favor of optional training programs and of mixed type. Regarding training topics, they proposed interculturalism, diversity, current events, religion, history, immigrants, environment, geography, human rights and culture. Finally, participants' aspects do not seem to be affected by their employment relationship and years of service. On the contrary, gender, ICT knowledge and additional studies seem to affect the results of the research.

**Keywords:** global education; adult educator; non-formal settings; vocational training institutes



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## 1. Introduction

The huge changes observed in modern societies are largely inscribed in the sphere of globalization and the 4th Industrial Revolution. Migration and displacement are on increase since more than 250,000,000 people, constantly driven by their instinct for survival and better livelihood opportunities, live in different countries from those they were born in [1].

A new landscape of living globally tends to dominate, which is characterized by multicultural societies and convergence of cultures [2], whereas the bonds of interdependence and interaction become increasingly stronger, even in societies that until recently were considered to be isolated and independent [3]. In this vein, education inevitably plays a crucial role in forecasting the development of appropriate skills and competences and in building the right knowledge, skills and capacities of individuals in order that they might work together to transform not only themselves but the world as well. This “can be as true for adult education and learning as it is for early childhood education” [4] (p. 60).

Abiding by that, Felisa Tibbits (2020), as cited in UNESCO Grale report [5] (p. 5), mentions that adult education and learning may enhance the capacities of adults to know, claim and enjoy both their individual and social rights and to participate in community life. Thus, the development of global education and global citizenship is a matter of priority, according to the UNESCO’s 5th Global Report on adult learning and education [5].

Global education could be defined as a process of empowering “learners of all ages to assume active roles, both locally and globally, in building more peaceful, tolerant, inclusive

and secure societies” [6] (p. 422). In addition, Musil (2006), as cited in Zhou [7] (p. 115), regards it as a “desirable outcome of general education which is rich, discipline-appropriate, varied, and rigorously, creatively developmental”. Additionally, it is based on cognitive, socioemotional and behavioral domains. Specifically, citizens are called to develop thinking skills in order to understand the complexity of the world; to provide themselves with soft, emotional and life skills [3] in order to live peacefully with the others; and to become more engaged in societies [6,8].

The preparation of global competent citizens is an important issue for Greek policies and the legislation framework since approximately 147,420 people recognized as refugees, 22,000 people recognized as asylum-seekers and 3645 persons categorized as “others” currently remain in Greece [9]. In addition, the 2021 population census [10] reported that 10,432,481 people are permanent residents of Greece, and it was also estimated that migrant citizens accounted for 11.34% of the total population. The majority of ethnic groups in Greece are mainly of Albanian, Bulgarian, Romanian, Pakistani, Georgian, Ukrainian, as well as Russian, Armenian, Syrian and Afghani origin, without taking into account the substantial numbers of undocumented workers and unregistered asylum-seekers in the country.

In light of this, Greek legislation, except for the 1996 law (2413/96), which was the institutional measure taken for the establishment of intercultural education in our country, includes a plethora of laws, presidential decrees and ministerial decision regarding the education of immigrants and refugees, applying specifically in the formal education field [11].

What about the field of non-formal education and educators’ readiness to develop, cultivate and promote global competence? Are educators appropriately trained and educated in order to apply global education successfully by choosing practices and teaching methods that enhance global awareness? UNESCO’s [12] findings on the implementation of the 1974 Recommendation titled: “Progress on Education for Sustainable Development and Global Citizenship Education” (with an emphasis on national education policies, curricula, teacher training and student assessment) highlight the insufficient teacher training programs in the eighty-three participating countries.

Towards this direction, this study attempts to explore adult educators’ aspects regarding the necessity of education and training on global competence in the Greek context they, and their aspects regarding the traits which training programs should have in order to be effective. Conducting this research study is significant as, at a national level, there is a limited number of similar studies which are restricted in formal educational settings [13] since formal education receives more attention and more coverage from researchers and its settings are considered to be more straightforward in terms of identifying and assessing inputs, processes and outcomes [14].

## 2. Adult Education and Global Competence

In order to cope with the complex conditions that arise in today’s demanding work environment, individuals should be equipped not only with the appropriate theoretical knowledge background, but also with the appropriate skills and competences. The applicability of the content of skills can highlight self-confidence, empowerment, collaboration and inspiration [15], whereas “considering globalization processes, the subject of competency seems to have undergone a transformation” [16] (p. 2).

Within this context, the need for investment in trainers’ professional development has been central to the national and international discourse since educators have an important role to play in “preparing individuals of all backgrounds and ages to live, learn and work in a world of today, as well as in creating and leading future changes” [17] (p. 6).

In Greece, thousands of high school graduates turn to public and private Vocational Training Institutes every year (indicatively, in 2022, more than 16,500 students were enrolled in the public vocational training institutes) [18], which offer alternative adult career paths. Their management and operation have been entrusted to the Youth and Lifelong Learning Foundation by the General Secretariat for Lifelong Learning, who aim at offering any

type of vocational training to adults, either initial or continuing, and at providing the trainees with the appropriate qualifications (knowledge, skills, competences) in order to be appropriately equipped for their professional integration into the labor market. In addition, their basic key principles are as follows: to select and develop certified initial vocational training programs, which correspond to specific job requirements; to hire trainers who are well-equipped with the knowledge and experience required in order to provide a high-quality training course; and to equip laboratories in the educational structures to ensure the proper learning and training environment [19].

According to the relevant literature, there is a strong linkage between global education and adult literacy since non-formal education is a favorable context in which to establish and implement a continuum of relative interventions; for example, this can be the inclusion of a citizenship topic in the curriculum, at the one end, and the organization of the whole curriculum around global education, at the other. Hanemann (2019), as cited in UNESCO Grale report [5] (p. 131), states that citizenship themes need to start from the local and country context before moving to the global dimensions, whereas local values, traditions and cultures should also be incorporated. Activity-based teaching and learning techniques could contribute to fostering social and emotional skills, such as self-awareness, self-management, relationship skills and responsible decision making.

Furthermore, global education can play a role in the critique of unjust societies and “make room for values and themes which are not central to formal learning and give voice to all peoples, including the marginalized” [20] (p. 20).

In this vein, the role of adult educators is enhanced, since they are called to accommodate learners’ different needs, ensure an enabling environment of respect, empower them to attain their aspirations and concerns and use methodological knowledge [21]. Furthermore, for the European policy framework, the competence of teachers stems from the belief that teachers play a transformative role for both the individual and society [22].

Educators are key movers in the global competence education field “both outside the formal education sector and directly contributing to the implementation of global competence education in formal education” since they operate through a wide range of offerings, such as in-person workshops, international exchanges, systematic school reviews, conferences, policy advocacy, online courses, teaching and learning material [23] (p. 24). They also give learners the competences to reflect and share their ideas and role within a global, interconnected society, to understand and discuss complex relationships of common social, ecological, political and economic issues and obtain new ways of acting [24]. Finally, they can contribute not only to the development of informed, engaged and globally skilled citizens, but also to their personal development as global citizens, since global educators are also global learners [25].

### 3. Methodology

This research study seeks to complete the findings of an earlier one [13] which was conducted on 310 adult trainers working in ten private and public vocational training institutes in the region of Western Greece. Specifically, the scale “Measuring Students’ Global Competence” [26] was used in order to investigate the level of knowledge, understanding, skills, attitudes and values of adult trainers regarding global competence. Research findings revealed high percentages for all the domain dimensions of the scale: global knowledge and understanding (sub-factors: world knowledge, understanding globalization, international academic knowledge), skills (sub-factors: use of tools, cross-cultural communication, international academic communication) and attitudes/values (sub-factors: intent to interact, open attitude and values) [13].

At a second level, the present study seeks to shed light in adult educators’ perceptions on global education and training by following the quantitative methodology approach. Quantitative research entails more than just the use of numerical data, since researchers state the questions to be examined and specify the procedures that will be used throughout the study [27]. They also identify a sample of participants large enough to provide statistically

meaningful data. The accessible population of the study was adult educators working in the public and private vocational training institutes in the region of the Western Greece during the academic year 2021–2022. The random sampling technique was applied in order to ensure the representativeness of the sample [28]. The specific region was chosen because it was easier for the researchers to have access to and ensure that a sufficient number of questionnaires would be completed.

Thus, 310 adult trainers were called to respond to the following research questions: (1) What are their perceptions towards the necessity of training and education on global competence? (2) What are their perceptions regarding the topics global competence education and training should focus on? (3) What are their perceptions regarding the character, type and duration which global competence training programs should have?

For the needs of the study, an electronic questionnaire with six close-ended questions (regarding participants' attendance of a course or courses about global competence, necessity of training on global competence, appropriate training agent, compulsory or optional character of training, face to face, distance or mixed type of training and duration of training programs) and one open-ended (regarding topics included in training programs) was chosen and sent to the directorates of the vocational centers, where there was a session of demographic data including questions regarding gender, age, additional studies, employment relationship, years of service and Information and Communications Technology (ICT) level.

Regarding the data analysis and the distribution of frequencies, rates and percentages, the *t*-test of comparison of average values for two independent samples and the variance analysis in one direction (ANOVA) were applied.

It is also worth mentioning that the questionnaire was piloted in order to identify any ambiguities, misinterpretations and errors [29]. The face validity of the research was checked based on the matching table of the research tool with the research purpose and the research questions [28].

Ethical considerations played a significant role as well, as an attempt to built mutual trust between the researchers and the participants was made. Specifically, the researchers had the responsibility to behave in a trustworthy manner, and the participants were expected to behave in the same way by providing reliable responses. In addition, the two overriding rules were that the participants would not be harmed physically, mentally or socially, and they would be provided with a cover letter, the purpose of which was to alert them about the questionnaire and to provide the details of the requested actions on their part. In addition, it conveyed important information, such as research topic and incentives, and influenced the respondent's decision to deny or cooperate fully and accurately with the survey task [30]. Any information or data that were collected were strictly confidential and limited to people directly involved in conducting the research. Study participants had complete anonymity and their identities were kept hidden [27].

Finally, a relative definition proposed by the OECD [31] was also given in order to ensure that the participants would understand the concept of global competence. Specifically, "global competence describes the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development" [31] (p. 7). We chose to provide the participants with this definition, despite the fact that it has been criticized because of its neoliberalist heritage, since "it appears the most inclusive of the knowledge skills, beliefs, values and attributes that are argued for in our modern world" [32] (p. 3).

### 3.1. Findings

Regarding the demographic data (Table 1), 52.9% out of the participants are women and 47.1% are men; 40.6% belong to the age category of 22–40 years and 48.4% to the category of 41–55 years; 61.9% have a master's degree; 56.8% do not have a permanent job position and 58.7% have from 0–10 years of service. Regarding the level of knowledge

in Information and Communication Technologies (ICT), the vast majority (72.3%) of the participants have an A-level certification or the European Computer Driving License (ECDL), which both describe basic computer and internet skills. Finally, only 9% have a B-level certification (B-level certification recommends the introductory training of educators in the educational utilization of ICT; it is mostly addressed to primary and secondary education teachers of all disciplines).

**Table 1.** Distribution of frequencies and percentages of demographic characteristics.

	N	Percentage (%)
Gender		
Male	146	47.1
Female	164	52.9
Other	0	0%
Age		
22–30	40	12.9
31–40	86	27.7
41–50	96	31.0
51–55	54	17.4
56 and more	34	11.0
Additional studies		
Second degree	22	7.1
Master’s degree	192	61.9
PhD	22	7.1
Not having	74	23.9
Employment relationship		
Permanent position	98	31.6
Not permanent position	176	56.8
Director	36	11.6
Years of service		
0–10	182	58.7
11–20	72	23.2
21–25	32	10.3
26 and more	24	7.7
ICT level		
A-Level/ECDL	224	72.3
B-Level	28	9.0
Not having	58	18.7

Regarding the attendance of a course or courses about global competence (Table 2), 59.4% of the respondents have attended one or more during their basic studies; 2.6% during their postgraduate studies; 2.6% both during their basic and postgraduate studies; 16.8% through their participation in a training seminar on their own initiative; 10.3% through their participation in a training seminar conducted by the official education authorities; and 8.4% both on their own initiative and within the training framework of the official education authorities (official education authorities include governments and their associated ministries, departments, institutions and agencies which are responsible for ensuring the right to education).

**Table 2.** Distribution of course attendance frequencies and rates on global competence.

	N	%
I have attended a course/courses about global competence:		
During my basic studies	184	59.4
During my postgraduate studies	8	2.6
In the form of participation in a training seminar on my own initiative	52	16.8
In the form of participation in a training seminar as part of the action of the official education authorities	32	10.3
Both during my basic and postgraduate studies	8	2.6
By participating both in a training program on my own initiative and as part of the actions of the official education authorities	26	8.4
Total	310	100.0

Regarding the importance and necessity of training in developing global competence, the vast majority (78.7%) consider it to be “very” and “extremely” important for their work (Table 3).

**Table 3.** Distribution of frequencies and impact rates of training for developing global competence on Work.

	N	%
You think that training in topics related to the development of global competence is important for your work:		
Not at all	2	0.6
Slightly	12	3.9
Moderately	52	16.8
Very	128	41.3
Extremely	116	37.4
Total	310	100.0

Regarding the suitable body or person for organizing appropriate seminars on global competence, a large segment (49.7%) of the respondents considers the University to be the most appropriate agent, whereas 31.6% consider the University and the responsible coordinator/advisor to be the most appropriate (Table 4).

**Table 4.** Distribution of frequencies and percentages for training agent.

	N	%
You consider as the best agent for organizing training seminars on global competence:		
Director of the training structure	22	7.1
Coordinator/advisor	36	11.6
University	154	49.7
Coordinator/advisor and University	98	31.6
Total	310	100.0

In addition, 59.4% state that education/training should be optional, while 40.6% claim that it should be compulsory (Table 5).

**Table 5.** Distribution of frequencies and percentages regarding the character of training.

	N	%
Education/training should be:		
Compulsory	126	40.6
Optional	184	59.4
Total	310	100.0

Regarding the duration of the training programs, 41.1% of the participants state that it should be of monthly duration; 28.0% biannual; 22.9% annual; and 8.0% state that it should have a duration of one day (Table 6).

**Table 6.** Distribution of frequencies and rates of training duration.

	N	%
The duration of the training programs should be:		
of one day	14	4.5
of one month	126	40.6
biannual	102	32.9
annual	68	21.9
Total	310	100.0

Regarding the topics of the training programs (Table 7), there was one open-ended question where participants were called to fill in their own options. According to their answers, 12.3% propose topics of intercultural education, respect, diversity, inclusion and cooperation; 8.4% declare topics concerning culture and environment; 12.3% propose topics of sociology, psychology, international affairs, economics, world history, religion, international practices and institutions; 7.7% state that it should cover topics of intercultural communication, networking and skills. Finally, it is noteworthy that the majority (55.5%) of the participants refused to make a suggestion regarding the topics of global competence training.

**Table 7.** Distribution of frequencies and percentages of training topics.

	N	%
Which topics should be included in training programs?		
International education, respect, diversity, inclusion, cooperation	38	12.3
Culture, environment	26	8.4
Sociology, psychology, international affairs, economics, world history, religion, international practices, institutions	38	12.3
International communication, networking, skills	24	7.7
Diverse cultures, interaction		3.9
Total	138	44.5
No answer	172	55.5
Total	310	100.0

Regarding the type of training, the majority (53.5%) regard the mixed method as being the most appropriate, while 21.9% prefer face-to-face and 24.5% prefer distance learning (Table 8).

**Table 8.** Distribution of training type frequencies.

	N	%
Which is the most appropriate type of training according to your perceptions?		
face-to-face	68	21.9
distance learning	76	24.5
mixed method (synchronous-asynchronous sessions and limited number of face-to-face sessions)	166	53.5
Total	310	100.0

At the same time, the Pearson correlation coefficient of the three dimensions (Knowledge and Understanding, Skills, Attitudes/Values) of global competence (Table 9) in the

importance and necessity of training demonstrates a statistically significant positive correlation with Knowledge and Understanding ( $r = 0.174$ ), Skills ( $r = 0.151$ ), Attitudes/Values ( $r = 0.344$ ) and, overall, with global competence ( $r = 0.250$ ).

**Table 9.** Correlation testing of global competence with training.

	Importance of Training
Importance of training	-
Knowledge and Understanding	0.174 **
Skills	0.151 **
Attitudes/Values	0.344 **
Global competence	0.250 **

\*\* Correlation is significant at the 0.01 level (2-tailed).

### 3.1.1. Correlation of Training Sub-Factors with Gender

In order to determine if there is a statistically significant difference in respondents' perceptions of sub-factors (necessity, agent, character, duration, type) of global competence training based on gender, the data were analyzed by using an independent samples *t*-test.

The findings (Table 10) record a statistically significant correlation with three of the training factors based on gender: (a) Training agent  $t(308) = 2.100$ ,  $p = 0.037 < 0.05$ ; (b) Training duration  $t(308) = -2.344$ ,  $p = 0.020 < 0.05$ ; and (c) Type of training  $t(308) = -2.572$ ,  $p = 0.011 < 0.05$ .

**Table 10.** *t*-test results for correlation of training necessity, agent, character, duration and type with gender.

		Levene's Test for Equality of Variances				Significance	
		F	Sig. *	t	df	One-Sided p	Two-Sided p
Necessity of training	Equal variances assumed	1.288	0.257	-0.528	308	0.299	0.598
	Equal variances not assumed			-0.525	295.118	0.300	0.600
Agent of training	Equal variances assumed	1.113	0.292	2.100	308	0.018	0.037
	Equal variances not assumed			2.121	307.007	0.017	0.035
Character of training	Equal variances assumed	0.386	0.535	0.310	308	0.378	0.757
	Equal variances not assumed			0.310	304.297	0.378	0.757
Duration of training	Equal variances assumed	0.115	0.735	-2.344	308	0.010	0.020
	Equal variances not assumed			-2.346	304.834	0.010	0.020
Type of training	Equal variances assumed	2.805	0.095	-2.572	308	0.005	0.011
	Equal variances not assumed			-2.558	295.334	0.006	0.011

\* =  $p < 0.05$ .

Men agree to a greater extent (mean = 3.16) than women (mean = 2.96) that the University should be the training agent. Women agree more (mean = 2.83) than men (mean = 2.60) that the duration of training should be monthly. Moreover, women agree more (mean = 2.43) than men (mean = 2.19) that the most appropriate type of training is the mixed method (Table 11).



**Table 11.** Descriptive measures of agent, character and type of training for male and female.

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Agent of training	Male	146	3.16	0.761	0.063
	Female	164	2.96	0.906	0.071
Duration of training	Male	146	2.60	0.843	0.070
	Female	164	2.83	0.855	0.067
Type of training	Male	146	2.19	0.841	0.070
	Female	164	2.43	0.768	0.060

### 3.1.2. Correlation of Training Sub-Factors with Additional Studies

One-way Anova was used to test the difference in mean values of respondents' perceptions with the sub-factors of necessity, agent, character, duration and type of global competence training based on additional studies. The findings of the analysis of variance for the training sub-factors for global competence show that there is no equality of mean values with two of the training sub-factors (necessity for training and character of training) with additional studies. However, there is a statistically significant difference for the necessity of training with the additional studies of the respondents ( $F(3) = 4.965$ ,  $p = 0.002 < 0.05$ ) (Table 12).

**Table 12.** Analysis of variation of necessity, agent, character, duration and type of training with additional studies.

		Sum of Squares	df	Mean Square	F	Sig. *
Necessity of training	Between Groups	10.689	3	3.563	4.965	0.002
	Within Groups	219.582	306	0.718		
	Total	230.271	309			
Agent of training	Between Groups	3.896	3	1.299	1.831	0.142
	Within Groups	217.059	306	0.709		
	Total	220.955	309			
Character of training	Between Groups	3.494	3	1.165	4.999	0.002
	Within Groups	71.293	306	0.233		
	Total	74.787	309			
Duration of training	Between Groups	2.587	3	0.862	1.180	0.317
	Within Groups	223.555	306	0.731		
	Total	226.142	309			
Type of training	Between Groups	1.933	3	0.644	0.981	0.402
	Within Groups	201.086	306	0.657		
	Total	203.019	309			

\* =  $p < 0.05$ .

The comparisons of the mean values show that the statistically significant differences for the necessity of training with additional studies (Table 13) are found in the categories "not having" and "postgraduate studies" ( $p = 0.003 < 0.05$ ). This difference shows that the average value of the high necessity of training for those who qualify as "not having" additional studies is 0.410 points higher than those who have a "Master's degree" and vice versa. Moreover, there is a statistically significant difference for the character of training with the respondents' additional studies ( $F(3) = 4.999$ ,  $p = 0.002 < 0.05$ ). The comparisons of the mean values show that the statistically significant differences for the character of training with additional studies (Table 14) are found in the categories "Postgraduate studies" and "not having" ( $p = 0.004 < 0.05$ ). This difference shows that the average value of the character of training (optional) for those with a "Master's degree" is 0.071 points lower than for those with "No additional studies" and vice versa (Table 13).

**Table 13.** Comparisons of mean values of training agents with additional studies.

Test Tukey HSD		95% Confidence Interval					
Dependent Variable	(I) Additional Studies	(J) Additional Studies	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Necessity of training	Second degree	Master's degree	0.395	0.191	0.165	-0.10	0.89
		PhD	0.182	0.255	0.892	-0.48	0.84
		Not having	-0.015	0.206	1.000	-0.55	0.52
	Master's degree	Second degree	-0.395	0.191	0.165	-0.89	0.10
		PhD	-0.213	0.191	0.679	-0.71	0.28
		Not having	-0.410	0.116	0.003	-0.71	-0.11
	PhD	Second degree	-0.182	0.255	0.892	-0.84	0.48
		Master's degree	0.213	0.191	0.679	-0.28	0.71
		Not having	-0.197	0.206	0.775	-0.73	0.33
	Not having	Second degree	0.015	0.206	1.000	-0.52	0.55
		Master's degree	0.410	0.116	0.003	0.11	0.71
		PhD	0.197	0.206	0.775	-0.33	0.73
Character of training	Second degree	Master's degree	0.071	0.109	0.914	-0.21	0.35
		PhD	0.273	0.146	0.241	-0.10	0.65
		Not having	0.295	0.117	0.060	-0.01	0.60
	Master's degree	Second degree	-0.071	0.109	0.914	-0.35	0.21
		PhD	0.202	0.109	0.249	-0.08	0.48
		Not having	0.224	0.066	0.004	0.05	0.39
	PhD	Second degree	-0.273	0.146	0.241	-0.65	0.10
		Master's degree	-0.202	0.109	0.249	-0.48	0.08
		Not having	0.022	0.117	0.998	-0.28	0.32
	Not having	Second degree	-0.295	0.117	0.060	-0.60	0.01
		Master's degree	-0.224	0.066	0.004	-0.39	-0.05
		PhD	-0.022	0.117	0.998	-0.32	0.28

**Table 14.** Analysis of variation of necessity, agent, character, duration and type of training with employment relationship.

		Sum of Squares	df	Mean Square	F	Sig. *
Necessity of training	Between Groups	0.765	2	0.382	0.512	0.600
	Within Groups	229.506	307	0.748		
	Total	230.271	309			
Agent of training	Between Groups	3.228	2	1.614	2.275	0.104
	Within Groups	217.727	307	0.709		
	Total	220.955	309			
Character of training	Between Groups	0.363	2	0.181	0.748	0.474
	Within Groups	74.424	307	0.242		
	Total	74.787	309			
Duration of training	Between Groups	2.063	2	1.031	1.413	0.245
	Within Groups	224.079	307	0.730		
	Total	226.142	309			
Type of training	Between Groups	3.437	2	1.718	2.643	0.073
	Within Groups	199.583	307	0.650		
	Total	203.019	309			

\* =  $p < 0.05$ .

### 3.1.3. Correlation of Training Sub-Factors with Employment Relationship

One Way Anova was used to test the difference in mean values of respondents' perceptions with the sub-factors of necessity, agent, character, duration and type of global competence training based on employment relationship. The findings of the analysis of variance for the training sub-factors for global competence show that there is no equality of means for all the training sub-factors (Table 14). There is no statistically significant difference with any of the sub-factors of training for global competence with the employment relationship ( $p > 0.05$ ).

### 3.1.4. Correlation of Training Sub-Factors with Years of Service

One-way Anova was used to test the difference in mean values of respondents' perceptions with the sub-factors of necessity, agent, character, duration and type of global competence training based on years of service. The findings of the analysis (Table 15) of variance for the training factors for global competence show that there is no statistically significant difference with any of the training sub-factors and the years of service ( $p > 0.05$ ).

**Table 15.** Analysis of variation of necessity, agent, character, duration and type of training with years of service.

		Sum of Squares	df	Mean Square	F	Sig. *
Necessity of training	Between Groups	0.926	3	0.309	0.412	0.745
	Within Groups	22.345	306	0.749		
	Total	230.271	309			
Agent of training	Between Groups	0.546	3	0.182	0.253	0.860
	Within Groups	220.409	306	0.720		
	Total	220.955	309			
Character of training	Between Groups	0.377	3	0.126	0.517	0.671
	Within Groups	74.410	306	0.243		
	Total	74.787	309			
Duration of training	Between Groups	2.392	3	0.797	1.090	0.353
	Within Groups	223.750	306	0.731		
	Total	226.142	309			
Type of training	Between Groups	1.889	3	0.630	0.958	0.413
	Within Groups	201.131	306	0.657		
	Total	203.019	309			

\* =  $p < 0.05$ .

### 3.1.5. Correlation of Training Sub-Factors with Level of ICT Knowledge

One-way Anova was used to test the difference in mean values of respondents' perceptions with the sub-factors of necessity, agent, character, duration and type of global competence training based on ICT knowledge.

The findings of the analysis of variance for the factors of training for global competence show that there is no equality of mean values for one of the factors of training (duration of training) with the level of ICT knowledge (Table 16). There is a statistically significant difference for the duration of the training with the level of ICT knowledge of the respondents ( $F(2) = 4.292, p = 0.015 < 0.05$ ). The comparisons of the mean values show that statistically significant differences for the duration of training with the level of ICT knowledge (Table 17) are found in the categories: (a) "A-Level/ECDL" and "B-Level" ( $p = 0.018 < 0.05$ ); this difference shows that the average value of the duration of training (monthly) for those with "A-Level/ECDL" is 0.464 points higher than for those with "B-Level" ICT knowledge and vice versa; (b) "B-Level" and "not having" ( $p = 0.016 < 0.05$ ). This difference shows that the average value of the training duration (monthly) for those with "B-level" is 0.464 units less than for those "not having" ICT knowledge and vice versa.

**Table 16.** Analysis of variation of necessity, agent, character, duration and type of training with ICT knowledge.

		Sum of Squares	df	Mean Square	F	Sig. *
Necessity of training	Between Groups	3.618	2	1.809	2.450	0.088
	Within Groups	226.653	307	0.738		
	Total	230.271	309			
Agent of training	Between Groups	1.022	2	0.511	0.713	0.491
	Within Groups	219.933	307	0.716		
	Total	220.955	309			
Character of training	Between Groups	1.161	2	0.581	2.422	0.090
	Within Groups	73.626	307	0.240		
	Total	74.787	309			
Duration of training	Between Groups	6.152	2	3.076	4.292	0.015
	Within Groups	219.990	307	0.717		
	Total	226.142	309			
Type of training	Between Groups	0.949	2	0.474	0.721	0.487
	Within Groups	202.071	307	0.658		
	Total	203.019	309			

\* =  $p < 0.05$ .**Table 17.** Comparisons of mean values of training agent with ICT knowledge.

Test Tukey HSD					95% Confidence Interval		
Dependent Variable	(I) ICT Knowledge	(J) Level of ICT Knowledge	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Duration of training	A-level/ ECDL	B-level	0.464	0.170	0.018	0.06	0.86
		Not having	−0.078	0.125	0.808	−0.37	0.22
	B-level	A-level/ECDL	−0.464	0.170	0.018	−0.86	−0.06
		Not having	−0.542	0.195	0.016	−1.00	−0.08
	Not having	A-level/ECDL	0.078	0.125	0.808	−0.22	0.37
		B-level	0.542	0.195	0.016	0.08	1.00

#### 4. Discussion

According to UNESCO [33], global education constitutes a humanistic approach, supporting learners of all ages and all settings, to obtaining values, beliefs, knowledge and skills emerging from the notions of human rights, social justice, gender equality, environment balance and protection, sustainable economy and development. However, it is undoubtedly a broad and multidimensional concept, with different theoretical definitions and sub-definitions.

Thus, any attempt to approach it theoretically or/and in a form of research is a challenge, particularly when it is sought in the field of non-formal education, given the limited number of similar studies in the Greek context. Moreover, through the completion of this research, some methodological limitations came to the surface, such as the fact that the research took place in a specific region of Greece and at a specific period of time. Thus, these findings cannot be generalized for the whole population.

However, based on our findings, it appears that the majority of the respondents have attended one or more courses on global education during their studies or during their participation in seminars and training programs. This finding is probably related to the fact that the specific sample of the survey demonstrated a high level of knowledge, understanding, skills, attitudes and values as well [13]. Specifically, in terms of sample teachers' answers, the average value for global knowledge is 3.69 (a lot), for understanding globalization 4.10 (a lot) and for international academic knowledge 3.91 (a lot). In total, for the dimension of Knowledge and Understanding, the average value is 3.92 (a lot). Regarding the participants' answers for the dimension of Skills, the average value for the

use of tools is 4.27 (a lot), for the cross-cultural communication 4.03 (a lot) and for the international academic knowledge 3.29 (enough) [13].

They also recognize to a significant degree the importance and necessity of their training in this field. A study conducted in the same region and with the same questionnaire (but in formal educational settings) revealed that 350 teachers of public primary and secondary schools also recognized the necessity and importance of training on global competence [34].

The significance of training in global education is currently recognized by many national education systems and it is supported by many development supporters as well [14,32]. According to the latest Cedefop research report [17], trainers' continuous professional development is mandatory in Greece and in eighteen more European countries (Belgium, Denmark, Germany, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Austria, Poland, Portugal, Romania and Sweden). According to the same report, three types of competences are mostly covered by training programs: technical or subject-specific; pedagogical/teaching/didactic; and transversal/cross-cutting.

In this vein, taking the contemporary growing multilingual and multicultural context into account, the official European discourse underscores the significance of appropriate teaching resources and skills to accommodate learners' goals and needs as well. More specifically, the European Commission, through its SOSTRA project "Soft Skills Training and Recruitment in Adult Educators" [35], is responding to the new European Council Recommendation on Key Competences for Lifelong Learning (2018) [36] by fostering the development of soft skills, which are closely related to the content of global competence: respect for others, critical thinking, inclusion, ethics, active listening, empathy, self-motivation, personal development, adaptability, a positive attitude and honesty. Soft skills are highly transferable and contribute to the effective and harmonious interaction of individuals on an intrapersonal, interpersonal and socioemotional level [37].

Following this line of thought, the development of these skills is closely promoted by the instructional approaches for global competence, such as structured debates, organized discussions and current events discussions, which help learners to delve deeply into a topic, practice their communication skills, express their perspectives, listen for understanding, change their minds when confronted with new ideas and elements and to find out what is happening around the globe [31].

However, it is also worth mentioning that our globalized world has recently been questioned on account of certain current events, such as the COVID-19 pandemic, the geopolitical tensions between China and the USA, and the Russia-Ukraine conflict. These challenges had a severe impact on the global economy of many countries since they were too dependent on global supply chains for their medical and other necessary food supplies. Hence, many of them were forced to become more self-reliant and prefer regional trade. In this vein, somebody could wonder if this means we are moving toward de-globalization. According to Global Economics [38], it is too early to say that and we likely will not see a complete de-globalization in all sectors of human life directly.

Regarding the suitable agent for organizing appropriate seminars on global competence, the role and the contribution of tertiary education to the field of training and education is widely recognize. It involves the training of effective teachers and educators, the involvement of highly qualified specialists in curriculum development and educational research, their online international programs, staff mobility and academic cooperation [39].

In any case, educators' training and development should be provided by a variety or reliable and experienced actors, including private companies and institutions, colleges and universities [12]. Towards this direction, the European institutions, through their policies, such as the Copenhagen Declaration 2002, the Maastricht Communiqué 2004, the Riga Conclusions 2015 and the Pathways to School Success 2022, emphasize that increased quality could be achieved through well-trained teachers and educators. The international discourse should focus on the learning needs of trainers, promote teachers' and trainers'

continuous competence development, offer opportunities for their development, and set guiding principles for making the education fit for the modern age [22].

In addition, the majority of the respondents are in favor of the mixed method of training (synchronous–asynchronous sessions and limited number of face-to-face sessions). “Asynchronous settings are temporally and geographically independent and defined as more individually based and self-paced as well as less instructor-dependent” and “require more self-study skills to stay on track” [40] (p. 2). Synchronous online learning is linked to the real-time interpersonal communication, the use of natural language and immediate feedback [33], while face-to-face learning offers a sense of community and a stronger communication between tutors and students [41]. Their preference to this type of training is probably related to the advent of the 4th Industrial Revolution, which helps learners choose among many quality programs and have access from anywhere and at any time. In addition to flexibility and easier access, stay-at-home-parents and time efficiency have also increased the attractiveness of distance learning [42]. Of course, we should also take into consideration the impact of the COVID-19 pandemic on learning and the sudden need for people to adapt to online teaching and learning and abolish almost all face-to-face teaching processes [43]. In this vein teachers and educators were called to adjust to distance education and obtain some important experience in this field.

Regarding the topics of the training programs, there was one open-ended question where participants were called to fill in their own options. What drew our attention is the fact that the majority of the sample (55.5%) avoided making a suggestion regarding the topics training should focus on. However, for those who answered, their preferences were towards intercultural education, respect, diversity, inclusion and cooperation, culture and environment, sociology, psychology, international affairs, economics, world history, religion, international practices and institutions, intercultural communication, networking and skills. Global competence is seen as a way to handle multicultural and intercultural issues, an aspect which was supported in other similar studies [32,34].

The findings record a statistically significant correlation with three of the training factors based on gender: training agent; training duration; and type of training. Specifically, men agree to a greater extent than women that the University should be the training agent, while women agree more than men that the duration of training should be monthly and that the most appropriate type of training is the mixed method.

Finally, one-way Anova was used to test the difference in mean values of respondents' perceptions with the sub-factors of necessity, agent, character, duration and type of global competence training based on additional studies. The findings of the analysis of variance show that there is a statistically significant difference for the necessity of training with the additional studies of the respondents and for the duration of the training with the level of ICT knowledge of the respondents, while there is no statistically significant difference with any of the sub-factors of training for global competence with the employment relationship and the years of service.

Concluding, this specific study, by following a descriptive approach, focuses mostly on the participants' access to training in the field of global education and on the propensity to participate in it in the future prevails. Thus, it would have been interesting to know the correlation between the demand for participation and the learning outcomes possessed by teachers, deriving from their previous training experiences.

That more and more national education systems attribute value to global education given the intense demographic, societal, technological, cultural and environmental changes is also positive. What is more, the demand for teacher training emerges in relation to disciplinary fields, to the labor market and from social and personal concerns [44,45].

However, we should also reflect on some issues related to training and education which could be further examined in future. To begin, non-formal education settings have not been studied adequately in the academic literature on global competence to date [46,47]. Thus, some more relevant research studies, both qualitative and quantitative, could be conducted in this direction.

In addition, training interventions differ from context to context, and it is not easy for academics and researchers to make safe comparable results. The introduction of some key guidelines or a common language for global competence among countries would potentially be helpful. Of course, it does not mean that local understandings of global competence should be omitted. Training programs should also take into account basic elements such as finding a common understanding of the topic, investigating learners' needs, developing a contextualized competency model and devising a training structure [45,46]. Some key questions, based on global competence assessment PISA 2018 and appropriate for trainers' and learners' self-reflection, could be the following [18] (p. 42–43):

- How am I prepared to develop learners' global competence?
- To what degree are learners able to critically examine contemporary issues of local, global and intercultural significance?
- To what degree are learners able to understand and appreciate multiple cultural perspectives (including their own) and manage differences and conflicts?
- To what degree are learners prepared to interact respectfully across cultural differences?
- To what degree do learners care about the world and take action to make a positive difference in other people's lives and to safeguard the environment?

We should also be more critical regarding the agents, the social and political context, the type, the aim and real purpose, the hidden and not hidden voices, the quality and the processes followed while planning relative training programs and interventions [46]. For instance, despite the fact that educators are being trained, they are still part of the dominant culture and ideology, and they may face difficulties, possibly influenced by personal prejudices, stereotypes and notions, in understanding the challenges and needs of individuals who are called to adjust to new environments [11].

Finally, educators need to realize that their profession has been undergoing constant and, in some cases, radical changes in recent years and they are required to participate in a continuous training process to respond to contemporary teaching demands as their initial training is not sufficient to meet the needs of their entire professional career [48,49]. Through this process, they will be called to reflect on their attitudes, skills, knowledge and competences in order to feel safe and strong enough to handle their learners' needs.

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**Informed Consent Statement:** The questionnaire did not require the completion of a separate participant information sheet or consent form but clearly indicated that all electronic questionnaire respondents gave informed consent to the study. Respondents were informed about the course and nature of the survey. The survey was voluntary and confidential.

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