



## Depicting Teachers' Views on Global Competence Training

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### Abstract

This study refers to the scientific field of global education and competence and comes to investigate teachers' views on global competence training. This survey was conducted in June 2022, whereas the quantitative methodology was followed for the collection of the data. A random sampling technique was used, and the sample consisted of 350 teachers who worked in primary and secondary school units in the region of Western Greece during 2021-2022. 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 University as the most appropriate training actor, and they are in favor of optional training programs of mixed type and of monthly duration. 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 variables such as gender and years of service. On the contrary, level of education and ICT knowledge, additional studies, and employment relationship seem to affect the answers of the participants.

**Keywords:** Global competence, teachers, education, training

## Introduction

Education for global competence and global citizenship has been a priority for the international discourse over the last few years. Specifically, the United Nations (UN), through its program “Agenda, 2030: Sustainable Development Goals” (2015) and the Organization for Economic Cooperation and Development (OECD) with its program for International Student Assessment (PISA) (2018), have both worked on designing a framework in order to define and assess global competence.

Four key dimensions of global competence (GC) have been identified: to investigate the world beyond their immediate environment by examining issues of local, global, and cultural significance, to recognize, understand and appreciate the perspectives and world views of others, to communicate ideas effectively with diverse audiences by engaging in open, appropriate and effective interactions across cultures and to take actions for collective well-being and sustainable development (Asia Society/OECD, 2018). This effort comes to contribute to the UN’s policy and specifically to the target 4.7 of the Agenda (2015), which describes that by 2030 all learners should acquire the knowledge and skills needed to promote sustainable development, human rights, gender equality, promotion of peace, global citizenship and appreciation of cultural diversity.

In this context, teachers are called to become globally and interculturally competent in order to teach GC. According to Hye-Won Lee, a global education researcher in Seoul, teachers often think that GC is just one more thing to teach. However, the truth is that many elements of GC are already found in national curricula and in everyday school activities. So, it is important to assist them to realize it (as cited in Asia Society/OECD, 2018). It could happen through appropriate training and high-quality professional development.

Teacher training programs should provide them with appropriate knowledge and skills and take behavioral learning and socio-emotional perspectives into consideration. Training should be relevant to teachers’ needs (needs could be investigated through different research methods), and include opportunities for collaboration, up-skilling on effective pedagogical techniques, student-centered and inclusive teaching methods, interdisciplinary project-based learning, engagement with local communities and natural environment, new methods of evaluation with flexible tools. It is also very important for the teachers to have the opportunity to participate in the development of curriculum materials and have access to many reliable resources (online resources could help in this direction) (Tiven, Fuchs, Bazari, & Wilhelm, 2022; UNESCO, 2021).

In this context, the United Nations Economic Commission for Europe (UNECE) proposed some critical competencies that global teachers should

have. To begin with, a holistic approach promotes integrative thinking and practice, envisioning change to explore alternative futures, and achieving transformation in the way we learn and in the learning systems. The aforementioned competencies could be subdivided into four groups: learning to know (to understand the challenges facing local and global communities), learning to do (to develop practical skills), learning to live together (to develop partnerships and appreciate pluralism, peace, and interdependence), and learning to be (to act with greater autonomy and personal responsibility) (Büker & Schell-Straub, 2017; Delors, et al., 1996; UNESCOb, 2018).

However, the UNESCO's (2018a) findings on the implementation of the 1974 Recommendation titled: "Progress on Education for Sustainable Development and Global Citizenship Education" (covering the topics of national education policies, curricula, teacher education, and student assessment) highlight the insufficient teacher training programs in the 83 participating countries.

Towards this direction, this study was designed and implemented in order to investigate teachers' aspects regarding education and training on GC in the Greek context.

## Methods

The present study comes to complete the findings of an earlier one which was conducted on 350 primary and secondary education teachers in the region of Western Greece (Karanikola, 2022). Specifically, the scale "Measuring Students' Global Competence" by Yang Liua, Yue Yinb, and Ruilin Wuc (2020) was used in order to investigate the level of knowledge, understanding, skills, attitudes, and values of teachers regarding global competence. This particular survey revealed high percentages on the scale as a whole. Higher levels were demonstrated in the sub-scales of global knowledge and understanding, use of tools, cross-cultural communication, intent to interact, open attitude, and values, whereas lower percentages (enough), were observed in the sub-scales of international academic knowledge and international academic communication.

At a second level, it was sought to investigate teachers' views on education and training on global competence. In particular, they were invited to express their aspects on the necessity of training and education on GC, on the topics training should aim at, on its character, type, and duration. The data collection took place in June 2022 with an electronic questionnaire that was sent to the Directorates of Primary Schools, Gymnasiums, and Lyceums of the Region of Western Greece, which resulted from random sampling to ensure the representativeness of the sample (Bryman, 2012).

For the needs of the present study, a questionnaire with open-ended and close-ended questions was chosen. Initially, the questionnaire was

piloted in order to identify any ambiguities, misinterpretations, and errors (Cohen, Manion, & Morrison, 2008). 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 (Bryman, 2017). Regarding ethics, the questionnaire in its initial part had an introductory note about the content of the research and its objective. Finally, in order to ensure that the participants understood the concept of GC, a relative definition was also given (OECD, 2018).

## Results

The questionnaire of the present survey was answered by 350 teachers of Primary and Secondary Education in the Region of Western Greece (Table 1). 75,4% of the participants were women and 24,6% were men. 60% belong to the age category of 41-55 years. 58,3% work in Secondary Education, 62,9% have a master's degree, 70,3% have a permanent position and 56% have 11-25 years of service. Regarding the level of knowledge in Information and Communication Technologies (ICT), the majority (48,6%) have an A level certification or ECDL (basic knowledge of computer use and internet use) and 36,6% certified knowledge B Level (use of educational software in the educational process).

**Table 1.** Demographic Data

	N	Percentage (%)
Gender		
Male	86	24,6
Female	264	75,4
Age		
22-30	24	6,9
31-40	74	21,1
41- 50	124	35,4
51-55	86	24,6
56 and more	42	12,0
Education level		
Primary Education	146	41,7
Secondary Education	204	58,3
Additional Studies		
Second degree	52	14,9
Master's degree	220	62,9
PhD	24	6,9
Not have	54	15,4
Employment relationship		
Permanent position	246	70,3
Not permanent position	78	22,3

Headmaster	26	7,4
Years of service		
0-10	98	28,0
11-20	136	38,9
21-25	60	17,1
26 and more	56	16,0
ICT level		
A Level/ECDL	170	48,6
B Level	128	36,6
Not have	52	14,9

Regarding the attendance of a course or courses about GC (Table 2) 26,9% of the respondents state that they have attended one/some during their basic studies, 18,3% during their postgraduate studies and 13,6% both in their basic and their postgraduate studies. 18,9%, claim that they have attended through their participation in a training seminar on their own initiative, 16,6%. through their participation in a training seminar conducted by the official education authorities and 5,7% have attended training seminars both on their own initiative and within the training framework of official education authorities.

**Table 2.** Distribution of course attendance frequencies and rates for GC

<b>I have taken relevant courses to global competence:</b>		
During my degree studies.	4	6,9
During my postgraduate studies.	4	8,3
In the form of participation in a training seminar on my own initiative.	6	8,9
In the form of participation in a training seminar as part of the action of official education authorities.	8	6,6
Both during my degree and postgraduate studies.	8	3,6
By participating both in a training program on my own initiative and as part of the action of official education authorities.	0	,7
Total	50	00,00

Regarding the importance and necessity of training in developing global competence, the majority (74.8%) consider it “a lot” and “too much” important for their work (Table 3).

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

<b>You think that training in topics related to the development of GC is important for your work:</b>		
Not at all		,6
A little	8	,1
Enough	8	9,4
A lot	16	3,1
Too much	46	1,7
Total	50	00,0

Regarding the suitability of the institution or person for organizing seminars on GC, the majority (56.6%) suggest that the University should be the most appropriate training agent, whereas 24% focus on the University in cooperation with the Coordinator/Consultant of Education (Table 4).

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

<b>You consider as the best agent for organizing training seminars:</b>		
Headmaster of the School Unit	6	,4
Coordinator/Consultant of Education	2	2,0
University	98	6,6
Coordinator/Consultant of Education and University	4	4,0
Total	50	00,0

In addition, 68,6% of the participants state that education/training should be optional and 31,4% argue that should be compulsory (Table 5).

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

<b>Training should be:</b>		
Compulsory	10	1,4
Optional	40	8,6
Total	50	00,0

Regarding the topics of the training programs (Table 6), there was one open-ended question, thus participants were called to fill in their own options. According to their answers, 16,6% focus on topics related to education, diversity, environment, and geography, 9,7% on interculturalism, 9,7% on current events, international development, institutions, immigrants, economy, and human rights, 8,6% on culture, religion, and history. It is worth mentioning that the majority of the participants (55,4%) were not willing to fill in some topics.

**Table 6.** Distribution of training topics

<b>Which topics should be included in training programs?</b>		
Intercultural topics	4	,7
Education, diversity, environment, geography	8	6,6
Culture, religion, history	0	,6
Current events, international development, institutions, immigrants, economy, Human rights	4	,7
Total	56	4,6
No answer	94	5,4
Total	50	00,0

Regarding the type of training, the majority (60.6%) regard the mixed method as being more appropriate, 20.6% prefer face to face and 18.9% distance learning (Table7).

**Table 7.** Distribution of Training Type Frequencies

<b>What is the most suitable type of training for you?</b>		
Face to face	2	0,6
Distance learning	6	8,9
Mixed method (synchronous-asynchronous actions and limited number of face to face sessions)	12	0,6
Total	50	00,0

Regarding the duration of the training programs, a large part (41,1%) of the participants state that it should be monthly, 28,0% biannual, 22,9% annual and 8,0% that it should have a duration of one day (Table 8).

**Table 8.** Distribution of Training duration Frequencies

<b>What should be the duration of training programs?</b>		
Daily	8	,0
Monthly	8	8,0
Biannual	44	1,1
Annual	0	2,9
Total	50	00,0

The Pearson correlation coefficient of the three dimensions (Knowledge and Understanding, Skills, Attitude, and values) of GC (Table 9) with the importance and necessity of training demonstrates a statistically significant positive correlation with Knowledge and understanding ( $r=0.134$ ) and overall with GC ( $r=0.117$ ). No statistically significant correlation is demonstrated ( $p>0.001$ ) with skills, attitude, and values.

**Table 9.** Testing Correlation of Global Competence with Training

	Importance of training
Importance of training	-
Knowledge and understanding	0,134**
Skills	0,092
Attitude and values	0,095
Global competence	0,117**

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

In order to determine if there is a statistically significant difference in respondents' perceptions of sub-factors (necessity, agent, character, duration, type) of GC training based on gender, the data were analyzed by using an independent samples T-test. The findings (Table 10) do not record a statistically significant correlation with any of the sub-factors based on gender.

**Table 10.** T-test results for Correlation of necessity, agent, character, course attendance 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	,731	,393	-1,185	348	,118	,237



	Equal variances not assumed			-1,129	133,863	,130	,261
Agent of training	Equal variances assumed	,149	,700	,070	348	,472	,944
	Equal variances not assumed			,069	141,857	,473	,945
Character of training	Equal variances assumed	,258	,612	-,259	348	,398	,796
	Equal variances not assumed			-,257	142,450	,399	,798
Duration of training	Equal variances assumed	,449	,503	1,270	348	,103	,205
	Equal variances not assumed			1,403	174,029	,081	,162
Type of training	Equal variances assumed	7,771	,006	-,675	348	,250	,500
	Equal variances not assumed			-,631	130,125	,264	,529

*Correlation of training sub-factors with level of education*

In order to determine if there is a statistically significant difference of respondents' perceptions of factors (necessity, agency, character, duration and type) of GC training based on education level, data analysis was performed using an independent samples T-test. The findings (Table 11) record a statistically significant correlation with two of the training factors, the training agent [ $t(348)=2.445$ ,  $p\text{-value}=0.015<0.05$ ] and the duration of the training [ $t(348)=-2.074$ ,  $p\text{-value}=0.039<0.05$ ]. Regarding the training institution (Table 12), Primary Education teachers agree to a greater extent (mean=3.10) than Secondary Education teachers (mean=2.88) that the best agent for organizing training seminars is the University. Regarding the duration of the training, Secondary Education teachers agree more (mean=3.24) than Primary Education teachers (mean=3.05)

**Table 11.** T-test results for Correlation of necessity, agent, character, duration, and type of training programs with a level of education

		Levene's Test for Equality of Variances				Significance	
		F	Sig.*	t	df	One-Sided p	Two-Sided p
Necessity of training	Equal variances assumed	,550	,459	1,285	348	,100	,200
	Equal variances not assumed			1,301	326,072	,097	,194
Agent of training	Equal variances assumed	,027	,868	2,445	348	,007	,015

	Equal variances not assumed			2,466	321,449	,007	,014
Character of training	Equal variances assumed	12,889	<,001	-1,899	348	,029	,058
	Equal variances not assumed			-1,874	296,993	,031	,062
Duration of training	Equal variances assumed	,226	,635	-2,074	348	,019	,039
	Equal variances not assumed			-2,008	272,907	,023	,046
Type of training	Equal variances assumed	1,994	,159	,482	348	,315	,630
	Equal variances not assumed			,476	297,314	,317	,634

**Table 12.** Descriptive measures of agent and duration of training for teachers of Primary and Secondary Education

	Level of education	N	Mean	Std. Deviation	Std. Error Mean
Agent of training	Primary	146	3,10	,782	,065
	Secondary	204	2,88	,822	,058
Duration of training	Primary	146	3,05	,893	,074
	Secondary	204	3,24	,732	,051

*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 show that there is no equality of mean values with one of the training sub-factors (training agent with additional studies) (Table 13). There is a statistically significant difference for training agent with respondents' additional studies ( $F(3) = 3,290, p = 0,021 < 0,05$ ). The comparisons of the mean values show that the statistically significant differences for the training institution with additional studies are found in the categories "Second degree" and "Not have" ( $p = 0,022 < 0,05$ ). This difference shows that the average value of the University as a training institution for those who have a "Second degree" is 0,450 units higher than those who "Not have" additional studies and vice versa.

**Table 13.** 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	6,382	3	2,127	2,504	,059
	Within Groups	293,915	346	,849		

	Total	300,297	349			
Agent of training	Between Groups	6,371	3	2,124	3,290	,021
	Within Groups	223,344	346	,646		
	Total	229,714	349			
Character of training	Between Groups	,367	3	,122	,564	,639
	Within Groups	75,062	346	,217		
	Total	75,429	349			
Duration of training	Between Groups	3,572	3	1,191	1,844	,139
	Within Groups	223,468	346	,646		
	Total	227,040	349			
Type of training	Between Groups	3,044	3	1,015	1,561	,199
	Within Groups	224,956	346	,650		
	Total	228,000	349			

\* =  $p < 0,05$

*Correlation of training sub-factors with employment relationship*

To test the difference in the mean values of teachers' perceptions with the sub-factors of necessity, agent, character, duration and type of training based on the employment relationship, one way analysis of variance (One Way Anova) was used. The findings of the analysis show that there is no equality of means with one of the training sub-factors (character of training with the working relationship) (Table 14). There is a statistically significant difference in the character of training with the employment relationship ( $F(2)=4,248, p=0,015 < 0,05$ ). The comparisons of the mean values show that statistically significant differences for the agent of training with the additional studies (Table 15) are found in the "Permanent" and "Not permanent" categories ( $p=0,048 < 0,05$ ). This difference shows that the average value for the optional character of training for those who are "Permanent" is 0,142 points higher than for those who are "Not permanent" and vice versa.

**Table 14.** Analysis of variance 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	,315	2	,157	,182	,834
	Within Groups	299,982	347	,865		
	Total	300,297	349			
Agent of training	Between Groups	3,953	2	1,977	3,038	,059
	Within Groups	225,761	347	,651		
	Total	229,714	349			
Character of	Between Groups	1,803	2	,901	4,248	,015

training	Within Groups	73,626	347	,212		
	Total	75,429	349			
Duration of training	Between Groups	2,227	2	1,113	1,719	,181
	Within Groups	224,813	347	,648		
	Total	227,040	349			
Type of training	Between Groups	,380	2	,190	,290	,749
	Within Groups	227,620	347	,656		
	Total	228,000	349			

\* = $p < 0,05$

**Table 15.** Comparison of mean values of the character of training and employment relationship.

Test Tukey HSD		95% Confidence Interval					
Dependent Variable	(I) Employment relationship	(J) Employment relationship	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Character of training	Permanent	Non permanent	,142	,060	,048	,00	,28
		Headmaster	,193	,095	,106	-,03	,42
	Non permanent	Permanent	-,142	,060	,048	-,28	,00
		Headmaster	,051	,104	,875	-,19	,30
	Headmaster	Permanent	-,193	,095	,106	-,42	,03
		Non permanent	-,051	,104	,875	-,30	,19

*Correlation of training sub-factors with years of service*

One Way Anova was used to test the difference in mean values of participants' perceptions with the sub-factors of necessity, agent, character, duration and type of GC training based on years of service. The findings of the analysis (Table 16) show that there is no statistically significant difference between any of the training sub-factors and years of service ( $p > 0.05$ ).

**Table 16.** Variation Analysis 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	3,577	3	1,192	1,390	,245
	Within Groups	296,720	346	,858		
	Total	300,297	349			
Agent of training	Between Groups	5,741	3	1,914	2,956	,063
	Within Groups	223,974	346	,647		
	Total	229,714	349			

Character of training	Between Groups	1,161	3	,387	1,802	,146
	Within Groups	74,268	346	,215		
	Total	75,429	349			
Duration of training	Between Groups	,638	3	,213	,325	,807
	Within Groups	226,402	346	,654		
	Total	227,040	349			
Type of training	Between Groups	4,085	3	1,362	2,104	,099
	Within Groups	223,915	346	,647		
	Total	228,000	349			

\* =  $p < 0,05$

### *Correlation of training sub-factors with level of ICT knowledge*

Finally, one Way Anova was used in order to test the difference in the mean values of the respondents' perceptions with the sub-factors of necessity, agent, character, duration and type of training based on level of ICT knowledge. The findings of the analysis show that there is a statistically significant difference for the training agent with the level of ICT knowledge ( $F(2)=1,992, p=0,048 < 0,05$ ). The comparisons of the mean values show that the statistically significant differences for the training agent with the level of ICT knowledge are found in the "A Level/ECDL" and "Not have" categories ( $p=0.037 < 0.05$ ). This difference shows that the average value of the University as a training provider for those with "A Level/ECDL" is 0,316 points higher than for those "Not have" any level of ICT knowledge and vice versa.

### **Discussion**

Based on the findings of this research, the majority have attended one or more courses mostly during their studies or during their participation in training programs. This could explain the fact that most of the participants have a high level of knowledge, understanding, skills, attitudes and values (Karanikola, 2022). In addition, most of the participants recognize the importance of being trained in GC. This finding comes to alignment with those of other similar researches. Specifically, a qualitative research conducted by Karanikola, Katsiouli and Palaiologou (2022) recognizes that teachers need more training since they feel that they are not always competent enough to handle and approach relative issues. Towards this direction, Kerkhoff and Cloud (2020) state that the right type of training can contribute to teachers' effectiveness in classroom environments.

Regarding the most appropriate training agent, the University is mostly proposed by the participants who work in the the primary education, as an expert in this field (Dunn, 2004; Panagiotopoulos, Daramara, & Karanikola, 2019). On the contrary, other similar researches recognize as

appropriate agents the Ministry of the Education and the International Organizations (Karanikola, Katsioli, & Palaiologou, 2022). In any case induction programs, in-service courses and training activities for teachers should be offered by a variety of reliable and experienced actors, including private companies and institutions, colleges and universities or Ministries of Education (UNESCO, 2018b).

Regarding the character, the type and the duration of the training programs, they are in favor of the optional ones, the mixed type and those of monthly duration. It is also worth mentioning that the majority of the participants were not willing to complete the topics that could be covered by training programs. However, the ones who did it proposed interculturalism, diversity, current events, religion, history, immigrants, environment, geography, human rights and culture. Taking into account different definitions and dimensions of GC (Deardorff, 2011; OECD, 2018; Fantini, 2009), we can see that most of them are recorded in a direct or in an indirect way by the participants. GC is seen as a way to develop multicultural and intercultural issues, an aspect which was also supported by the research of Parmigiani, Jones, Kunnari and Nicchia (2022).

In addition, the Pearson correlation coefficient of the three dimensions of GC (Knowledge and understanding, Skills, Attitude and values) with the importance and necessity of training demonstrates a statistically significant positive correlation with Knowledge and understanding ( $r=0.134$ ) and overall with GC ( $r=0.117$ ), whereas there was no statistically significant correlation ( $p>0.001$ ) with skills, attitude and values.

Finally, the correlation of the training sub-factors with the variables reveals that participants' aspects are not affected by gender and years of service. On the contrary, level of education and ICT knowledge, additional studies and employment relationship seem to affect the results of the research.

## **Conclusion**

The contemporary role of teachers and educators is getting more and more demanding. New needs and demands emerge due to major technological and demographic shifts, the advent of the 4th industrial revolution and the globalization. Education framework should follow these advances and prepare students get adjusted to the global changes. Initial training is not enough and ongoing professional development comes to contribute to teachers' effectiveness in order to feel confident and informed about integrating GC in their instructional practices. It is also important for teachers to ensure that practical fieldwork is interwoven with academic content, professional courses and supervised internships (UNESCO, 2018b).

This research tried to shed light on some important aspects of this topic and contribute to the relative scientific field. Some important findings were revealed, which cannot be generalized for the whole population. Some more relevant researches, both qualitative and quantitative, could be conducted towards this direction. Finally, more aspects related to education and training could also be investigated, such as needs analysis, training programs designing and implementation, active techniques and adult education principles applied.

### **Human Studies**

I state that appropriate approvals were obtained from the relevant institutional review board and that ethical guideline were followed.

### **Conflicts of Interests**

No conflicts of interests.

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