

TEACHER'S PERCEPTIONS IN GREECE ABOUT THE INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN INTERCULTURAL EDUCATION

PERCEPCIONES DE LOS PROFESORES EN GRECIA SOBRE LAS TECNOLOGÍAS DE LA INFORMACIÓN Y LA COMUNICACIÓN (TIC) LA EDUCACIÓN INTERCULTURAL

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Resumen: El uso de las tecnologías de la información y la comunicación en la práctica educativa es objeto de investigación para muchos investigadores, provocando una intensa movilización y reflexión. La globalización y el movimiento de las poblaciones hacen imperativa la necesidad de desarrollar una política educativa para explorarla a nivel internacional y destacar la diversidad y la interculturalidad en beneficio de la sociedad. Las nuevas tecnologías son uno de los recursos más importantes en el proceso educativo, como medio para la transmisión de conocimientos, el desarrollo del pensamiento crítico y la resolución de problemas. El objetivo de este estudio es destacar la utilidad de las TIC y las nuevas tecnologías en la educación intercultural. Los resultados de la investigación mostraron que la mayoría de los profesores cree en gran medida que el uso de las nuevas tecnologías contribuye a un mayor progreso de la sociedad. Asimismo, se encontraron diferencias significativas en el uso del ordenador para la preparación de su docencia a favor de las mujeres. Además, se destaca que los estudiantes, a través del uso de las TIC, participan más activamente en el proceso educativo en comparación con la forma tradicional de enseñar sin el uso de las TIC. Así, presentamos una línea de estudio que enfatiza la importancia de la utilización de las TIC durante todo el proceso educativo en un entorno intercultural educativo.

Abstract: The use of Information and Communication Technologies in educational practice is a research object for many researchers, causing intense mobilization and reflection. Globalization and the movement of populations make imperative the need to develop educational policy to explore it at an international level and highlight diversity and interculturalism for the benefit of society. ICT are one of the most important resources in the educational process, as means for the knowledge transmission, development of critical thinking and problem solving. The purpose of this study is to highlight the usefulness of ICT in intercultural education. The research results showed that most teachers believe to a large extent that the use of ICT contributes to the wider progress of society. Also, significant differences were found in the use of computer for the preparation of their teaching in favor of women. Moreover, it is highlighted that students, using ICT, participate more actively in

the educational process compared to the traditional way of teaching without the use of ICT. Thus, we present a line of study that emphasizes the importance of the utilization of ICT during the entire educational process in an educational intercultural environment.

Résumé: L'usage des technologies de l'information et de la communication dans la pratique éducative fait l'objet de recherches pour de nombreux chercheurs, suscitant une intense mobilisation et réflexion. La mondialisation et les mouvements de populations rendent impératif de développer une politique éducative pour l'explorer au niveau international et mettre en valeur la diversité et l'interculturalité au profit de la société. Les nouvelles technologies constituent l'une des ressources les plus importantes du processus éducatif, en tant que moyen de transmission des connaissances, de développement de la pensée critique et de résolution de problèmes. L'objectif de cette étude est de mettre en évidence l'utilité des TIC et des nouvelles technologies dans l'éducation interculturelle. Les résultats de la recherche ont montré que la majorité des enseignants croient largement que l'utilisation des nouvelles technologies contribue à un plus grand progrès dans la société. De même, des différences significatives ont été constatées dans l'utilisation de l'ordinateur pour la préparation de leur enseignement en faveur des femmes. En outre, il est souligné que les étudiants, grâce à l'utilisation des TIC, participent plus activement au processus éducatif par rapport à la manière traditionnelle d'enseigner sans utiliser les TIC. Ainsi, nous présentons une ligne d'étude qui met l'accent sur l'importance de l'utilisation des TIC tout au long du processus éducatif dans un environnement éducatif interculturel.

Palabras Clave: TIC; Educación Intercultural; Competencia Digital; Profesores.

Key words: ICT; Intercultural Education; Digital Competence; Teachers.

Mots clés: TIC; Éducation interculturelle; Compétence numérique; Enseignants.

INTRODUCTION

The students' long-term engagement with modern technological means, both for personal information and entertainment purposes, demonstrates their familiarity with modern technology (Byungura *et al.*, 2018). Therefore, the integration of digital technological means in learning processes leads to an increase in the interest of all students towards the educational process, regardless of their learning level (Pinto & Leite, 2020).

The importance of the teacher's role in modern educational systems is indisputable. Throughout time, the personal and scientific development and evolution of teachers is a key driver of the optimization of the educational system, while it is always at the center of reforms and general educational changes. However, the introduction of ICT in the educational process requires radical reforms and to be accompanied by the desired results, teachers need to be adequately trained (Ahmed *et al.*, 2019; Esfijani & Zamani, 2020).

According to Marin (2018), Marín-Díaz *et al.* (2022) and Fernández-Batanero *et al.* (2022), any kind of teacher training, which is intertwined with the use of ICT in the educational practice, promotes the opening of channels that help in better communication between teachers and their students. However, when it comes to intercultural education, it is not enough for teachers just to be trained on issues of using ICT in the educational process. At the same time, their adequate training and education on issues of intercultural education is required. The research data of the last years in Greece, regarding the education and training

of teachers in matters of intercultural education and management of the linguistic diversity that appears in Greek schools, highlight great shortcomings and huge problems, which are faced by Greek teachers. This is a situation highlighted by the research of Damanakis (1997), Nikolaou (2000), Triarchi-Herrmann (2000), Kossyvaki (2002), Skourtou (2005) and Kasimi (2005). Furthermore, Damanakis (1997) demonstrates that the inadequate education and training of Greek teachers hinders their efforts to implement reform or social action programs in their classrooms, while Sakkoula and Kitsiou (2021) demonstrate the insufficient resources and the barriers existence that make the use of ICT technologies in intercultural education difficult in the Greek educational reality.

Regarding the utilization of ICT in the educational process, Soulioti and Paghe (2005) point out that the use of computers in school classrooms offers students rich audiovisual material, while at the same time it creates motivation for them to learn and makes the teaching subject more accessible and easier to understand. Especially in multicultural school classes, students need the utilization of their special abilities and the development of their internal motivation, to be able to integrate more successfully into their new educational environment. The use of ICT is particularly helpful in achieving these goals (Nikolaou, 2000).

The correct use of ICT, combined with the possibility of access by users from multiple technological devices, offer an alternative teaching option with multiple benefits in the context of a multicultural classroom. More specifically, according to the studies of Sakkoula and Kitsiou (2021), Wang et al. (2023) and Zhang and Zhou (2023), taking into consideration the pedagogical possibilities offered by the digital world, and the role of cultural and language dimensions in intercultural communication carried out in virtual environments facilitated by ICT, there is an imperative need for the societies to adapt to a new modernized environment, from which multiple benefits arise in the improvement of global communication.

At the same time, it is helpful for foreign students, so that they can communicate effectively and more easily with the natives, but also for reasons of their smoother integration into their new school environment (Alcaraz-Mármol, 2020). Of course, it is necessary to ensure equal access to new technologies for all students. To make this possible and to avoid inequalities, special emphasis must be placed on poor social groups to ensure their adequate access to ICT (Jayadi et al., 2022).

Enen more, using ICT in multicultural school classes, the development of students' language skills, their understanding of lessons, as well as their oral and written production is facilitated. Studies, such as those of Schietroma (2019) and Ou et al. (2022), support that

the use of ICT in multicultural school classes encourages the active participation of foreign and returnee students in various group activities, encourages their acceptance by their peers, while at the same time, effectively helps in development of their communicative language, through which foreign students more easily achieve their inclusion in the school class. Also, it has been proven that the use of ICT in the educational process in multicultural school classes promotes mutual understanding of foreign students and boosts their self-confidence (Demir & Kayaoglu, 2022).

METHODOLOGY

This research concerns the evaluation of the use and utilization of ICT in the teaching process in intercultural education in the Greek educational system. It is quantitative research, in which the research objective was covered from the perspective of Greek teachers.

In order to meet the research objective, the following research questions are going to be answered:

1. Are teachers adequately trained in the use ICT?
2. Is the teachers' use and exploitation of ICT in intercultural education adequate?
3. Are teachers adequately trained in intercultural education?
4. Is there a pedagogical contribution from the use of ICT in learning practice in an intercultural learning environment, according to the teachers' attitudes/views?

Data collection instrument

The data collection instrument was a questionnaire composed by 35 items and designed by the researcher, after corresponding literature review. Specifically, it is a primary quantitative research, based on an electronically distributed questionnaire of closed-ended and 5-point Likert scale questions.

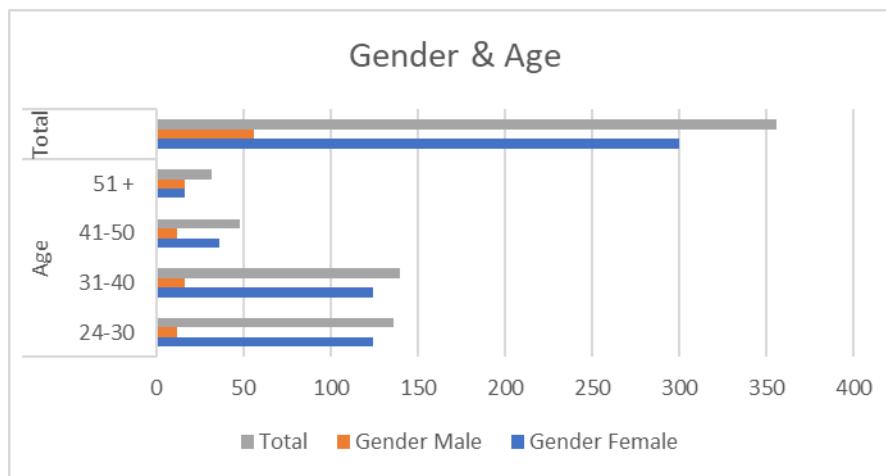
Sample

The research sample consisted of primary and secondary public education teachers, permanent and substitute, who work or had worked in the past in school classrooms with an intercultural profile in Greece. The sampling applied for this study is based on a causal kind (Sabariego, 2012), characteristic of research in the field of social and educational sciences, based on the ease of access to individuals under study. Finally, the research sample consists of 356 teachers from all over Greece, coming from many different specialties, what could indicate a diversity of perspectives when incorporating this resource

into the classroom in advance. In order to administer the instrument and carry out the investigation, it was necessary the participation of teachers, which did not put any impediments, since they showed interest to this research.

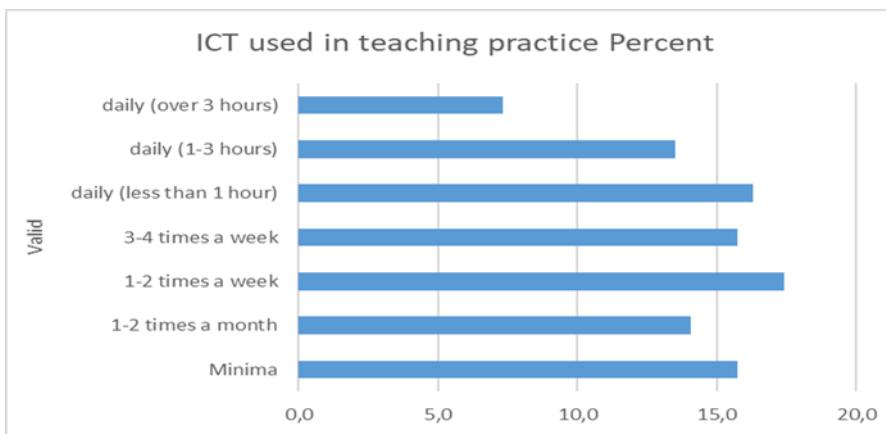
More analytically, the 15,7% of the research sample were men and 84,3% were women. With regard to the age that they were at the moment the instrument was administered, the sample was distributed as reflected in Fig. 1.

Figure 1. Distribution of the sample according to the gender and age.



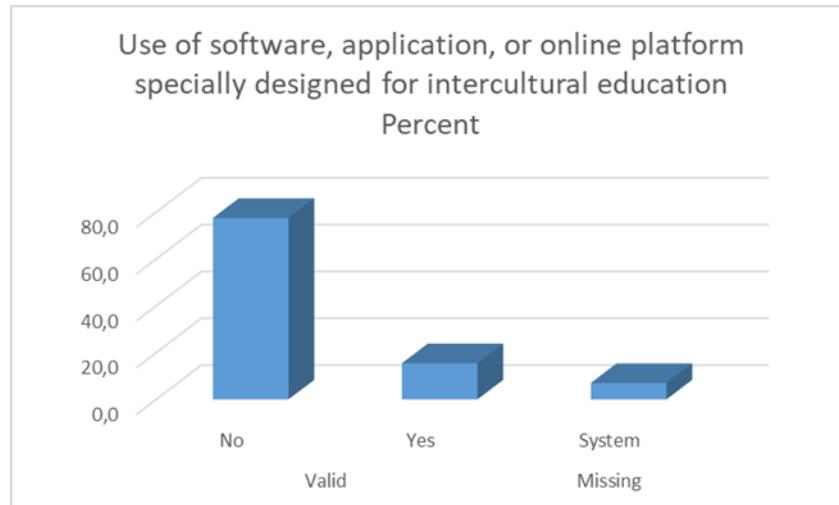
As regards the age, the sample is mostly located at the age group of 24-30 and 31-40 years old (38,2% and 39,3% accordingly), followed by the teachers who are at the age group of 41-50 and over 51 years old respectively (13,5% and 9% accordingly).

Figure 2. Distribution of the sample according to the use in teaching practice.



With respect to the use of ICT in teaching practice, 17,4% of the participants stated that they use ICT in education 1-2 times a week, 16,3% stated that they use ICT less than an hour daily, the 15,7% stated that they use ICT in education less than 1-2 times a month, 14% that they use ICT in education 1-2 times a month, 13,5% that they use ICT in education daily for 1- 3 hours and 7,3% use ICT in education daily for more than 3 hours (Fig. 2).

Figure 3. Use of software, application, or online platform specially designed for intercultural education



With respect to the use of software, application, or online platform specially designed for intercultural education, 77,5% of the participants answered “No” while the rest of 15,4% of the participants answered “Yes” (Fig. 3).

Finally, to ensure research ethics and deontology, the participating teachers were informed in detail about the purpose of the research, about their voluntary participation and about maintaining their anonymity. The communication details of the researcher stayed at their disposal, and they had the ability to directly ask any further questions they possibly had, about this research.

RESULTS-DESCRIPTIVE STUDY

Based on the four above-described dimensions of which the questionnaire is structured, an evaluation of its elements is carried out (Tables 1,2,3).

More than half of the teachers (56,2%) believe that the use of ICT contributes extremely to the wider progress of society, while 37,1% of the participating teachers believe that this contribution is moderate ($M= 0,49$; $SD= 0,60$) (Item 1). Regarding the teachers' ability to adequately handle an electronic computer, they reported that they can handle it extremely and moderately ($M = 0,66$; $SD= 0,66$) (Item 8).

29,2% of the respondents indicated that they have attended B' level training, while 70,8% of the teacher respondents stated that they have not attended it ($M= 0,29$; $SD= 0,46$) (Item 3).

The teachers who reported that they have participated in the training of the Ministry of Education, expressed the belief that the knowledge they gained, during the lessons taught, was quite important ($M= 0,73$; $SD= 1,07$) (Item 4). Also, 2/3 of the specific category of teachers reported that they were not taught software with an intercultural character ($M=$

0,41; SD= 0,62) (Item 5). In contrast to the low rates of ICT training, 77,5% of the participating teachers stated that they have received training in intercultural education (M= 0,78; SD= 0,42) (Item 27).

The cumulative percentage of teachers who occasionally use ICT to prepare their lessons is 29,5% (M= 3,41; SD= 1,60) (Item 9). At the same level, the answers of teachers vary when asked how often they use ICT during the teaching process (M= 2,72; SD= 1,86) (Item 11). 60,7% of the teachers stated that they implemented the ICT in their classroom exclusively with their own personal computer. Notably, only 15,7% of teachers reported that they did not use their own personal computer, but only the school's computer lab equipment (M= 0,84; SD= 1,16) (Item 12).

Most participants (82%) consider the equipment and the logistical infrastructure of the teaching spaces to be insufficient to moderate (M= 2,29; SD= 1,15) (Item 13). 71,9% of the teachers consider that the lack of a specific available teaching space, equipped with the appropriate infrastructure, is a factor that acts extremely inhibiting the utilization of ICT (M= 1,10; SD= 1,16) (Item 14). Also, the lack of equipment in the school's traditional classrooms makes the efforts made by teachers even more difficult (M= 0,97; SD= 1,16) (Item 15).

Also, it appears that the large number of students per school class has a negative effect on class management (M= 1,71; SD= 1,32) (Item 18). The same happens at the case with inappropriate or outdated educational software in schools, which make it even more difficult to integrate ICT into the educational process (M= 1,90; SD = 1,31) (Item 23). 77,5% of teachers stated that they have not used any software, application or electronic platform, which is specifically designed for intercultural education (M= 0,17; SD = 0,37) (Item 37). Finally, the use of ICT improves the efficiency of teachers (M= 0,75; SD= 0,81) (Item 39), upgrades the educational process (M= 0,60; SD= 0,68) (Item 38) and contributes positively in lessons understanding in intercultural learning environments (M= 0,88; SD = 0,85) (Item 43).

Table 1. Descriptive study, Dimension 1 Training in ICT.

															Valid	Missing	Mean	Std.	Deviation
Item 1	56	37	6	0	0									352	4	,49	,604		
Item 2	55	2,2	1	2,2	9	3,4	1,1	0	5	6,7	11,2			352	4	2,69	2,360		
Item 3	29	71												356	0	,29	,455		
Item 4	2,2	21	8	0	62									331	25	,73	1,072		
Item 5	6,7	26	64											344	12	,41	,618		
Item 6	0	6,7	7	11	4,5	66								340	16	1,06	1,692		
Item 7	14,6	4,5	9	68,5										344	12	,52	,950		

Table 2. Descriptive study, Dimension 2 Use and exploitation of ICT in intercultural education.

															Valid	Missing	Mean	Std.	Deviation
Item 8	43,8	44,9	10,1	0	0									352	4	,66	,656		
Item 9	3,4	11,2	14,6	19,1	22,5	19,1	9							352	4	3,41	1,602		
Item 10	22,5	31,5	24,7	15,7	5,6									356	0	1,51	1,164		
Item 11	15,7	14	17,4	15,7	16,3	13,5	7							356	0	2,72	1,856		
Item 12	60,7	7,9	15,7	14,6										352	4	,84	1,159		
Item 13	10,1	7,9	41,6	23,6	16,9									356	0	2,29	1,145		
Item 14	37,1	34,8	15,7	5,6	6,7									356	0	1,10	1,163		
Item 15	43,8	33,7	11,2	4,5	6,7									356	0	,97	1,157		
Item 16	10,1	14,6	24,7	21,3	29,2									356	0	2,45	1,317		
Item 17	19,1	29,2	29,2	11,2	11,2									356	0	1,66	1,228		
Item 18	20,2	31,5	19,1	15,7	13,5									356	0	1,71	1,319		
Item 19	6,7	14,6	28,1	19,1	31,5									356	0	2,54	1,256		
Item 20	6,7	19,1	22,5	21,3	30,3									356	0	2,49	1,284		
Item 21	9	80,2	24,7	18	28,1									356	0	2,36	1,319		
Item 22	11,2	16,9	21	20,2	29,2									352	4	2,40	1,363		
Item 23	16,9	23,0	31,7	10,4	18									356	0	1,90	1,312		
Item 24	18	24,7	24,7	15,7	16,9									356	0	1,89	1,338		
Item 25	16,9	27,0	27	20,2	7,9									352	4	1,75	1,191		
Item 26	18	25,8	27	19,1	9									352	4	1,75	1,219		

Table 3. Descriptive study, Dimension 3 Education and training in Intercultural Education.

						Valid	Missing	Mean	Std. Deviation
Item 27	77,5	22,5				356	0	,78	,418
Item 28	5,9	25,8	46,1	13,2	9	356	0	1,94	,992
Item 29	70,8	29,2				356	0	,71	,455
Item 30	14,6	29,2	27	21,3	6,7	352	4	1,76	1,150
Item 31	16,9	36,0	27	10,1	7,9	348	8	1,55	1,134
Item 32	51,7	40,4	5,6	1,1	0	352	4	,56	,656
Item 33	6,7	23,6	36	19,1	13,5	352	4	2,09	1,116
Item 34	15,7	28,4	27,8	19,1	7,9	352	4	1,75	1,172
Item 35	6,7	14,6	29,2	30,3	16,9	348	8	2,37	1,137
Item 36	14,6	39,3	30,3	9	6,7	356	0	1,54	1,062
Item 37	15,4	77,5				331	25	,17	,373

Table 4. Descriptive study, Dimension 4 Attitudes/views on the pedagogical contribution from the use of ICT in learning practice in an intercultural learning environment.

						Valid	Missing	Mean	Std. Deviation
Item 38	50,6	37,1	11,2	0	0	352	4	,60	,984
Item 39	44,9	38,2	13,5	3,4	0	356	0	,75	,812
Item 40	38,2	44,9	16,9	0	0	356	0	,79	,712
Item 41	20,2	46,1	23,6	6,7	2,2	352	4	1,24	,931
Item 42	24,7	48,3	20,2	5,6	0	342	4	1,07	,824
Item 43	30,6	48,3	9,8	3,4	1,1	314	42	,88	,845
Item 44	25,8	39,3	27	5,6	1,1	352	4	1,16	,917

Inferential study: Teacher's T test and Analysis of Variance (ANOVA)

Carried out the inferential Teacher's T test (Table 5) and taking as discrimination variable the gender, significant differences ($p<0,05$) between male and women teachers were found in all the Items, except in the Items 8, 11, 12, 13, 16, 18, 19, 20, 22, 24, 25, 26, 29, 30, 31, 33, 34, 36, 38 and 39 ($p>0,05$).

Table 5. Teachers' T test regarding the gender.

		LEVENE'S TEST FOR EQUALITY OF VARIANCES					
	Gender	N	Mean	Std. Deviation	F	Sig.	
ITEM 1	Female	296	,49	,576	9,450	,002	
	Male	56	,50	,739			
ITEM 2	Female	296	2,62	2,035	45,165	,000	
	Male	56	3,07	3,627			
ITEM 3	Female	300	,28	,450	4,104	,044	
	Male	56	,36	,483			
ITEM 4	Female	279	,63	1,023	11,493	,001	
	Male	52	1,23	1,198			
ITEM 5	Female	292	,37	,586	12,028	,001	
	Male	52	,62	,745			
ITEM 6	Female	288	,94	1,618	13,166	,000	
	Male	52	1,69	1,956			
ITEM 7	Female	292	,44	,829	53,947	,000	
	Male	52	1,00	1,372			
ITEM 8	Female	300	,68	,658	,000	,993	
	Male	52	,54	,641			
ITEM 9	Female	296	3,46	1,555	4,465	,035	
	Male	56	3,14	1,823			
ITEM 10	Female	300	1,51	1,138	4,045	,045	
	Male	56	1,50	1,307			
ITEM 11	Female	300	2,71	1,848	,288	,592	
	Male	56	2,79	1,914			
ITEM 12	Female	300	,79	1,137	1,787	,182	
	Male	52	1,15	1,243			
ITEM 13	Female	300	2,35	1,103	1,449	,229	
	Male	52	2,00	1,321			
ITEM 14	Female	300	1,00	1,060	25,508	,000	
	Male	56	1,64	1,507			
ITEM 15	Female	300	,88	1,060	20,193	,000	
	Male	56	1,43	1,512			
ITEM 16	Female	300	2,48	1,302	,342	,559	
	Male	56	2,29	1,398			
ITEM 17	Female	300	1,65	1,185	10,264	,001	
	Male	56	1,71	1,449			
ITEM 18	Female	300	1,75	1,340	2,603	,108	
	Male	56	1,50	1,191			
ITEM 19	Female	300	2,56	1,238	,409	,523	
	Male	56	2,43	1,360			
ITEM 20	Female	300	2,52	1,250	3,515	,062	
	Male	56	2,36	1,458			
ITEM 21	Female	300	2,35	1,293	6,245	,013	
	Male	56	2,43	1,463			
ITEM 22	Female	296	2,45	1,339	2,207	,138	
	Male	56	2,14	1,470			
ITEM 23	Female	300	1,90	1,251	16,114	,000	
	Male	56	1,86	1,612			
ITEM 24	Female	300	1,93	1,332	1,314	,252	
	Male	56	1,64	1,354			
ITEM 25	Female	296	1,76	1,197	,004	,950	
	Male	56	1,71	1,171			
ITEM 26	Female	300	1,75	1,203	2,946	,087	
	Male	52	1,77	1,323			
ITEM 27	Female	300	,83	,379	41,470	,000	
	Male	56	,50	,505			
ITEM 28	Female	300	1,91	1,024	7,142	,008	
	Male	56	2,09	,793			

ITEM 29	Female	300	,72	,450	4,104	,044
	Male	56	,64	,483		
ITEM 30	Female	296	1,78	1,179	3,231	,073
	Male	56	1,64	,980		
ITEM 31	Female	292	1,59	1,135	,341	,560
	Male	56	1,36	1,119		
ITEM 32	Female	296	,59	,677	9,518	,002
	Male	56	,36	,483		
ITEM 33	Female	296	2,08	1,126	1,311	,253
	Male	56	2,14	1,069		
ITEM 34	Female	296	1,78	1,203	2,547	,111
	Male	56	1,57	,988		
ITEM 35	Female	292	2,52	1,037	10,387	,001
	Male	56	1,57	1,305		
ITEM 36	Female	300	1,57	1,075	,225	,635
	Male	56	1,36	,980		
ITEM 37	Female	275	,19	,389	22,933	,000
	Male	56	,07	,260		
ITEM 38	Female	296	,59	,697	3,054	,081
	Male	56	,64	,616		
ITEM 39	Female	300	,76	,799	,484	,487
	Male	56	,71	,889		
ITEM 40	Female	300	,75	,715	11,400	,001
	Male	56	1,00	,661		
ITEM 41	Female	296	1,19	,834	26,242	,000
	Male	56	1,50	1,307		
ITEM 42	Female	296	1,03	,772	12,545	,000
	Male	56	1,29	1,039		
ITEM 43	Female	258	,81	,765	4,123	,043
	Male	56	1,21	1,091		
ITEM 44	Female	296	1,11	,849	14,701	,000
	Male	56	1,43	1,189		

More analytically, there is a statistically significant difference among teachers' belief that the use of ICT contributes extremely to the wider progress of society between women ($M=0,49$; $SD=0,58$) and men ($M=0,50$; $SD=0,74$) ($F=9,45$; $p=<0,02$) (Item 1). There is also statistically significant difference among teachers' participation in second level training, between women ($M=0,28$; $SD=0,45$) and men ($M=0,36$; $SD=0,48$) ($F=4,10$; $p=0,04$) (Item 3). Concerning the teachers who reported that they have participated in the training of the Ministry of Education, there are statistically significant differences at the expression of the belief that the knowledge they gained, during the lessons taught, was quite important, between women ($M=0,63$; $SD=1,02$) and men ($M=1,23$; $SD=1,19$) ($F=11,49$; $p=0,01$) (Item 4). Also, at the specific category of teachers there is a statistically significant difference between women ($M=0,37$; $SD=0,59$) and men ($M=0,62$; $SD=0,75$), who were not taught software with an intercultural character ($F=12,02$; $p=0,01$) (Item 5). Moreover, there is a statistically significant difference at the teachers' training in intercultural education, between women ($M=0,83$; $SD=0,38$) and men ($M=0,50$; $SD=0,51$) ($F=41,47$; $p<0,01$) (Item 27).

There is statistically significant difference at teachers' consideration that the lack of a specific available teaching space, equipped with the appropriate infrastructure, is a factor that acts extremely inhibiting the utilization of ICT, between women ($M= 1,00$; $SD= 1,06$) and men ($M= 1,64$; $SD= 1,51$) ($F= 25,51$; $p<0,01$) (Item 14). Also, there is statistically significant difference at the teachers' beliefs on the fact that the lack of equipment in the school's traditional classrooms makes the efforts made by teachers even more difficult, between women ($M= 0,88$; $SD= 1,06$) and men ($M= 1,43$; $SD= 1,51$) ($F= 20,19$; $p<0,01$) (Item 15). The same happens at the case with inappropriate or outdated educational software in schools, which make it even more difficult to integrate ICT into the educational process, where there are statistically significant differences between women ($M= 1,90$; $SD = 1,25$) and men ($M= 1,86$; $SD = 1,61$) ($F= 16,11$; $p<0,01$) (Item 23).

There is also statistically significant difference between women ($M= 0,19$; $SD = 0,39$) and men ($M= 0,07$; $SD = 0,26$) teachers, who stated that they have not used any software, application or electronic platform, which is specifically designed for intercultural education ($F= 22,93$; $p<0,01$) (Item 37). Finally, statistically significant difference at the teachers' belief that the use of ICT contributes positively to lessons understanding in intercultural learning environments, between women ($M= 0,81$; $SD = 0,77$) and men ($M= 1,21$; $SD = 1,09$) ($F= 4,12$; $p=0,04$) (Item 43).

Carried out the Anova test and taking as discrimination variable the teachers' specialty, significant differences ($p<0,05$) were found in all the Items, except in the Items 1, 3, 5, 13, 28, 29, 34, 37, 38 and 43 ($p>0,05$) (Table 6).

Table 6. Anova test regarding specialty.

ANOVA OF 4 DIMENSIONS AND SPECIALTY		
DIMENSIONS	Items	Sig.
1	Item 1	0,26
	Item 2	0,00
	Item 3	0,51
	Item 4	0,01
	Item 5	0,165
	Item 6	0,008
	Item 7	0,004
2	Item 8	0,004
	Item 9	0,000
	Item 10	0,007
	Item 11	0,002
	Item 12	0,000
	Item 13	0,732
	Item 14	0,003
	Item 15	0,039
	Item 16	0,000
	Item 17	0,000
	Item 18	0,000

	Item 19	0,000
	Item 20	0,000
	Item 21	0,000
	Item 22	0,000
	Item 23	0,000
	Item 24	0,000
	Item 25	0,000
	Item 26	0,000
DIMENSION	Item 27	0,000
3	Item 28	0,356
	Item 29	0,212
	Item 30	0,001
	Item 31	0,003
	Item 32	0,000
	Item 33	0,000
	Item 34	0,165
	Item 35	0,000
	Item 36	0,000
	Item 37	0,807
DIMENSION	Item 38	0,653
4	Item 39	0,004
	Item 40	0,000
	Item 41	0,000
	Item 42	0,024
	Item 43	0,316
	Item 44	0,023

More analytically, Physics ($M<0,01$; $SD<0,01$) and Geologists ($M<0,01$; $SD<0,01$) had the lowest mean scores in ICT credentials (Item 2), while Biologists ($M= 3,00$; $SD<0,01$) had the highest mean score on knowledge that have been received during the attendance of second-level training of the Greek Ministry Education for Computer (Item 4) and on the use of intercultural software in their classrooms ($M= 4,00$; $SD<0,01$) (Item 6). Mechanical engineers had the highest mean on computer handling ($M= 2,00$; $SD<0,01$) (Item 8). English teachers ($M= 1,00$; $SD<0,01$), music teachers ($M= 1,00$; $SD<0,01$) and mechanical engineers ($M= 1,00$; $SD<0,01$) had the lowest mean scores on using ICT to prepare commitments in the education process (Item 9), while music teachers ($M= 0,86$; $SD<0,01$) and mechanical engineers ($M= 1,00$; $SD<0,01$) had the lowest mean scores on using ICT as time-reducing tool prepare for class (Item 10). The ICT is less used in the educational procedure by music teachers ($M<0,01$; $SD<0,01$) and by the teachers of physical education ($M= 0,67$; $SD<0,01$) (Item 11). Physicians ($M<0,01$; $SD<0,01$), biologists ($M<0,01$; $SD<0,01$) and music teachers ($M<0,01$; $SD<0,01$) use ICT less frequently in their classrooms (Item 12).

Moreover, research results show that foreign languages teachers ($M= 1,00$; $SD<0,01$), philologists ($M= 0,93$; $SD<0,01$) and kindergarten teachers ($M= 1,00$; $SD<0,01$) are more trained in intercultural education (Item 26), while these three teachers' categories have less

difficulty in communicating with culturally different students. Finally, philologists use software specially designed for intercultural education, more often ($M= 0,50$; $SD= 0,51$) (Item 37).

Correlational study

After Shapiro-Wilk normality test, it is proven that there is no normal distribution of the data. This is the reason why the non-parametric Spearman rho test is conducted and many statistically significant correlations are observed among the items in the four dimensions, being the level of significance both $n= 0,05$ and $n= 0,01$ (Table 7).

Table 7. Correlational study.

Dimensions	1		2		3		4							
	R	R	R	R	R	R	R	R						
1	-,133*	,013	,032	,547	-,259**	,000	-,212**	,000						
2	-,120*	,024	,039	,460	,069	,196	,013	,807						
3	-,104	,051	,006	,914	-,066	,212	-,021	,693						
4	-,062	,263	,031	,558	,062	,243	-,091	,085						
5	-,038	,479	,125*	,019	-,113*	,036	,160**	,003						
6	-,058	,285	,028	,594	,070	,187	-,114*	,033						
7	-,057	,295	,019	,726	,086	,107	,076	,153						
8		,100		,059	,020	,708	-,009	,872						
9			-,259**	,000	-,053	,320	-,039	,469						
10				-,135*	,011									
11					-,230**	,000								
12						-,131*	,013							
13							-,273**	,000						
14								-,277**	,000					
15									-,216**	,000				
16										-,255**	,000			
17											-,313**	,000		
18												-,203**	,000	
19													-,217**	,000

*Correlation is significant at the 0.05 level

**Correlation is significant at the 0.01 level

As regards the first dimension, it is noted that the statistically significant correlations are low (Dimension 1 x Item 1, $r = -0,13$; Dimension 1 x Item 2, $r = -0,12$), based on the classification made by Pérez et al. (2009, p, 134). As regards the second dimension, the statistically significant correlations are also low (Dimension 2 x Item 5, $r = 0,13$; Dimension 2 x Item 9, $r = -0,26$; Dimension 2 x Item 10, $r = -0,14$; Dimension 2 x Item 11, $r = -0,23$; Dimension 2 x Item 12, $r = -0,13$; Dimension 2 x Item 13, $r = -0,27$; Dimension 2 x Item 14, $r = -0,28$; Dimension 2 x Item 15, $r = -0,22$; Dimension 2 x Item 16, $r = -0,26$; Dimension 2 x Item 17, $r = -0,31$; Dimension 2 x Item 18, $r = -0,20$; Dimension 2 x Item 19, $r = -0,22$), based on the classification made by Pérez et al. (2009, p, 134). As regards the third dimension (Table 4), the statistically significant correlations are also low (Dimension 3 x Item 1, $r = -0,26$;

Dimension 3 x Item 5, $r = -0,11$) and the same happens with the correlations of the fourth dimension (Dimension 4 x Item 1, $r = -0,21$; Dimension 4 x Item 5, $r = -0,16$; Dimension 4 x Item 6, $r = -0,11$) (Table 4), based on the classification made by Pérez *et al.* (2009, p, 134).

DISCUSSION

The results of this research showed that the teachers working in Greek public intercultural education are adequately trained and qualified in the use of ICT and show a positive intention to utilize ICT in the educational process. However, no satisfactory training was found among the teachers, on issues of intercultural education, while they show low to moderate levels of familiarity and communication with the culturally diverse students in their school classes, as it was exactly mentioned by Damanakis (1997), Nikolaou (2000), Triarchi-Herrmann (2000), Kossyvaki (2002), Skourtou (2005) and Kasimi (2005). Also, it was proven that teachers do not show the tendency to use ICT for purposes of serving intercultural education. However, we believe that this is not due to their reduced intention to take this action, but to their insufficient education on issues that fall within the scope of intercultural education.

In fact, they seem to recognize the important pedagogical contribution of the use of ICT in intercultural education. In more detail, the teachers who participated in this research believe that ICT is useful in all educational processes, which was also supported by other scholars, such as Soulioti and Paghe (2005). They also claim that ICT improves their performance in the educational process, which was also confirmed by Nikolaou (2000), Schietroma (2019) and Ou *et al.* (2022), as well as that ICT helps the active participation of students, which is a pedagogical benefit highlighted by Demir and Kayaoglu (2022) and Alcaraz-Mármol (2020).

Also, this research highlighted the importance of the use of ICT in improving the school performance of foreign students, in their better understanding of the lessons and in their easier communication with their classmates. Therefore, the research findings are aligned with Schietroma (2019), Alcaraz-Mármol (2020) and Ou *et al.* (2022)'s, research regarding the aforementioned benefits that stem from the use of ICT in multicultural school classrooms. However, due to the fact that the existence of insufficient infrastructure in the teachers' school units, which limits their ability to use ICT in the educational process, as well as the existence of outdated educational software, has been proven, school principals must address these identified weaknesses.

CONCLUSION

Concludingly, teachers believe that ICT highly contribute to the wider progress of society and improve teaching preparation progress. Moreover, while ICT empower students' active participation on the overall learning procedure, their implementation to the teaching process is recommended. Furthermore, the importance of the use of ICT during the educational procedure and their utilization is greater in the case of educational intercultural environments.

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