

# Global Competence Measurement in Non-Formal Educational Settings

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## ABSTRACT

This research comes to measure the level of knowledge, understanding, skills, attitudes and values of educators on global competence. The quantitative methodology was followed and the questionnaire tool was selected. Random sampling technique was used, and the questionnaire was delivered through google forms. The sample consisted of 310 educators who taught in public and private Vocational Training Institutes in the region of Western Greece during 2021-2022. Research findings show that 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). Regarding participants' answers for the Skills sub-factors, 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). Regarding the factors of Attitude and values, the average value for intent to interact is 3, 95 (a lot), for open attitude 4,46 (a lot) and for the values 3,94 (a lot). In addition, the control of the Pearson correlation coefficient of the nine factors for global capability shows a statistically significant positive correlation between them. Finally, gender, additional studies, employment relationship and years of service seem to affect the results of the scale.

**Keywords:** Attitude, Educators, Global Competence, Knowledge, Skills, Values.

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## I. INTRODUCTION

As the context of education is rapidly transforming, the interest of international organizations turned early on to the issue of adult education. For the UNESCO (2015) in particular, the biggest contemporary challenge is filling the deficit of right skills and improving the quality of education provided. It therefore attempts to contribute to the strategic planning of educational policies, which place the adult at the core of development and promote the holistic development of the human personality (Pangiotopoulos *et al.*, 2018).

However, despite the fact that the world is increasingly interconnected, there are still many human rights violations, inequality, poverty, discrimination and environmental problems. The UNESCO's response to these challenges focus on empowering learners of all ages to understand that these issues are global and to become active promoters of more peaceful, tolerant, inclusive, secure and sustainable societies (United Nations, 2015).

In addition, according to the International Bureau of Education (Mmantsetsa & Griffin, 2019) education systems should prepare individuals for lifelong learning, self-agency, trans-disciplinary, interactive use of diverse tools and resources, interacting with others and interacting with the world. These skills could enable awareness, sensitivity, effective and positive engagement from local to global levels and entails multicultural and multilingual perspectives as an enriching asset and not as a barrier.

Therefore, global competence is considered to be the foundation of education and employability and is one of the key competencies for the citizen of the 21st century (OECD, 2018) in order to successfully respond to a world of increasing diversity and complexity (Popov *et al.*, 2017).

Educators have a special role to play as they are the agents of changes, they can prepare future citizens with appropriate knowledge and skills to recognize and adapt to global socio-economic and environmental changes (Pylvas & Nokelainen, 2019) and integrate a global perspective in their teaching (Ford & Quinn, 2010).

Educators' readiness to manage issues related to the aforementioned field lies in knowledge, skills, attitudes and abilities. Through a review of the relevant literature, globally competent educators demonstrate a commitment to equity and social justice in their personal and professional lives (Agnello,

White, & Fryer, 2006), demonstrate empathy, reflect on cultural, political and social entity them, they reexamine the way they work, question and criticize (Crawford *et al.*, 2020).

Additionally, they possess an interdisciplinary knowledge base on global issues and current events, including economic, political, cultural and environmental interactions, they enrich the curriculum with modules such as identity, culture, social justice, human rights, peace building, conflict resolution and sustainable future (Merryfield & Subedi, 2006) and they know how to use different teaching methods (O'Connor & Zeichner, 2011).

In such a context, the present research seeks to explore the level of knowledge, skills, attitudes and values on issues related to global competence educators of non formal education have. The elaboration of this research is considered important as at national level there is a limited number of researches only in the field of formal education (e.g. Karanikola *et al.*, 2022) and not in non-formal educational settings.

## II. METHODOLOGY

The purpose of this research is to investigate the basic dimensions of global competence, as they are perceived by educators teaching in public and private Vocational Training Institutes in the region of Western Greece. Specifically, the following questions were investigated:

- What is educators' level of knowledge and understanding on global competence?
- What is their level of skills related to global competence?
- What attitudes and values have they developed in terms of global competence?
- Is there a correlation between global competence and gender, level of education, additional studies, employment relationship, years of service, level of ICT knowledge?

In the present research, the quantitative methodology was followed and the questionnaire of Yang Liua, Yue Yinb and Ruilin Wuc (2020), "Measuring Students' Global Competence" was applied. It consists of 35 close-ended questions which are divided into three axes: knowledge and understanding (10 questions), skills (14 questions), attitudes /values (11 questions). Participants were asked to answer on a five-point Likert scale (1 = Not at all, 2 = A little, 3 = Enough, 4 = A lot, 5 = Too much). The data collection took place in June 2022 with an electronic questionnaire (google form) which was sent to the Directorates of public and private Vocational Training Institutes of the Region of Western Greece, which resulted from random sampling to ensure the representativeness of the sample (Babbie, 2011).

The data were encoded and analyzed with the statistical software SPSS 27.0 for Windows. The reliability of the internal consistency of the three dimensions of the questionnaire (Table I) is high as it ranges from 0,928 to 0,915 > 0,70. The values of the correlation indices range from +0,415 to +0,793 > +0,3 indicating high internal consistency of the dimensions. Overall the Global Competency Questionnaire shows high reliability (Cronbach's Alpha = 0,951 > 0,70). Finally, the high coherence of the global competency questionnaire is demonstrated by the values of the correlation indices which range from +0,399 to +0,816 > +0,3.

The questionnaire of the present survey was answered by 310 educators working during 2021-2022 in public and private Vocational Training Institutes in the Region of Western Greece, of which 52,9% are women and 47,1% are men. 40,6% belong to the age category of 22-40 years and the 48,4% to the category of 41-55 years. 61,9% have a master's degree and 56,8% do not have a permanent job position and 58,7% have 0-10 years of service. Regarding the level of knowledge in Information and Communication Technologies (ICT), the majority (72,3%) have an A-level or ECDL certification (basic computer and internet skills).

TABLE I: RELIABILITY OF SCALE

| Dimensions                  | N of Items | Corrected Item-Total Correlation | Cronbach's Alpha |
|-----------------------------|------------|----------------------------------|------------------|
| Knowledge and understanding | 10         | 0,527-0,745                      | 0,915            |
| Skills                      | 14         | 0,500-0,793                      | 0,928            |
| Attitudes and values        | 11         | 0,415-0,731                      | 0,892            |
| Global competence           | 35         | 0,399-0,816                      | 0,951            |

## III. RESULTS

In terms of sample teachers' answers to the Knowledge and Understanding sub-factors (Table II), 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 Skills sub-factors (Table III), 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). Overall for the Skills dimension the average value

is 3,82 (a lot).

TABLE II: DISTRIBUTION OF MEAN AND SD FOR KNOWLEDGE AND UNDERSTANDING

| Dimensions                  | Sub-factors                               | Items                                                                                                                                   | MEAN | SD    |
|-----------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------|-------|
| Knowledge/<br>Understanding | 1) World Knowledge (WK)                   | Q1 Other than my own country, I know about the history and geography of at least one other country.                                     | 3,58 | 0,066 |
|                             |                                           | Q2 Other than my own country, I know about the political and economic systems of at least one other country.                            | 3,62 | 0,061 |
|                             |                                           | Q3 Other than my own country, I know about the language, cultural norms, religions, beliefs, and customs of at least one other country. | 3,86 | 0,057 |
|                             |                                           | Total                                                                                                                                   | 3,69 | 0,057 |
|                             | 2) Understanding Globalization (UG)       | Q4 I understand the globalization concept and its development trends.                                                                   | 4,17 | 0,048 |
|                             |                                           | Q5 I understand the effect of globalization on a country's development, individual lifestyles and scientific research activities.       | 4,13 | 0,05  |
|                             |                                           | Q6 I understand the roles of international organizations and institutions in today's world and society.                                 | 3,95 | 0,051 |
|                             |                                           | Q7 I pay attention to global events and international affairs.                                                                          | 4,14 | 0,05  |
|                             |                                           | Total                                                                                                                                   | 4,10 | 0,042 |
|                             | 3) International Academic Knowledge (IAK) | Q8 I know the internationally accepted theories and schools of thought in my field of study or profession.                              | 4,02 | 0,057 |
|                             |                                           | Q9 I know the international cutting-edge research problems, issues, and theories in my field of study or profession.                    | 3,86 | 0,055 |
|                             |                                           | Q10 I know the main internationally accepted research methods in my field of study or profession                                        | 3,85 | 0,054 |
|                             |                                           | Total                                                                                                                                   | 3,91 | 0,05  |
|                             | Total knowledge and Understanding         |                                                                                                                                         | 3,92 | 0,042 |

TABLE III: DISTRIBUTION OF MEAN AND SD FOR SKILLS

| Dimension    | Sub-factors                                  | Items                                                                                                                              | MEAN  | SD    |
|--------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| Skills       | 1) Use of Tools (UT)                         | Q11 I can easily read and write in one foreign language                                                                            | 4,04  | 0,063 |
|              |                                              | Q12 I can easily use MS Office, PDF Reader, and other common international software.                                               | 4,52  | 0,042 |
|              |                                              | Q13 I can easily browse foreign language websites to obtain knowledge and the requisite information.                               | 4,26  | 0,057 |
|              |                                              | Total                                                                                                                              | 4,27  | 0,047 |
|              | 2)Cross-Cultural Communication (CCC)         | Q14 I can analyze and evaluate issues from the perspective of a foreign culture.                                                   | 3,88  | 0,055 |
|              |                                              | Q15 I have made efforts to understand foreigners so that we can work or live together                                              | 4,14  | 0,053 |
|              |                                              | Q16 I can be aware of cultural differences in my interactions with people from different cultures.                                 | 4,2   | 0,045 |
|              |                                              | Q17 I am able to quickly communicate in a common language in my interactions with people from different cultures                   | 4,02  | 0,055 |
|              |                                              | Q18 I have the ability to adjust to language and communication outside of my own culture.                                          | 3,98  | 0,053 |
|              |                                              | Q19 I can learn, work, and live outside of my own culture.                                                                         | 3,97  | 0,054 |
|              |                                              | Total                                                                                                                              | 4,03  | 0,042 |
|              | 3)International Academic Communication (IAC) | Q20 I can easily comprehend foreign literature in my field of study or profession.                                                 | 4,01  | 0,058 |
|              |                                              | Q21 When faced with problems in understanding professional literature, I can take the initiative to contact and consult the author | 3,34  | 0,071 |
|              |                                              | Q22 I made efforts to publish papers in SCI, SSCI, ISTP, EI, and other indexed journals or conferences with my supervisors.        | 2,97  | 0,086 |
|              |                                              | Q23 I can actively seek foreign scholars to discuss research questions and issues at international academic conferences.           | 3,02  | 0,076 |
|              |                                              | Q24 I can easily discuss research questions and issues with foreign scholars at international academic conferences.                | 3,09  | 0,073 |
|              |                                              | Total                                                                                                                              | 3,29  | 0,062 |
| Total Skills |                                              | 3,82                                                                                                                               | 0,044 |       |

Regarding the answers of the respondents to the factors of Attitude and Values (Table IV), the average value for intent to interact is 3,95 (a lot), for Open Attitude 4,46 (a lot) and for the values 3,94 (a lot). In

total for the dimension of Attitude and Values the average value is 4,08 (a lot). In terms of Global Competence as recorded by the respondents' answers in all three dimensions (nine factors) the average value is 3,93 (a lot).

The Pearson correlation coefficient test of the nine factors for global competence shows a statistically significant positive correlation between them (Table V). Higher levels of statistically significant positive correlation are recorded between Understanding Globalization and International Academic Knowledge ( $r=0.606$ ), between Use of tool and Cross-cultural Communication ( $r=0.670$ ), between Cross-cultural Communication with International Academic Communication ( $r=0.639$ ), Intent to interact ( $r=0.607$ ) and Open Attitude ( $r=0.659$ ). Lower levels of statistically significant positive correlation are recorded between Understanding Globalization and Intent to interact ( $r=0.165$ ), Open Attitude ( $r=0.165$ ) and Values ( $r=0.172$ ). Finally, between International Academic Knowledge and Intent to interact ( $r=0.298$ ) and Values ( $r=0.310$ ).

Checking the Pearson correlation coefficient of the three dimensions demonstrates a statistically significant positive correlation between them at relatively high levels. Knowledge and understanding with Skills ( $r=0.612$ ) and Skills with Attitude/values ( $r=0.688$ ). Relatively low levels of statistically significant positive correlation are recorded between Knowledge and understanding with Attitude and values ( $r=0.409$ ).

#### A. Correlation of Global Competence with Gender, Additional Studies, Employment Relationship, Years of Service

T-test independent samples were used in order to test whether there is a statistically significant difference in the perceptions of the respondents based on gender. Regarding the correlation of gender with knowledge and understanding, skills, attitudes and values, for women and men in Levene's Test the  $p\text{-value} > 0.05$ .

TABLE IV: DISTRIBUTION OF MEAN AND SD FOR ATTITUDE AND VALUES

| Dimension            | Sub-factors                | Items                                                                                                                                       | MEAN | SD    |
|----------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------|-------|
| Attitudes and Values | 1) Intent to Interact (II) | Q25 I would like to spend time and energy interacting with foreigners and establishing contacts.                                            | 3,72 | 0,062 |
|                      |                            | Q26 I would like to experience life and culture in other countries (such as through tourism).                                               | 4,28 | 0,05  |
|                      |                            | Q27 I would like to take the risk to experience cross-cultural learning and personal development (such as through overseas study and work). | 3,94 | 0,063 |
|                      |                            | Q28 I would like to go abroad and experience foreign countries' academic and research environments.                                         | 3,92 | 0,061 |
|                      |                            | Q29 I would like to consult foreign scholars in my areas of interest at international academic lectures and report sessions.                | 3,88 | 0,062 |
|                      |                            | Total                                                                                                                                       | 3,95 | 0,049 |
|                      | 2) Open Attitude (OA)      | Q30 When communicating with foreigners, I try to respect their cultures and values.                                                         | 4,48 | 0,042 |
|                      |                            | Q31 When communicating with foreigners, I try to understand their cultures and values.                                                      | 4,45 | 0,044 |
|                      |                            | Q32 When communicating with foreigners, I try to appreciate their cultures and values.                                                      | 4,44 | 0,043 |
|                      |                            | Total                                                                                                                                       | 4,46 | 0,041 |
|                      | 3) Values (V)              | Q33 I identify with my own country's culture and values                                                                                     | 3,95 | 0,055 |
|                      |                            | Q34 I believe that my worldview is one of many equally valid worldviews.                                                                    | 3,88 | 0,058 |
|                      |                            | Q35 I consider myself valuable to my country and society.                                                                                   | 3,98 | 0,055 |
|                      |                            | Total                                                                                                                                       | 3,94 | 0,045 |
|                      | Total Attitudes and values |                                                                                                                                             | 4,08 | 0,038 |
|                      | Total Global Competence    |                                                                                                                                             | 3,93 | 0,035 |

TABLE V: CORRELATION TESTING OF THE NINE FACTORS OF GLOBAL COMPETENCE

| Pearson Correlation | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9 |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---|
| 1 WK                | -       | -       | -       | -       | -       | -       | -       | -       | - |
| 2 UG                | 0,582** | -       | -       | -       | -       | -       | -       | -       | - |
| 3 IAK               | 0,542** | 0,606** | -       | -       | -       | -       | -       | -       | - |
| 4 UT                | 0,367** | 0,458** | 0,485** | -       | -       | -       | -       | -       | - |
| 5 CCC               | 0,429** | 0,519** | 0,544** | 0,670** | -       | -       | -       | -       | - |
| 6 JAC               | 0,367** | 0,427** | 0,512** | 0,594** | 0,639** | -       | -       | -       | - |
| 7 II                | 0,209** | 0,316** | 0,298** | 0,359** | 0,607** | 0,515** | -       | -       | - |
| 8 OA                | 0,165** | 0,381** | 0,373** | 0,508** | 0,659** | 0,399** | 0,599** | -       | - |
| 9 V                 | 0,172** | 0,424** | 0,310** | 0,355** | 0,435** | 0,380** | 0,420** | 0,468** | - |

Thus, for knowledge and understanding, the mean values for men and women are statistically significantly different from each other [ $t(308)=4.261$ ,  $p\text{-value}=0.000 < 0.05$ ]. Therefore, men agree to a

greater extent (mean=4.10) than women (mean=3.76) about knowledge and understanding. For skills the mean values for men and women are statistically significantly different from each other [ $t(308)=-2.225$ ,  $p\text{-value}=0.027<0.05$ ]. Therefore, men agree to a greater extent (mean=3.92) than women (mean=3.72) about skills (Table). Regarding attitudes and values, the average values for men and women do not differ statistically significantly from each other [ $t(308)=-0.058$ ,  $p\text{-value}=0.954>0.05$ ].

One Way ANOVA was used to test the difference in mean values of knowledge/understanding, skills, attitudes and values between the categories of participants' additional studies. The findings of the analysis of variance for the two dimensions (Knowledge/understanding, Skills) show that there is no equality of means with additional studies. For Attitude and values, they show that there is an equality of mean values. Therefore, there is a statistically significant difference between the level of knowledge/understanding and skills. There is no statistically significant difference between attitude/values and additional studies. Specifically, in terms of knowledge and understanding,  $F(3)=6.279$ ,  $p=0.000<0.05$  is recorded. For skills  $F(3)=3.011$ ,  $p=0.000<0.05$ . For attitude and values we have  $F(3)=0.268$ ,  $p=0.848>0.05$ .

The comparisons of the mean values show that the statistically significant differences of the three dimensions of global competence with the additional studies are found in terms of Knowledge and understanding between the categories: a) "Master" and "PhD" ( $p=0.002<0.05$ ). This difference shows that the average value of the level of knowledge and understanding for those with a "Master" is 5.769 points lower than for those with a "PhD" and vice versa. b) "PhD" and "Not have" ( $p=0.000<0.05$ ). The average value of the level of knowledge and understanding for those with a "PhD" is 7.160 points higher than for those "Not have" additional studies and vice versa. Regarding Skills, the differences are found between the "PhD" and "Not have" categories ( $p=0.022<0.05$ ). This difference shows that the average value of the skill level for those with a "PhD" is 7.504 points higher than for those "Not have" additional studies and vice versa.

One Way ANOVA was also used to check the difference of the mean values of knowledge/understanding, skills and attitude/values with the employment relationship of the participants. The findings of the analysis for the Knowledge/understanding dimension show that there is no equality of means with employment relationship. However, there is an equality of mean values of Skills and Attitude/values with the employment relationship. Therefore there is a statistically significant difference of the level of Knowledge/understanding with employment relationship of the respondents. Specifically, regarding Knowledge/understanding,  $F(2)=3.166$ ,  $p=0.044<0.05$  is recorded. There is no statistically significant difference of Skills  $F(2)=2.337$ ,  $p=0.098>0.05$  and Attitude/values  $F(2)=1.159$ ,  $p=0.315>0.05$  with the employment relationship of the participants.

The comparisons of the mean values show that the statistically significant differences of the dimension of Knowledge/understanding with the employment relationship are found in the categories: "Permanent position" and "Not permanent position" ( $p=0.033<0.05$ ). This difference shows that the average value of the level of knowledge and understanding for those who are "Permanent" is 2.299 points lower than for those who are "Not permanent" and vice versa.

Regarding the correlation with years of service, One Way Anova reveals that that there is no statistically significant difference ( $F(3)=2.684$ ,  $p=0.057>0.05$ ) neither between Knowledge/understanding and years of service nor between Attitude/values and years of service ( $F(3)=1.448$ ,  $p=0.229>0.05$ ). On the contrary, there is a statistically significant difference ( $F(3)=4.180$ ,  $p=0.006<0.05$ ) between the level of Skills and the years of service. In addition, the analysis shows that the mean value of the Skill level for those with "0-10" years of service is 4.444 points higher than those with "11-20" years of service and vice versa. Also for those with "11-20" years of service the average value of the Skill level is 6.917 points higher than for those with "26 and above" years of service and vice versa.

Finally, regarding the correlation of global competence with the level of ICT knowledge, One Way Anova shows that there is no statistically significant difference between the level of knowledge/understanding, skills and attitude/values and the level of ICT knowledge. Specifically, for knowledge/understanding,  $F(2)=0.404$ ,  $p=0.668>0.05$ ; for skills  $F(2)=2.262$ ,  $p=0.106>0.05$ , for attitude/values,  $F(2)=2.113$ ,  $p=0.123>0.05$ .

#### B. Multiple Regression with Knowledge and Understanding as a Dependent Variable

The control of the effect of the independent variables (skills, attitude and values, gender, additional studies, employment relationship, years of service) on the dependent variable Knowledge and understanding was done by the analysis of the linear multiple regression.

TABLE VI: MODEL VARIANCE CONTROL

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|---|------|
|-------|----------------|----|-------------|---|------|

|   |            |           |     |          |        |                    |
|---|------------|-----------|-----|----------|--------|--------------------|
|   | Regression | 6797,231  | 6   | 1132,872 | 35,235 | 0,000 <sup>b</sup> |
| 1 | Residual   | 9741,918  | 303 | 32,152   | -      | -                  |
|   | Total      | 16539,148 | 309 | -        | -      | -                  |

a. Dependent Variable: *Knowledge and understanding*

b. Predictors: (Constant), gender, additional studies, employment relationship, years of service, skills, attitudes/values

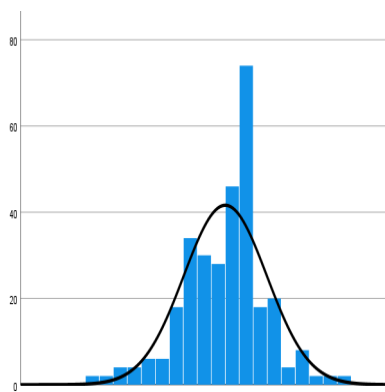


Fig. 1. Residual Distribution Curve.

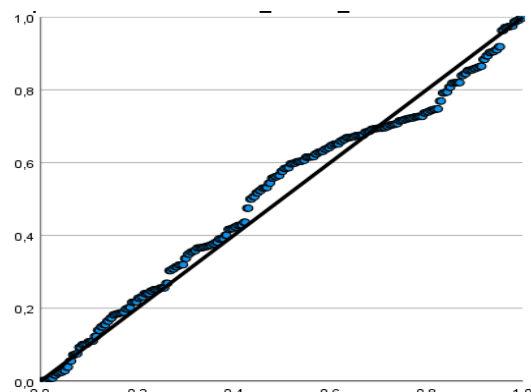


Fig. 2. Control of Normal Residue Distribution.

The normality of the dependent variable was first checked with the One Sample Kolmogorov-Smirnov Test according to which a normal distribution follows ( $p > 0.05$ ). The independent variables (Table VI) affect the dependent variable ( $p < 0.05$ ) and therefore the regression model exists.

Gender, additional studies, employment relationship, years of service, skills, attitude and values explain 39,9% ( $R^2 = 0,399$ ) of knowledge and understanding of the participants.

The regression model equation is of the form  $Y = b_0 + b_1x_1 + b_2x_2$ , Knowledge and understanding =  $20.606 - 2.329 \cdot \text{Gender} + 0.041 \cdot \text{Skills}$ . Therefore, if gender increases by one unit (female based on coding) and the other independent variables remain constant, then Knowledge and Understanding decreases by 2.329 units. If Skills increase by one unit and other variables remain constant then Knowledge and Understanding will increase by 0.041 units. The Gender variable seems to be the most important variable as its absolute value is the highest of all the other variables ( $B = -2.329$ ). The variables Additional studies, Work relationship, Years of service and Attitude and values do not influence the dependent variable Knowledge and understanding ( $p > 0.05$ ).

The regression control after the completion of the model shows that there is a normal distribution of residues (Fig. 1). The Durbin-Watson = 2,039 ~ 2,00 indicates that there is residual independence (Fig. 2). Homoscedasticity testing shows that the residues are not related to each other.

In addition, the Pearson correlation test shows that there is no correlation of residue variables ( $p = 1,000 > 0.05$ ). Finally, collinearity testing shows that there is a marginal independence of the variables and therefore the regression model is not affected ( $VIF < 2.00$ ).

### C. Multiple Regression with Skills as a Dependent Variable

Initially, the normality of the dependent variable was checked with the One Sample Kolmogorov-Smirnov Test according to which a normal distribution follows ( $p > 0.05$ ). The independent variables affect the dependent variable ( $p < 0.05$ ) and therefore the regression model exists.

Gender, additional studies, employment relationship, years of service, knowledge and understanding, attitude and values explain 58,9% ( $R^2 = 0,589$ ) of the perceptions of the respondents about the skills (Table VII).

The regression model equation is of the form  $Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3$ , Skills =  $2.174 - 1.050 \cdot \text{Years of service} + 0.753 \cdot \text{Attitude and values} + 0.574 \cdot \text{Knowledge and understanding}$ . Therefore, if years of service increases by one unit and the other independent variables remain constant, then Skills decrease by 1.050 units. If Attitude and Values increase by one unit and other variables remain constant then Skills will increase by 0.753 units. If Knowledge and understanding increases by one unit then the Skills will increase by 0.574 units.

TABLE VII: MODEL SUMMARY<sup>a</sup>

| Model | R      | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|--------|----------|-------------------|----------------------------|---------------|
| 1     | 0,773* | 0,597    | 0,589             | 6,953                      | 2,040         |

a. Predictors: (Constant), gender, additional studies, employment relationship, years of service, Knowledge and understanding, Attitude and values

b. Dependent Variable: Skills

The variable Attitude and values seems to be the most important variable as its value is the highest among all the other variables ( $B = 0.753$ ). The variables Gender, Additional studies and Work relationship do not

affect the dependent variable Skills ( $p > 0.05$ ).

The regression control after the completion of the model shows that there is a normal distribution of residues. The Durbin-Watson test = 2,040 ~ 2,00 indicates that there is residual independence. Finally, homoscedasticity testing shows that the residues are not related to each other.

Also, the Pearson correlation test shows that there is no correlation of residue variables ( $p = 1,000 > 0.05$ ). Finally, collinearity testing shows that there is independence of the variables and therefore the regression model is not affected ( $VIF < 2.00$ ).

#### D. Multiple Regression with Attitude/Values as a Dependent Variable

One Sample Kolmogorov-Smirnov Test shows that we have a normal distribution ( $p > 0.05$ ). Gender, additional studies, employment relationship, years of service, knowledge and understanding, and skills explain 45.3% ( $R^2 = 0.453$ ) of participants' perceptions of Attitude and values. The regression model equation is of the form  $Y = b_0 + b_1x_1 + b_2x_2$ , Attitude and values =  $14.836 + 1.293 * \text{Gender} + 0.460 * \text{Skills}$ . Therefore, if Gender increases by one unit (female as coded) and the other independent variables remain constant, then Attitude and values will increase by 1.293 units. If Skills increase by one unit and other variables remain constant then Stance and values will increase by 0.460 units. The variables Additional studies, Work relationship, Years of service and Knowledge and understanding do not influence the dependent variable Attitude and values ( $p > 0.05$ ).

The regression control after the completion of the model shows that there is a normal distribution of residues. The Durbin-Watson test = 2,034 ~ 2,00 indicates that there is residual independence, while Homoscedasticity testing shows that the residues are not related to each other.

Also, the Pearson correlation test shows that there is no correlation of residue variables ( $p = 1,000 > 0.05$ ). Finally, collinearity testing shows that there is independence of the variables and therefore the regression model is not affected ( $VIF < 2.00$ ).

## IV. CONCLUSION

Global competence, according to the OECD (2016, 2018), is regarded as a multidimensional concept which relates to maximizing economic profits, environment protection, social harmony, security, health and education. In addition, the principles and values of global education are intertwined with multicultural and intercultural education and therefore effective educators should be able to introduce the principles of intercultural pedagogy into their teaching and learning process. This, however, presupposes educators' reflection on their beliefs, perceptions, prejudices and stereotypes they may carry (Arvanitis *et al.*, 2019), but also the acquisition of the appropriate knowledge, skills and practices (Longview Foundation, 2008).

In such a context, this research revealed some important findings, since using a scale, despite the endogenous and exogenous weaknesses, constitutes instrumentation and research, which allows the shaping of our value judgments (Babbie, 2011).

To begin with, the participants demonstrate high levels in all the dimensions of the global competence, whereas gender, additional studies, employment relationship and years of service seem to affect the results of the scale. It is positive the fact that educators of Vocational Training Institutes are aware of global competence and recognize appropriate attitudes and values.

In addition, and given that no other similar research based on this scale has been conducted in Greece in the field of non formal education, it could be a starting point for further discussion and fruitful dialogue.

It is also suggested that it should be tested in some other similar cases and other regions. What is more, a quantitative research can complement and enrich this qualitative research study, as the comparison of the two seems to create huge interest and new implications. Finally, more aspects could be also investigated, such as initial and in job training of educators, topics of training, practices followed in order to flourish and cultivate global competence.

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## CONFLICT OF INTEREST

Author declares that she does not have any conflict of interest.

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