

THE IMPORTANCE OF TEACHERS' CULTURAL INTELLIGENCE FOR THE INTERNATIONALIZATION PROCESS OF HIGHER EDUCATION

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Purpose: The main purpose of this article is to diagnose the level of cultural intelligence of academic teachers of public economic universities in Poland and identify factors related to this kind of intelligence.

Design/methodology/approach: The tests carried out were quantitative. The following methods were used: analysis of the subject literature, surveys, and analysis of organizational documentation.

Findings: The study showed that the level of cultural intelligence of teachers of economic universities in Poland is relatively high and slightly different between the surveyed universities. There was no correlation between the cultural intelligence level and such variables as gender and a scientific degree. On the other hand, the number of languages known at the communicative level and the number of countries in which the employee has stayed under international cooperation programs are positively correlated with the level of cultural intelligence.

Research limitations/implications: The original plan was to carry out the survey at all five public universities of economics in Poland. Eventually, due to a small number of completed questionnaires, teachers from three public universities of economics were included in the study.

Practical implications: This study may contribute to revealing the factors influencing the cultural intelligence level of academics and, consequently, the intercultural work environment and the wider internationalisation process of universities.

Originality/value: This is pioneering research on the level of cultural intelligence of employees at Polish economic universities. Some of the findings are novel, such as the diagnosed correlation between a lecturer's academic degree and the level of cultural intelligence. The authors believe that their study may inspire researchers from other countries to conduct more in-depth research in the area of cultural intelligence of lecturers.

Keywords: Cultural intelligence; academic teachers; higher education institutes; internationalization; skills.

Category of the paper: Research paper.

1. Introduction

Global changes of a social, economic, political, and technological nature, which we observed in past decades, have had a significant impact on the way enterprises, non-governmental organizations, as well as universities operate. Contemporary universities are now facing dynamically changing conditions and numerous claims made towards them. They are expected to participate in the development of the local community as well as the development of innovation and shaping human capital (Chirileasa, 2013). The necessity of shaping human capital by universities is indicated by Boucher, Conway, Meer (Boucher, Conway, & Van Der Meer, 2003). As multiculturalism has become a sign of times, next to work at the junction between cultures and the need to have excellent communication skills, universities must enter the path of gradual internationalization. It means the process of including international, intercultural and global dimensions into the process of providing educational services at the academic level (Chan, 2013). Its effect is expected to be appropriate preparation of the academic community for successful participation in the increasingly interdependent world (Francis, 1993).

The internationalization of higher education requires continuous adjustment to a dynamically changing global environment, responding to challenges and use of emerging capabilities (Hudzik, 2013). Its significance changes depending on the premises, stimuli and political and economic circumstances in which it takes place (Callan, 2000). According to the program for the internationalisation of Polish higher education, developed by the Ministry of Science and Higher Education in Poland in 2015 (MNISW, 2015), the development of cultural competences has great importance for the success of the internationalization process among both students and university staff. These competences, also called cultural intelligence (in short CQ), facilitate the understanding of beliefs, standards, and values relevant to various national cultures. Consequently, they enable adaptation and efficient functioning in a multicultural environment. The need for developing and strengthening the cultural intelligence of academic teachers as part of their professional development has also been pointed out by Upton and Butters (Upton & Butters, 2019).

Cultural intelligence is defined as the ability to adapt to different cultural realities (Earley & Ang, 2003), or the ability to effectively interact with people from various cultural environments, which is strengthened by any new cultural experience (Bobanovic and Grzinić 2019; Thomas and Inkson 2009). Cultural intelligence refers to the features and skills thanks to which people quickly, and with minimal stress, adapt to interaction in cultures other than the one in which they were socialized. According to Le, Jiang and Nielsen (2018), cultural intelligence helps people to adapt to a multicultural environment and deal with stress, cultural barriers and difficulties in communication and intercultural interactions. People with a high CQ more often relate to culturally determined situations, and at the same time, those who have

a deeper and more frequent contact with other cultures show a more developed cultural intelligence (Kolano & Olszewski, 2011). Thomas and Inkson (2009) emphasize that cultural intelligence is not a subset of emotional intelligence but a separate ability. It is about the "ability to effectively interact with people from various cultural circles". People with high emotional intelligence can sense the emotions, desires and needs of others, while people with high cultural intelligence are sensitive to the values, beliefs, attitudes and body language of people from different cultures, and they use this knowledge in interactions based on empathy and understanding (Suharti, Handoko, & Huruta, 2019).

According to the concept of Ng, Van Dyne, and Ang, cultural intelligence consists of four dimensions/components (Ng, Van Dyne, & Ang, 2012): meta-cognitive, cognitive, motivational and behavioural. The meta-cognitive dimension of CQ reflects the thought processes that individuals use to acquire and understand cultural knowledge, including knowledge about individual thought processes related to culture and control over them. It includes planning, monitoring and revision of mental models and cultural standards. The cognitive dimension of CQ reflects the knowledge about standards, practices and conventions prevailing in different cultures, obtained both in the education process and through individual experiences. The motivational dimension of CQ reflects the ability to focus attention and energy on learning and functioning in situations characterized by cultural differences. Last but not least, the behavioural dimension of CQ reflects the ability to take appropriate verbal and non-verbal actions when interacting with people from various cultures.

2. Theoretical foundation and development of hypotheses

According to Kim and Locke (Locke & Kim, 2010), the impact of globalization on higher education is usually discussed in relation to students and their mobility, the financing of higher education institutions, research and knowledge transfer and labour markets for graduates. Little attention has been paid to academic teachers so far. Meanwhile, Qiang (2003) notes that to equip students with the desirable labour market competences, universities must have staff with high cultural competences. The cultural intelligence of teachers is perceived as an important factor of effective responsibility for the educational requirements of heterogeneous student groups (Ramis, Krastiņa, and Ramis Salas, 2010; Teekens, 2003; Zelenková and Hanesová, 2019; Sá and Serpa, 2020) and involvement in the implementation of international research projects, often under Interdisciplinary teams (Suharli et al., 2019; Plum, 2007). Ryan believes that teachers' cultural intelligence can contribute to the students' development, such as the openness of the mind, openness to the world, tolerance and respect for others (Ryan, 2005).

The internationalization of Polish universities is rather low compared to other European Union countries. One of the reasons is the cultural differences between Poles and foreigners. Lack of knowledge with respect to values, standards, customs, and attitudes typical of diverse cultures hinders intercultural adaptation, often causing a cultural shock. That is why it is so important that employees of Polish universities develop their cultural competences, enabling effective interaction in intercultural situations.

Empirical research, which analyses the cultural intelligence of academic teachers and its importance in the context of the internationalization of universities, is relatively new and not very ample. M. Tharapos (Tharapos, 2015) studied the level of CQ of Australian researchers dealing with accounting, as well as demographic factors that may affect the CQ results. In turn, Mahasneh, A.M., Gazo, A.M., and O.A. Al-Adamat (2019) compared the level of cultural intelligence of teachers and students of the University of Haszymid. Clearly prevailing in Polish literature are works on the internationalization of universities omitting the issue of cultural intelligence (Domański, 2017; Popowska, 2016; Piwowarczyk, 2016; Maliszewski, 2015; Golubieva, Tutko, and Tutko, 2016; Przytuła, 2019b, 2019a). The work of A. Pabian and B. Pabian should be considered particularly interesting from the perspective of the subject matter of this article. A. Pabian and B. Pabian focus on the internationalization of Polish universities in the aspect of cultural differences (Pabian and Pabian, 2012, 2019).

These studies are a response to the research gap observed. Their main objective was to diagnose the level of cultural intelligence of academic teachers at public economic universities in Poland and to identify factors related to this type of intelligence. The research questions were formulated as follows: How is the level of four dimensions of employees' cultural intelligence shaped? Are there any significant differences in this respect between universities? Is there a relationship between the level of CQ and factors such as gender, scientific degree, knowledge of foreign languages and the number of countries visited by the employee for at least 5 days under international cooperation initiatives?

Polish public universities that participated in the research are predominantly located in large cities, have the same (economic) profile and a similar size and offer similar opportunities to acquire experiences and develop cultural competences by teachers (e.g., through exchange programmes, internships, foreign placements, lectures for visiting professors, participation in international organizations, international scientific projects, etc.). That is why it was assumed that teachers of these universities are characterized by a similar level of cultural intelligence. H1: There are no significant differences with respect to the individual four dimensions of cultural intelligence (meta-cognitive, cognitive, motivational and behavioural) between employees of the researched universities.

Previous studies on CQ and gender relations are ambiguous. Research by Bobanovic & Grzinic (2019) and MacNab & Brent (2012) showed that women and men differ in the level of cultural intelligence. In their study women were characterized by a higher level of the behavioral dimension of CQ. On the other hand, Brancu, Munteanu, Golet (2016) (Brancu

et al., 2016) indicated the existence of statistically significant differences in cultural intelligence due to gender, but in favour of men. At the same time, they could concern one component. In Mahasneh's research (Mahasneh et al., 2019), it was a CQ motivational dimension. Engle and Nehrt (2012) and Ward, Fetscher (2008) research did not state any statistically significant differences in cultural intelligence due to gender variables. Noticing the need for further research in this respect, in this study it was decided to verify the following hypothesis H2: Women, regardless of the researched university, have higher cultural intelligence than men.

In Poland, the professional promotion of scientific staff means the need to enter a defined professional path, which in turn requires time. The Law on Higher Education and Science (Sejm, 2018) provides for two scientific steps: Doctor and habilitated Doctor. The title of Professor should be distinguished from the scientific degrees. The title is given by the President of the Republic of Poland to a person holding a degree of Habilitated Doctor for outstanding scientific or artistic achievements. In exceptional cases, the title of Professor may be given to a person with a doctoral degree if it is justified by the highest quality of their scientific or artistic achievements. Progressing to further stages of one's career means involvement in research and publishing work not only in the country but also abroad. Therefore, it seems that people who have the title of Professor, due to their richer international, personal, and professional experience, will have a higher level CQ than people with a degree of Doctor and Habilitated Doctor. Hence, the hypothesis: H3: The scientific degree affects the level of cultural intelligence.

There are studies indicating that while learning a foreign language, one learns the culture of the country of its origin (Alon & Higgins, 2005). Ang et al. (2011) stated that individual language skills are positively related to the level of cultural intelligence. One can come across similar conclusions in the works of N. Harrison (2012). M. Tharapos noticed that academic teachers who communicate in more than one language have higher total CQ (Tharapos, 2015). It was decided to check if the said conclusions of the researchers can be confirmed in Polish conditions. The following hypothesis was formulated: H4: Knowledge of foreign languages affects the level of cultural intelligence.

According to K.A. Crowne, cultural exhibition in all forms affects Cultural Intelligence (Crowne, 2013). It can therefore be expected that experiences in the form of foreign trips are positively related to CQ. Engle and Crowne (2014) studies have shown that participation in a short-term international research programme lasting from 7 to 12 days causes a significant increase in the level of each of the four dimensions of CQ. It is hard to disagree with Ang et al. (2011) that not all international experiences are the same and that international experience must be significant enough to bring the effect. According to J. Eisenberg et al. (2013), significant international experience requires a stay abroad lasting at least 6 months. In these studies, considering a relatively low level of Polish teachers' participation in official foreign trips, it was assumed that in the assessment of cultural exhibition, even short, five-day foreign visits will be considered. The hypothesis regarding the dependence between the CQ level and

the number of countries in which the employee has been involved in international cooperation was formulated as follows: H5: There is a relationship between the CQ level and the number of countries in which an employee has stayed under international cooperation programs for at least 5 days

3. Methods

The empirical research carried out was quantitative. Methods such as surveys and analysis of organizational documentation were used. In May 2020, the consent of the authors of the scale measuring cultural intelligence (CQS) was obtained to use it in research and publications in scientific journals. This consent obliged the authors of the survey to place the following copyright information in the electronic copy of the survey and its subsequent publications:

© Cultural Intelligence Center 2005. Used by Permission of Cultural Intelligence Center. Note. Use of this Scale Granted to Academic Researchers for Research Purposes Only. For Information on Using The Scale For Purposes Other Than Academic Research (E.G., Consultants and Non-Academic Organizations), Please send an email to info@culturalq.com.

This copyright information was directly translated into Polish and used in an electronic CQS copy. CAWI (ang. Computer-Assisted Web Interview) type surveys were carried out in the period September – October 2020 to determine the teachers' CQ. A quantitative approach was decided upon, as it enables the collection of descriptive information and examines the relationship between variables. It also allows replication, generalization of results and comparison between groups (Creswell, Klassen, Clark, & Smith, 2013). Scientific staff of public economic universities in Poland constituted the group of respondents. No incentive was proposed to participate in the study. The relevant study was preceded by a pilot study, which resulted in the improvement of the research tool. Before collecting data, an email consent was obtained for the research from the rectors of all five public economic universities in Poland. Surveys were directed to internal mail to all academic teachers.

Due to the small number of completed surveys at Katowice University of Economics (7 replies) and Poznan University of Economics (2 replies), it was decided that these two universities would not be considered in the statistical analysis. Finally, teachers from three public economic universities were considered in the studies: Warsaw School of Economics (in short – SGH) (81 people), Krakow University of Economics (in short – EU Krakow) (64 people) and the Wroclaw University of Economics and Business (in short – EU Wroclaw) (61 people). Warsaw School of Economics is the oldest economic university in Poland and the biggest one (in terms of the number of employees and students). According to higher education rankings in Poland, it is also considered the best economic university in the country (Perspektywy, 2021).

Year by year, employees of the researched universities are becoming increasingly involved in international cooperation. Table 1 includes basic information on foreign mobility in the academic year 2018/2019. It can be clearly seen that SGH boasts the highest foreign mobility of their teachers – 695 people have travelled abroad, which is about 87% of all teachers. At the same time, the university analysed has been visited by just 32 visiting professors. The University of Economics in Wroclaw is the worst in the summary. Less than 17% of teachers have taken foreign trips, with the number of visiting professors (48) higher than in SGH.

Table 1.

Foreign mobility in the academic year 2018/2019

Specification	Warsaw School of Economics	Wroclaw University of Economics and Business	Krakow University of Economics
Number of teachers going abroad ^a /Total number of academics	695/800*	97/581*	616/748*
Number of visiting professors ^b	32	48	85

*approximate figures

Legend:

^aStaff departures include conferences, teaching, research, and training placements, Other (organisational, queries etc.), Erasmus Plus mobility; ^bArrivals include visiting professors under the teaching and Erasmus Plus programmes and research placements.

A total of 206 people took part in the study, representing approximately 10% of the total teacher population of each university. A detailed description of the sample is included in Table 2. The research was dedicated to Polish nationality teachers only, with women (57.8%) prevailing. The largest percentage of the people surveyed ranged in their age from 36-45 years old (36.4%), with a Doctor's scientific degree (46.1%). The smallest number of responses came from people 55+ years old (16%), with the scientific degree of Professor or Habilitated Doctor (8.3%).

Table 2.

Description of the sample (N = 206)

Specification	Number	Percentage of N in column
Sex	Female	57.8%
	Male	42.2%
Nationality	Polish	100.0%
University	SGH	39.3%
	UE Krakow	31.1%
	UE Wroclaw	29.6%
Age	up to 35 years	13.6%
	36-45 years	36.4%
	46-55 years	34.0%
	+55 years	16.0%
Scientific degree	Master of Science, engineer	16.5%
	Doctor	46.1%
	Habilitated Doctor	29.1%
	Professor, Doctor habilitated	8.3%

4. Results

In the statistical analyses carried out to measure the reliability of the research questionnaire, the Alfa Cronbach coefficient was calculated. Credibility tests were needed because the survey was translated into Polish and was used in a different culture and in a different period than the previously taken tests. The value of the scale in the educational measurement was adopted at 0.9 for the main scale for the acceptable resolution limit. Alpha Cronbach for the entire CQ scale of the translated questionnaire was 0.93.

Verification of research hypothesis

H1: There are no significant differences at the level of particular 4 dimensions of cultural intelligence (meta-cognitive, cognitive, motivational and behavioural) between the teachers of the university respondents.

In order to test the hypothesis regarding the lack of differences between the teachers of the universities, i.e. SGH Warsaw, the EU Krakow and the EU Wroclaw, in terms of the level of individual dimensions making up cultural intelligence, i.e. a meta-cognitive, cognitive, motivational and behavioural dimension, a single-factor analysis of variance was carried out for independent groups. The analysis showed the following:

- a statistically significant variable effect. University in a meta-cognitive dimension $F(2, 202) = 3.3473$, $p < 0.04$, $\eta^2 = 0.03$. The comparisons of post hoc with the help of the Bonferroni test revealed differences between two universities, i.e. SGH Warsaw and the EU Wroclaw ($p < 0.04$), which means that SGH Warsaw employees are characterized by a higher level of cultural intelligence at a meta-cognitive level ($M = 23.48$; $SD = 4.03$) than EU employees Wroclaw ($M = 21.64$; $SD = 4.36$);
- statistically significant variable effect. University in cognitive dimension $F(2, 202) = 6.6955$, $p < 0.002$, $\eta^2 = 0.06$. The comparisons of post HOC with the help of the Bonferroni test revealed differences between two universities, i.e., SGH Warsaw and the EU Wroclaw ($p < 0.001$), which means that SGH Warsaw employees are characterized by a higher level of cultural intelligence in the cognitive dimension ($M = 30.03$; $SD = 6.69$) than EU Wroclaw employees ($M = 25.89$; $SD = 7.04$);
- statistically significant variable effect. University in the motivational dimension $F(2, 202) = 6.9451$, $p < 0.001$, $\eta^2 = 0.06$. The comparisons of post hoc with the help of the Bonferroni test revealed differences between two universities: SGH Warsaw and the EU Wroclaw ($p < 0.001$), which means that SGH Warsaw employees are characterized by a higher level of cultural intelligence in the motivational dimension ($M = 28.26$; $SD = 5.44$) than EU Wroclaw employees ($M = 24.56$; $SD = 5.74$);

- effect at the level of a trend ($p < 0.06$). University in behavioural dimension $F(2, 202) = 2.9151$, $p < 0.06$, $\eta^2 = 0.03$. Post hoc comparisons with the help of the Bonferroni test revealed differences, but also at a trend level, between SGH Warsaw and the EU Wroclaw ($p < 0.07$), which means that SGH Warsaw employees are characterized by a higher level of cultural intelligence at a behavioural level ($M = 27.24$; $SD = 6.89$) than EU employees Wroclaw ($M = 24.66$; $SD = 6.29$). However, one needs to remember that this is a trend.

To check whether teachers of individual universities differ in the IC level, a single analysis of the variance was performed, which showed a variable effect of the University $F(2, 202) = 7.6$, $p < 0.001$, $\eta^2 = 0.07$. Comparisons of post hoc with a Bonferroni test showed a statistically significant difference between SGH Warsaw and the EU employees ($p < 0.001$) and the difference at a trend level ($p < 0.06$) between SGH Warsaw and EU employees (SGH Warsaw: $M = 108.96$; $SD = 19.28$, EU Krakow: $M = 101.48$; $SD = 18.72$, EU Wroclaw: $M = 96.74$; $SD = 18.28$). To test the hypothesis concerning a higher level of cultural intelligence of women compared to men, an analysis was carried out using a T test for independent tests. The results of this analysis did not show the gender effect and thus differences between women ($M = 103$; $SD = 19.3$) and men ($M = 103$; $SD = 19.7$) in terms of cultural intelligence $T(204) = 0.31$, COHEN'S $D = 0.04$. Women and men do not differ in terms of cultural intelligence. To test the hypothesis on the impact of the scientific degree on the level of cultural intelligence, a single analysis of the variance was performed, which showed a statistically significant effect of the variable "Scientific stage" $F(3, 201) = 1.2573$. There are no differences in the level of cultural intelligence between the groups distinguished on the basis of the scientific degree: Master's degree ($M = 102.79$; $SD = 16.69$), Doctor ($M = 102.31$; $SD = 18.71$), Habilitated Doctor $M = 101.72$; $SD = 21.96$), Professor Habilitated Doctor ($M = 111.65$; $SD = 17.99$). Respondents with varying scientific degrees are characterized by a similar level of cultural intelligence.

Table 3.

Data on the knowledge of foreign languages and the number of countries visited by employees under international cooperation programs (N = 206)

Specification		Number	Percentage of N in column
Number of foreign languages known (communicative level)	1	63	30.6%
	2	106	51.5%
	3 and more	37	18.0%
Number of countries visited within international cooperation for at least 5 days so far (student classes, training, or research project implementation)	0	46	22.3%
	1	36	17.5%
	2	32	15.5%
	3 and more	92	44.7%

Table 3 contains data on the knowledge of foreign languages and the number of countries visited by employees under international cooperation programs. In the study, people who can communicate in 2 foreign languages (51.5%) and people who have spent at least 5 days in three or more countries (44.7%) constituted the largest percentage. A scarce number of people declared knowledge of three or more foreign languages (18%) and a stay in two countries under international cooperation programs (15.5%). To test the hypothesis on the influence of foreign language skills on the level of cultural intelligence, a single analysis of the variance was made, which showed the effect of a variable knowledge of languages $F(2, 202) = 22.92, p < 0.001, \eta^2 = 0.18$. Comparisons post hoc with Bonferroni test showed statistically significant differences between individual groups ($p < 0.02$), i.e. people using one foreign language are characterized by a lower level of cultural intelligence ($M = 91.7; SD = 17.79$) than those who know two languages ($M = 105.45; SD = 18.68$), and yet those who know two languages are characterized by a lower level of cultural intelligence than those who know 3 and more languages ($M = 115.24, SD = 13.68$). The number of languages known at the communicative level varies the level of cultural intelligence; the more languages one knows the greater cultural intelligence they represent.

To investigate the relationship between the number of countries which the employee has visited under international cooperation programs for at least 5 days and the level of cultural intelligence, a single analysis of the variance was performed, which showed a statistically significant effect of the variable effect "Number of countries" $F(3, 201) = 13.08, p < 0.001, \eta^2 = 0.16$. Comparisons post hoc with Bonferroni test showed statistically significant differences between individual groups ($p < 0.01$), i.e. people who have not been to any country under international cooperation programs are characterized by a lower level of cultural intelligence ($M = 91.24; SD = 17.56$) than those who have visited one country ($M = 96.86; SD = 17.23$), and a lower level than those who have visited two countries ($M = 106.47; SD = 18.49$), and respectively, lower than those who have visited three and more countries ($M = 109.99; SD = 18.03$). The greater the number of countries visited by the respondents, the higher the level of their cultural intelligence.

5. Discussion

The choice of Polish public economic universities for the study was not accidental. These universities did not survey for cultural intelligence. Meanwhile, the literature emphasises that business schools should be sensitive to cross-cultural differences (Caporarello & Manzoni, 2020), as they are responsible for educating ethical and entrepreneurial leaders who think globally and also understand the systemic implications of business decisions (Business Education Jam, 2015). R. MacIntosh, Chairman of the Chartered ABS writing about the

contribution of business schools to the public good, stated: "The world faces big challenges on climate and social inclusion, the answers to which don't just lie in technological innovation. Scientific breakthroughs are important but not enough on their own - they need an interface with business research to ensure their transition to viable products and services for the benefit of society" (Chartered ABS and ITN Launch "Business Schools for Good" film, Chartered Association of Business Schools, n.d.).

The main purpose of the research was to diagnose the level of cultural intelligence of academic teachers of public economic universities in Poland. It was assumed in the research that teachers of three Polish universities are characterized by a similar level of cultural intelligence: H1: There are no significant differences with respect to the individual four dimensions of cultural intelligence (meta-cognitive, cognitive, motivational and behavioural) between employees of the universities (Krakow, Warsaw, Wroclaw).

The studies conducted have shown a difference in terms of the level of individual dimensions making up cultural intelligence, i.e., a meta-cognitive, cognitive, motivational and behavioural dimension, between the employees of SGH Warsaw and the EU Wroclaw and the difference at a trend level between SGH Warsaw and EU employees. The analysis showed that at each of the four dimensions, SGH Warsaw employees are characterized by a higher level of cultural intelligence components than employees of EU Wroclaw. On the other hand, employees of EU Krakow do not differ from the employees of SGH Warsaw and the EU Wroclaw. Further research and analysis should be carried out to determine what specific factors affect these differences, but it seems that it can be such factors as the mobility of academic staff or – more generally – the degree of the university's internationalization.

It is difficult to find research that would allow a comparison between the level of cultural intelligence of employees of Polish economic universities with employees of economic universities from other countries. Among the few researchers who have dealt with the CQ analysis of academic teachers are M. Tharapos (2015), who studied the level of CQ of Australian researchers dealing with accounting, as well as demographic factors that can affect CQ; and also the team A.M. Mahasneh, A.M. Gazo and O.A. Al-Adamat (2019), who compared the level of cultural intelligence of teachers and students of the University of Haszimid. Due to significant differences in the method and the scope of research, one can only make a very general comparison of the level of cultural intelligence of Polish academic teachers with the level of intelligence of the teachers from the University of Haszimid (Jordan). The results of the Jordanian teachers with respect to three dimensions: meta-cognitive, cognitive, and motivational are within the range between the result of teachers from SGH Warsaw and the EU Wroclaw, while the result concerning the behavioural dimension is higher in the case of teachers of the Haszimid University. This relatively better result in behavioural dimension may result from cultural conditions – Arab countries are characterized by different behaviour standards. Perhaps this is also the cause of differences in the level of CQ by gender, which will be mentioned in the next paragraph. H2: Women, regardless of the university researched, have higher cultural intelligence than men.

The results of the analysis carried out at economic universities in Poland did not show the gender effect and thus, no differences between women and men in terms of cultural intelligence were observed. These results are consistent with the results of Engle and Nehrt (2012) and Ward and Festcher (2008), who have not stated any statistically significant differences in cultural intelligence due to the gender variable. They differ from the results of Mahasneh et al. (2019), M. Bobanovic, J. Grzinic and MacNaba (2019), which showed differences between the level of cultural intelligence of women and men. The existing research on the relationship between gender and the level of CQ is ambiguous, hence further, in-depth tests in this respect are justified. H3: The scientific degree affects the level of cultural intelligence.

The studies conducted showed a statistically significant effect of the "Scientific Degree" variable in relation to the level of cultural intelligence. Researchers with various scientific degrees were characterized by a similar level of cultural intelligence. However, it can be assumed that the support of research on a larger test sample with equally distributed numbers of employee groups with certain scientific degrees would reveal some differences, as usually employees with a higher scientific degree have greater opportunities to participate in various forms of activities under international cooperation programs, and research confirms the positive influence of any type of cultural exposure on Cultural Intelligence (Crowne, 2013). H4: Knowledge of foreign languages affects the level of cultural intelligence.

The results of research carried out into Polish economic universities confirmed the hypothesis that knowledge of foreign languages at a communicative level varies the level of cultural intelligence; the more known languages declared, the greater cultural intelligence. These results are consistent with the findings of other researchers, including S. Ang et al. (2011), N. Harrison (2012) or M. Tharapos (2015). H5: There is a relationship between the IC level and the number of countries in which the employee has stayed under international cooperation programs for at least 5 days.

Research carried out into Polish economic universities revealed that their employees' CQ increases with the number of stays of an employee under international cooperation programs. There were significant differences between individual groups, i.e., people who have not visited any country under international cooperation programs are characterized by a lower level of cultural intelligence than those who have visited one country. Respectively, the people who have visited one country are characterised by a lower level than those who have visited two countries, and in turn, the people who have visited two countries are characterised by a lower level than those who have visited three or more countries. To some extent, these results are consistent with the findings of K. Crowne, who observed that the cultural exhibition in all forms had an impact on cultural intelligence (Crowne, 2013) and Engle and Crowne (2014), who observed that participation in a short-term international research program lasting from 7 to 12 days caused a significant increase in each of the four CQ components. A relatively low level of participation of Polish teachers in official foreign trips resulted in the fact that in the assessment of cultural exhibition all, even short, five-day foreign visits were considered,

without any differentiation. This fact, therefore, does not make it possible to refer to the proposition by Ang et al. (2011) that not all international experiences are the same and that international experience must be significant enough to bring the effect.

6. Conclusion

As it was observed in the introduction, there is no research regarding academic teachers, therefore, in this study, an attempt was made, at least to some extent, to fill in this research gap. The research showed that the level of cultural intelligence of teachers of economic universities in Poland is relatively high and slightly different between the three universities studied. In each of the four dimensions of CQ, SGH Warsaw employees are characterized by a higher level of cultural intelligence than EU Wroclaw employees. On the other hand, EU Krakow employees do not differ significantly from SGH Warsaw and EU Wroclaw employees. There was no correlation between two variables, i.e. gender and academic degree of lecturer and the CQ level. On the other hand, the number of languages known at a communicative level and the number of countries visited by the employee under international cooperation programs for at least 5 days is positively correlated with the level of cultural intelligence. It should be noted that some of the conclusions that have been described in detail in the article coincide with the results of international research carried out by other authors. Some of the conclusions are of a relatively innovative nature, such as the diagnosed correlation between the academic degree of lecturer and CQ. The authors believe that their research may inspire researchers from other countries to conduct more in-depth research to reveal organizational and individual mechanisms that affect the CQ level of academics and, consequently, the intercultural work environment, and the broadly understood internationalization process of universities. The conducted research does not entitle one to generalise conclusions to all types of universities. Further research among different kinds of universities, i.e. art, technical, military, medical, agricultural, theological and pedagogical universities, seems advisable to determine whether their teachers' level of cultural intelligence is similar or significantly different.

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References

1. Alon, I., & Higgins, J.M. (2005). Global leadership success through emotional and cultural intelligences. *Business Horizons*, 48(6), 501-512. <https://doi.org/10.1016/j.bushor.2005.04.003>.
2. Ang, S., Van Dyne, L., & Ling Tan, M. (2011). Cultural intelligence. In: S.B. Kaufman & R.J. Sternberg (Eds.), *The Cambridge Handbook of Intelligence* (pp. 582-602). New York: Cambridge University Press. Retrieved from https://culturalq.com/wp-content/uploads/2019/03/Ang_Van-Dyne_Tan-2011-Sternberg.pdf.
3. Bobanovic, M.K., & Grzinic, J. (2019). Teaching Tourism Students With Cultural Intelligence. *UTMS Journal of Economics*, 10(1), 85-95.
4. Boucher, G., Conway, C., & Van Der Meer, E. (2003). Tiers of engagement by universities in their region's development. *Regional Studies*, 37(9), 887-897. <https://doi.org/10.1080/0034340032000143896>.
5. Brancu, L., Munteanu, V., & Golet, I. (2016). Comparative Evidences of Cultural Intelligence Profile for Management and Non-Management Students. *Revista De Management Comparat International/Review Of International Comparative Management, Faculty of Management, Academy of Economic Studies*, 17(4), 308-319. Retrieved from <https://ideas.repec.org/a/rom/rmcimn/v17y2016i4p308-319.html>.
6. Business Education Jam (2015). *Reimagining Business Education. A World of Ideas*. Retrieved from https://efmdglobal.org/wp-content/uploads/Reimagining_Business_Education.pdf.
7. Callan, H. (2000). Higher Education Internationalization Strategies: Of Marginal Significance or All-Pervasive? The International Vision in Practice: A Decade of Evolution. *Higher Education in Europe*, 25(1), 15-23. <https://doi.org/10.1080/03797720050002161>.
8. Caporarello, L., & Manzoni, B. (2020). The Role of Business Schools and Their Challenges in Educating Future Leaders: Looking Back to Move Forward. In: N. Pfeffermann (Ed.), *New Leadership in Strategy and Communication* (pp. 209-226). Cham: Springer, https://doi.org/10.1007/978-3-030-19681-3_15.
9. Chan, S.J. (2013). Internationalising higher education sectors: Explaining the approaches in four Asian countries. *Journal of Higher Education Policy and Management*, 35(3), 316-329. <https://doi.org/10.1080/1360080X.2013.786854>.
10. Chartered ABS and ITN launch "Business Schools for Good" film - Chartered Association of Business Schools (n.d.). Retrieved from <https://charteredabs.org/chartered-abs-and-itn-launch-business-schools-for-good-film/>. 17.02.2022.
11. Chirileasa, I.C. (2013). University and insertion environment – progresses in the knowledge of relationship between the two entities. *Analele Universitatii Din Oradea – Seria Geografie*, 2, 321-332.

12. Creswell, J.W., Klassen, A.C., Clark, V.L.P., & Smith, K.C. (2013). Best Practices for Mixed Methods Research in the Health Sciences. *Qualitative Social Work.*, 12(4), 541-545.
13. Crowne, K. A. (2013). Cultural exposure, emotional intelligence, and cultural intelligence: An exploratory study. *International Journal of Cross Cultural Management*, 13(1), 5-22. <https://doi.org/10.1177/1470595812452633>.
14. Domański, T. (2017). Internacjonalizacja polskich uczelni wyższych Wprowadzenie. In: A. Stępień-Kuczyńska, A. Włodarska-Frykowska, & T. Domański (Eds.), *Internacjonalizacja polskich ośrodków politologicznych*. Wydawnictwo Uniwersytetu Łódzkiego. <https://doi.org/10.18778/8088-741-1.05>.
15. Earley, C., & Ang, S. (2003). *Cultural Intelligence: Individual Interactions Across Cultures*. Stanford: Stanford University Press.
16. Eisenberg, J., Lee, H.J., Brück, F., Brenner, B., Claes, M.T., Mironski, J., & Bell, R. (2013). Can business schools make students culturally competent? Effects of cross-cultural management courses on cultural intelligence. *Academy of Management Learning and Education*, 12(4), 603-621. <https://doi.org/10.5465/amle.2012.0022>.
17. Engle, R.L., & Crowne, K.A. (2014). The impact of international experience on cultural intelligence: an application of contact theory in a structured short-term programme. *Human Resource Development International*, 17(1), 30-46. <https://doi.org/10.1080/13678868.2013.856206>.
18. Engle, R.L., & Nehrt, C.C. (2012). Antecedents of Cultural Intelligence: The Role of Risk, Control, and Openness in France and the United States. *Journal of Management Policy and Practice*, 13(5), 35-47.
19. Francis, A. (1993). *Facing the Future: The Internationalization of Post-Secondary Institutions in British Columbia. Task Force Report*. Vancouver. Retrieved from <https://eric.ed.gov/?id=ED377759>.
20. Golubieva, T., Tutko, M., & Tutko, M. (2016). Internationalization in Polish and Ukrainian higher education : a comparative analysis. *Studia Ekonomiczne*, 269, 87-98.
21. Harrison, N. (2012). Investigating the impact of personality and early life experiences on intercultural interaction in internationalised universities. *International Journal of Intercultural Relations*, 36, 224-237. <https://doi.org/10.1016/j.ijintrel.2011.03.007>.
22. Hudzik, J.K. (2013). Changing paradigm and practice for higher education internationalisation. In: H. de Wit (Ed.), *An Introduction to Higher Education Internationalisation* (pp. 47-60). Milan: Vita e Pensiero. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.905.8413&rep=rep1&type=pdf>.
23. Kolano, A., & Olszewski, J. (2011). Poziom inteligencji kulturowej a jego związek z doświadczeniem międzynarodowym oraz oceną doświadczeń z innymi kulturami. *Przedsiębiorczość i Zarządzanie*, 12, (z. 4, Studia z zarządzania międzykulturowego), 52-69.
24. Le, H., Jiang, Z., & Nielsen, I. (2018). Cognitive Cultural Intelligence and Life Satisfaction

- of Migrant Workers: The Roles of Career Engagement and Social Injustice. *Social Indicators Research*, 139(1), 237-257. <https://doi.org/10.1007/s11205-016-1393-3>.
25. Locke, W., & Kim, T. (2010). *Transnational academic mobility and the academic profession*. Retrieved from Centre for Higher Education Research and Information. London: The Open University, <https://oro.open.ac.uk/>.
26. MacNab, B.R. (2012). An experiential approach to cultural intelligence education. *Journal of Management Education*, 36(1), 66-94. <https://doi.org/10.1177/1052562911412587>.
27. Mahasneh, A.M., Gazo, A.M., & Al-Adamat, O.A. (2019). Cultural intelligence of the Jordan teachers and university students from the Hashemite University: Comparative study. *European Journal of Contemporary Education*, 8(2), 303-314. <https://doi.org/10.13187/ejced.2019.2.303>.
28. Maliszewski, T. (2015). *Jak wykreować sukces uczelni. Budowanie przewagi konkurencyjnej na rynku edukacyjnym*. Warszawa: Oficyna a Wolters Kluwer business.
29. MNISW. (2015). Program Umiejdzynarodowienia Szkolnictwa Wyższego. Retrieved from <https://www.bip.nauka.gov.pl/komunikaty-rzeczniaka-prasowego-mnisw/program-umiedzynarodowienia-szkolnictwa-wyzszego.html>, 15.04.2021.
30. Ng, K.-Y., Van Dyne, L., & Ang, S. (2012). Cultural intelligence: A review, reflections, and recommendations for future research. *Conducting Multinational Research: Applying Organizational Psychology in the Workplace*, October, 29-58. <https://doi.org/10.1037/13743-002>.
31. Pabian, A., & Pabian, B. (2019). *Wielokulturowość w szkolnictwie wyższym. Zarządzanie i komunikacja z cudzoziemcami z perspektywy różnic kulturowych*. Warszawa: PWN SA.
32. Pabian, A., & Pabian, B. (2012). Internacjonalizacja polskich uczelni w aspekcie różnic kulturowych. *Nauka i Szkolnictwo Wyższe*, 2(40), 117-124. Retrieved from <https://pressto.amu.edu.pl/index.php/nsw/article/view/3295>.
33. Perspektywy (2021). Ranking Szkół Wyższych Perspektywy 2020. Retrieved from <https://ranking.perspektywy.pl/2020/ranking/ranking-uczelni-akademickich/types/uczelnie-ekonomiczne>, 12.05.2021.
34. Piwowarczyk, A.J. (2016). Istota i znaczenie inteligencji kulturowej w kontekście kształcenia uniwersyteckiego. *E-Mentor*, 1(63), 1-14. <https://doi.org/https://doi.org/10.15219/em63.1225>.
35. Plum, E. (2007). Cultural Intelligence - A concept for bridging and benefiting from cultural differences. Retrieved from https://kulturelintelligens.dk/Cultural_Intelligence_Plum.pdf, 28.03.2021.
36. Popowska, M. (2016). Internacjonalizacja szkolnictwa wyższego – uwarunkowania i przejawy w świetle faktów i liczb. *Horyzonty Wychowania*, 15(35), 131-154. <https://doi.org/10.17399/HW.2016.153507>.
37. Przytuła, S. (2019a). Ekspatriacja akademicka jako przejaw internacjonalizacji uczelni. *Przegląd Organizacji*, 10, 18-24. Retrieved from <https://www.researchgate.net/publication/>

- 339441201_Ekspatriacja_akademicka_jako_przejaw_internacjonalizacji_uczelni.
38. Przytuła, S. (2019b). Internacjonalizacja szkolnictwa wyższego - implikacje dla polskiej nauki. In: Ł. Sułkowski & R. Seliga (Eds.), *Internacjonalizacja i marketing Uniwersytetów* (pp. 295-321). Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
 39. Qiang, Z. (2003). Internationalization of Higher Education: towards a conceptual framework. *Policy Futures in Education, vol. 1*. Retrieved from https://www.researchgate.net/publication/225083424_Internationalization_of_Higher_Education_Towards_a_Conceptual_Framework.
 40. Ramis, M., Krastiņa, L., & Ramis Salas, M. (2010). *Cultural Intelligence in the School. 15(2)*, 239-252. Retrieved from www.ehu.es/revista-psicodidactica.
 41. Ryan, J.M. (2005). Improving teaching and learning practices for international students: implications for curriculum, pedagogy and assessment. In: J. Carroll & J. Ryan (Eds.), *Teaching International Students: Improving Learning For All* (pp. 92-100). London: Routledge. Retrieved from <https://research.monash.edu/en/publications/improving-teaching-and-learning-practices-for-international-stude>.
 42. Sá, M.J., & Serpa, S. (2020). Cultural dimension in internationalization of the curriculum in higher education. *Education Sciences, 10(12)*, 1-11. <https://doi.org/10.3390/educsci10120375>.
 43. Sejm (2018). Ustawa z dnia 20 lipca 2018 r. Prawo o szkolnictwie wyższym i nauce. Retrieved from <http://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20180001668/UD20181668Lj.pdf>, 10.04.2021.
 44. Suharli, Supriatna, N., Maryani, E., & Komalasari, K. (2019). *Profile Of Teacher's Strategy In Improving Student's Cultural Intelligence. 323* (ICoSSCE 2018), 95-99. <https://doi.org/10.2991/icossce-icsmc-18.2019.18>.
 45. Suharti, L., Handoko, Y.A., & Huruta, A.D. (2019). Linking Cultural Intelligence and Adaptive Performance: Do Intercultural Interactions and Host University Support™ Play Important Roles? *Business, Management and Education, 17(0)*, 36-48. <https://doi.org/10.3846/bme.2019.8831>.
 46. Teekens, H. (2003). The Requirement to Develop Specific Skills for Teaching in an Intercultural Setting. *Journal of Studies in International Education, 7(1)*, 108-119. <https://doi.org/10.1177/1028315302250192>.
 47. Tharapos, M.A. (2015). *Cultural intelligence in the transnational education classroom: The case of Australian accounting academics*. School of Accounting at RMIT University.
 48. Thomas, D.C., & Inkson, K. (2009). *Cultural Intelligence: Living and Working Globally*. San Francisco: Berrett-Koehler Publishers.
 49. Upton, S., & Butters, L. (2019). The importance of developing cultural intelligence. Retrieved from <https://www.universityworldnews.com/post.php?story=20191017135800899>, 30.03.2021.

50. Ward, C., & Fischer, R. (2008). Personality, cultural intelligence & cross-cultural adaptation: A test of the mediation hypothesis. In: S Ang & L. Van Dyne (Eds.), *Handbook of Cultural Intelligence: Theory, Measurement, and Applications* (pp. 159-173). Armonk: M.E. Sharpe, Inc.
51. Zelenková, A., & Hanesová, D. (2019). Intercultural competence of university teachers: a challenge of internationalization. *Journal of Language and Cultural Education*, 7(1), 1-18. <https://doi.org/10.2478/jolace-2019-0001>.