Alicja DUDEK[*]

CHANGES IN THE CULTURAL INTELLIGENCE OF STUDENTS AT CRACOW UNIVERSITY OF ECONOMICS[1]

Collaborating with people from different cultures at work went from being an exception to being the new norm. The work environment is becoming increasingly diversified due to global trends including migration, new technologies and the proliferation of remote work. Well-managed diversity can positively affect a company's financial performance, innovativeness or increased resilience. Concurrently organizations that do not have inclusive practices in place are wasting the potential of a cross-cultural environment. Employers are realizing the value of cultural intelligence (CQ), which allows employees to successfully cooperate in a culturally diversified team. CQ can increase over time, therefore students can develop their CQ already during their years at university. The focus of the study is to determine how the perception of CQ changes over time among management students at the Cracow University of Economics. The results of self-reported CQS suggest that students' assessment of their CQ has declined over time. The results also indicate that students possess the lowest levels of cognitive CQ out of all CQ facets. The last section covers recommendations for employers, on initiatives that can help current students and their future potential employees have a high CQ.

Keywords: competences, cultural intelligence, cultural competences, students' competences, Polish students, cross-cultural competences, CQ

1. INTRODUCTION

The ability to effectively communicate remains the quality that is sought after the most by employers (Patrício, Franco, 2022). The onset of globalization increased the value of intercultural communication even further. This study draws on the theoret-

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[*] Uniwersytet Ekonomiczny, Kolegium Nauk o Zarządzaniu i Jakości, Instytut Zarządzania, Katedra Zarządzania Kapitałem Ludzkim. ORCID: 0000-0002-2631-0133.

ical framework of cultural intelligence (CQ) to enhance understanding of the intercultural capabilities of future managers. The focus of the research is on the changing self-reported CQ of the management students at University of Economics in Cracow (CUE). It is measured using a Polish language version of the Cultural Intelligence Scale (CQS) (Barzykowski, Majda, Przyłęcki et al., 2019; Barzykowski, Majda, Szkup et al., 2019). The data for the research was collected via Computer-Assisted Web Interview (CAWI) from the students of the Faculty of Management at the CUE. The research is focused on management students because as future managers they need to be able to leverage the diversity of their team to enhance company performance.

The remainder of this paper is divided into four sections: a literature review on CQ, its impact on effectiveness in the workplace and its enhancement; then research design along with the methods section, followed by the results and conclusion.

2. LITERATURE REVIEW

2.1. Essential skills and competences

To ensure business success, employers are looking for perfect candidates that demonstrate the skills, knowledge and attitude germane to their industry. The rankings of competences that are in demand, may vary depending on the type of activity or the region where the research is conducted. In the last recent years, researchers moved from looking for the ideal manager with a universal set of skills and worked on creating competency frameworks for managers in specific industries, positions or contexts. An example of such a framework is Mikusova and Copíkova's (2016) work on competences expected from crisis manager: they need to be "resilient, problem solver, independent and flexible". Whereas managers working remotely need to prove they have following skills: "assertiveness, verbal and written communication; organization; self-management, ability to adapt easily to the use of Mobile Information Technologies, have multicultural sensitivity and their attitude has to be characterized by commitment, discipline, initiative for cooperation and collaboration" (Pereira, Freitas, 2019). Project managers are expected to be focused on project constraints, its results, on communication and team as well as be a problem solver (Radu, 2014).

Since the paper is focused on Polish students, the most recent reports on the most sought-after competences in Poland have been reviewed. The top five identified competence clusters are "responsibility, discipline, reliability; logical thinking and problem-solving; initiative; critical thinking and analytical skills; flexibility and resistance" (Manpower Group, 2021). Even though intercultural communication is not

mentioned explicitly, the qualities mentioned there are integral components of CQ. In one of the most comprehensive studies on the expectations regarding manager's competencies based on job offers in Poland it is shown that higher education, English proficiency and the ability to work under time pressure are among most frequently mentioned requirements (Wyskwarski, 2020).

Different countries and industries require very specific competency clusters, but communication skills remain present in almost all of them (Filipova, 2016; Li, 2021). The continual immigration and subsequent diversification of the work environment brought about the transformation: that basic communication skills will no longer suffice and CQ has become critical for business success (Avery, Thomas, 2004).

Polish students and graduates (including those from CUE) are not limiting their career choices to companies based in Poland. For this reason, they need to take into consideration not only the expectations of Polish employers but also the foreign ones. According to the most recent statistics on Polish emigrants, there were over 2 mil people living abroad, mostly in Germany, the UK and Holland (GUS, 2021). That is why the ability to work effectively in a culturally diverse work environment became so salient.

2.2. Cultural intelligence

The concept of cultural intelligence (CQ) was proposed by Earley and Ang (2003) who are also seminal authors in the field, with Ang (2007) inventing the Cultural Intelligence Scale (CQS). Earley and Ang (2003) define CQ as the personal ability to successfully operate in a culturally diverse environment. CQS is a 20-item inventory to measure the general level of CQ as well as the levels of four distinct aspects of CQ: cognitive, metacognitive, motivational and behavioural. The cognitive CQ refers to the ability to gather information regarding other cultures that allows individuals to understand the context during cross-cultural interactions. The vast number of cultures makes it impossible for an individual to have in-depth knowledge regarding every single society. Therefore, the cognitive CQ is defined as the ability to discern cultural differences and universals such as the natural need to sustain life and interact with others without reverting to stereotypes. A sample statement from the CQS included "I know the cultural values and religious beliefs of other cultures" for cognitive CQ (Shannon, Begley, 2008). Whereas the capability to change thinking patterns and re-examine the cultural assumptions is a sign of a high level of metacognitive CQ. A sample statement of the CQS included "I check the accuracy of my cultural knowledge as I interact with people from different cultures" for metacognitive CQ (Shannon, Begley, 2008). Motivational CQ reflects the ability to dedicate all resources to learning about cultural differences and appreciate their characteristics (Ang, Van Dyne, 2008). A sample statement of the CQS included "I am sure I can deal with the stresses of adjusting to a culture that is new to me" for motivational CQ (Shannon, Begley, 2008). Finally, the behavioural CQ covers the capacity

to exhibit adequate behaviour during cross-cultural interactions. A sample statement of the CQS included "I change my nonverbal behaviour when a cross-cultural situation requires it" for behavioural CQ (Shannon, Begley, 2008). Both verbal and non-verbal communication plays a crucial role during contact with individuals from other cultures and has to be adjusted depending on the interlocutor (Lustig, Koester, 2006).

The noticeable diversification of a work environment has led researchers to investigate its impact on performance. A number of studies showed that diversity can positively influence business results (for an exhaustive review, see Patrício and Franco, 2022). Others have suggested that diversity can lead to conflicts consequently hindering performance (Pelled, Eisenhardt, Xin, 1999). It was concluded that it depends on a wide range of factors whether the diversity has a beneficial or disastrous impact (Avery, Thomas, 2004). One important factor that was identified was the level of CQ of managers and employees.

The high CQ of team leaders managing culturally diverse teams leads to better team results (Nosratabadi et al., 2020). The level of CQ of team members also plays an important role in potentially enhancing job outcomes and decreasing the turnover rate (Aminullah et al., 2022). CQ has also been shown to moderate the competences of managers (Yazdanshenas, 2021). Since CQ consists of four dimensions some scientists focused on relations between specific aspects of CQ and employees' results, confirming that there is a positive relation between motivational CQ and the performance of employees (Gorji, Ghareseflo, 2011). Additionally, CQ is positively related to Cross-Cultural Job Satisfaction (CCJS) (Sozbilir, Yesil, 2016). However the CQ is not a panacea and a high level of managers' CQ is not enough to solve the problem of discrimination against migrants in the workplace (Charoensukmongkol, Phungsoonthorn, 2022).

The CUE graduates entering culturally diverse workplaces will be required to successfully cooperate and high CQ will facilitate coping with cross-cultural interactions. This study investigates how CUE students are assessing their CQ and how it changes over time. This study also looks at the specific results of four CQ dimensions.

3. METHODS

3.1. Hypothesis

CQ can be developed through training (Earley, Ang, 2003), experience (Poór et al., 2016) and "exposure to a foreign country that also includes encounters with members of different cultures" (Michailova, Ott, 2018). Including multicultural information in the curriculum, offering exchange programs and initiatives as well as foreign language courses have been proved to increase students' CQ. Especially internships abroad enhance one's CQ (Pereira, Vilas-Boas, Rebelo, 2020; Lambert Snodgrass, Hass, Ghahremani, 2021). Additionally, while first year subjects cover

the essentials, second and third year students attend specialized classes that also focus on international aspects. Therefore, studying at CUE that offers all of the above, should help in developing the CQ. Based on this evidence, the following hypothesis is suggested:

H1: Time spent at CUE is positively related to all levels of cultural intelligence.

The review of curricula of subjects offered at the Faculty of Management provides information about the classes conducted at each level and the possible inclusion of international aspects. During the first year of study, students acquire basic information and get to know the general picture of their field of study. With each year, subjects become more and more specific. Subjects relating to international issues appear mostly in the second and third years of study, providing students with information on other cultures. This structure primarily enhances the cognitive aspects of CQ, as it refers to the ability to gather information on different cultures, facilitating the understanding of the context during cross-cultural interactions. In the scenario where students are not participating in any exchange programs and other extracurriculars, only fulfilling the bare minimum to graduate, they still need to attend classes and are acquiring the knowledge that enhances their cognitive CQ.

H2: Studying at CUE has the most substantial impact on the cognitive aspect of CQ.

3.2. Data collection and sample

Self-reported CQS was used for this research. The scale consists of 20 questions, using the Likert scale as a base. Participants have answer choices ranging from $0 - I$ strongly disagree to $7 - I$ strongly agree. The Cronbach's alpha for the twenty-item scale was 0.885. Data analysed in this article came from two samples. The first sample was obtained in April 2021 from first-year undergraduate students from the Institute of Management at CUE – class of 2024. The second sample was obtained in April 2022 from first-year undergraduate students (class of 2025) as well as second-year undergraduate students (class of 2024).

Research on CQ among management students at CUE has been carried out for the second consecutive year to monitor the changes in self-assessed CQ. In April 2022 the online survey was distributed to all students at the Institute of Management. Some of the respondents were third-year students or were simultaneously second-year and third-year students because they were studying two different subjects and were excluded from the analysis. Some students from the class of 2024 that participated in the first phase of research in April 2021 did not participate in the subsequent phase and a number of students who did not participate in the first phase replied to the survey as second-year students. The results of students who participated in only one phase were taken into account in compiling the results.

All of the students had to participate in obligatory classes and they could participate in facultative activities. In the survey all participants were asked to disclose if

they partook in non-obligatory events e.g. exchange programs or international projects. However, the sample was too small to determine if any single factor affected the students' CQ. The first year bachelor students have less opportunities to enhance their CQ through extracurricular activities, since they cannot apply for many exchange programs, including Erasmus and the subjects covered during the first year are general in nature, providing introductory information.

The 81 results were obtained in the first phase of the research and 145 in the second phase of research – 75 answers from the first-year students and 70 answers from the second-year students. Finally, a fully completed CQS was analysed from a sample of 226 students.

Table 1. Demographics of the respondents that participated in the research in April 2022

Demographics of respondents	No of responses N =	% of responses
Gender	163	100.0
Female	107	65.6
Male	54	33.1
Nonbinary	2	1.2
Age		
<18	2	1.2
18-21	117	71.8
22-25	41	25.2
26-29	3	1.8
>30	–	
Type of programme		
Full-time	123	75.5
Part-time	40	24.5
Field of study		
Applied informatics (Eng.)	–	–
Applied informatics	4	2.5
Business innovations	–	–
Management and organizational engineering	8	4.9
International logistics	79	48.5
Marketing and communication	16	9.8
Modern Business Management (Eng.)	–	–
Accounting and controlling	16	9.8
Tourism and recreation	3	1.8
Management	19	11.7
Human resource management	19	22.7

Source: own elaboration.

4. RESULTS

The average level of CQ among the first-year students that joined the university in 2022 is lower in general (decreased from 5.09 to 4.71) and in each of the four aspects of CQ. The biggest difference is in motivational CQ that fell from 5.41 to 4.88 and the smallest discrepancy is shown in metacognitive and behavioural CQ. Metacognitive CQ remains the aspect with the highest results and cognitive CQ with the lowest results for both the first-year students starting in 2021 and 2022. A potential explanation for the considerable decrease in motivational CQ is the influence of the COVID-19 pandemic which largely prevented travelling for almost two years and consequently many cross-cultural interactions. Additionally, while there was a possibility to participate in exchange programs during the COVID-19 pandemic, many universities allowed only online classes. On one hand, it allowed CUE students to attend lectures in foreign languages and have remote classes with diverse groups, on the other hand, travel restrictions limited in-person interactions, some students joined lectures without leaving their home country.

Table 2. CQ Comparison between results of the class of 2024 in their first year and class of 2025 in their first year of studies

Calculation description	CQ Component	M First-year students in 2020/2021	SD	M First-year students in 2021/2022	SD
4 component average	CQS – overall result	5.09	1.44	4.71	0.82
4 item average	Metacognitive	5.47	1.26	5.22	0.98
6 item average	Cognitive	4.37	1.41	4.08	0.96
5 item average	Motivational	5.41	1.45	4.88	1.11
5 item average	Behavioural	5.08	1.64	4.86	1.29

M – mean, SD – standard deviation, CQS – Cultural Intelligence Scale, CQ – cultural intelligence (quotient).

Source: own elaboration.

The average results of students that participated in the research as first-year students and then as second-year students is lower in the second group. The aspect of CQ with the lowest score is cognitive CQ in both cases. However, there is a difference when it comes to the aspects with higher scores – in responses from the first sample the metacognitive aspect had the highest score whereas in the second sample the motivational aspect took its place. Out of all four aspects of CQ, cognitive CQ has decreased the most significantly and it is the only aspect rated below 4.0. The

perception of one's cognitive CQ has fallen drastically after one year of studying at university. The possible explanation is the Dunning-Kruger effect – after being exposed to many new concepts and ideas, students realized how much more they have to learn to become competent at coping with a culturally diverse environment. First year students have limited options to enhance their CQ, nevertheless they join the international academic community and are able to join students' organizations with a global focus such as AISEC.

Table 3. CQ Comparison between the results of class of 2024 in their first
and second year of studies

Calculation description	CQ Component	M First-year students in 2020/2021	SD	M Second-year students in 2021/2022	SD
4 component average	CQS – overall result	5.09	1.44	4.52	0.82
4 item average	Metacognitive	5.47	1.26	4.86	0.98
6 item average	Cognitive	4.37	1.41	3.87	0.96
5 item average	Motivational	5.41	1.45	4.96	1.11
5 item average	Behavioural	5.08	1.64	4.57	1.29

M – mean, SD – standard deviation, CQS – Cultural Intelligence Scale, CQ – cultural intelligence (quotient).

Source: own elaboration.

The results suggest that the expected increase in CQ after studying at CUE has not occurred, conversely the perception of one's own CQ has worsened over time. Additionally, comparing the results of first year students from two different academic years, it seems that one year junior students are not assessing their CQ as optimistically as their older colleagues.

5. CONCLUSION

In context of the results of this study it is clear that companies seeking competent management graduates will face a number of challenges. Unless management students dramatically improve their CQ during the last academic year, employers will not be able to find candidates that meet the job requirements and can confidently manage teams with a changing demographic composition. An increasing number of companies is committed to creating an inclusive climate and they seek people who will fit their organizational culture. Even the companies that are relatively homogenous will have to invest in cross-cultural training before the new-comers will be able

to successfully represent the company in any negotiations with overseas partners and customers. Summing up, if the students do not develop the necessary competences during the time spent at university, it will impact the recruitment process as finding suitable candidates will be harder and will therefore generate additional training costs for employers.

Both the first hypothesis (H1: Time spent at CUE is positively related to all levels of cultural intelligence) and the second one (H2: Studying at CUE has the most substantial impact on the cognitive aspect of CQ) were disproved. Sophomore students have lower self-reported CQ than freshmen. Despite the fact that CUE is offering ways to enhance one's CQ, the perception of the CQ has decreased after one year at university. It is worth noting that during the freshman year, students had classes via Zoom for 9 out of 10 months, which has affected their learning outcomes and prevented students from fully utilizing the opportunities to develop their CQ. Cognitive CQ remains the lowest rated aspect of CQ among sophomore students, despite attending more specialized, culture-oriented classes. The lack of improvement in this dimension is disturbing as it may increase the risk of following certain clichés or prejudices and forming negative biases and generalizations.

Recommendations for employers are twofold. To prevent the situation in which management graduates have low CQ, a future curriculum could be developed with input from businesses, ensuring that graduates will be well-equipped to handle diverse teams. Another form of cooperation between companies and universities for increasing employability is joint preparation of internships for students. However, companies do not have to rely on a university's willingness to cooperate as they can independently offer a trial period or training with an extra focus on cross-cultural cooperation.

This study contributes to understanding how a university education affects students' CQ. The limitation of the study is the number of participants and it should be accounted for when analysing the results. Additionally, since CUE has experienced an influx of migrants from Ukraine and other Eastern European countries, it would be advisable to ask participants about their nationality. Further studies on changes of students CQ should be considered in order to verify how this crucial capability can be improved before entering the labour market.

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ZMIANY W INTELIGENCJI KULTUROWEJ STUDENTÓW UNIWERSYTETU EKONOMICZNEGO W KRAKOWIE

Streszczenie

Praca w zróżnicowanym kulturowo zespole jest już nową normą ze względu na globalne trendy, w tym migracje, rozwój technologii i upowszechnienie się pracy zdalnej. Dobrze zarządzana różnorodność może pozytywnie wpłynąć na wyniki finansowe firmy, innowacyjność czy zwiększoną odporność. Jednocześnie organizacje, które nie stosują praktyk inkluzywnych, marnują potencjał zróżnicowanego środowiska. Pracodawcy zdają sobie sprawę, jak cenna jest inteligencja kulturowa, która pozwala pracownikom skutecznie współpracować w zróżnicowanym kulturowo zespole. Poziom tej inteligencji może z czasem wzrosnąć, dlatego studenci mogą ją rozwijać już w trakcie studiów na uniwersytecie. Celem badania jest określenie, jak zmienia się w czasie postrzeganie inteligencji kulturowej wśród studentów zarządzania na Uniwersytecie Ekonomicznym w Krakowie. Wyniki samooceny sugerują, że percepcja własnej inteligencji z czasem się pogorszyła. Wskazują też, że studenci najniżej oceniają swoją inteligencję w wymiarze kognitywnym. Możliwe wyjaśnienie wyników, sprzecznych z przyjętymi hipotezami, jest zawarte w ostatniej sekcji artykułu. Ostatnia część tekstu zawiera rekomendacje dla pracodawców dotyczące inicjatyw, które mogą sprawić, że przyszłe pracowniczki i pracownicy będą charakteryzowali się wysoką inteligencją kulturową.

Słowa kluczowe: kompetencje, kompetencje międzykulturowe, polscy studenci, kompetencje kulturowe, inteligencja kulturowa, kompetencje studentów