

I. ARTICLES

KÜBRA AKSAK

Bursa Technical University

FERYAL ÇUBUKÇU

Dokuz Eylül University

Exploring the cultural intelligence levels of bilinguals and multilinguals

ABSTRACT. There have been numerous studies conducted on the importance of multiple intelligence levels of learners and the significance of language learning. By contrast, this study dwells on exploring cultural intelligence, its components and the relationship between cultural intelligence and language learning. To achieve this aim, bilingual and multilingual primary school students were selected and administered a cultural intelligence questionnaire to detect whether or not there is a relationship between these two aspects. The results yield the fact that multilinguals have higher scores in cultural intelligence, showcasing that those who are open to other cultures and can easily adapt to new patterns of thinking are likely to learn languages with ease.

KEYWORDS: Cultural intelligence, primary school students, bilinguals, multilinguals.

1. INTRODUCTION

Cultural Intelligence is seen as a form of intelligence, just like social or emotional intelligence (Brislin, Worthley & Macnab 2006; Crowne 2009; Earley & Ang 2003; Gooden, Creque & Chin-Loy 2017; Kumar, Rose & Subramaniam 2008). Cultural Intelligence is related to people's capabilities across cultures (Ng & Earley 2006; Thomas 2006). Other types of intelligence tend to be involved in a particular aspect in a single cultural context. Cultural intelligence entails the ability to interact effectively with people who are culturally different hence, it is seen as "a specific form of intelligence focused on the ability to grasp, reason, and behave effectively in situations" (Bücker, Furrer & Lin 2015: 5).

Cultural intelligence has four components as stated by Bücker et al. (2015: 6) drawing on the notions by Ang, van Dyne and Koh (2006) and Ang et al. (2007) encompassing “a multidimensional construct with four dimensions: metacognitive, cognitive, motivational, and behavioral”. Metacognitive Cultural Intelligence is defined as “the person’s cultural consciousness and awareness of cultural cues during interactions with people from other cultural backgrounds and it is the process individuals utilize to understand the cultural knowledge of the local or the target cultures” (Bücker et al. 2015: 6). People with “metacognitive cultural intelligence consciously question their own cultural assumptions, reflect on these assumptions, and then move on to building up skills while interacting with people from other cultures” (Ang & van Dyne 2008: 3).

The second one, Cognitive Cultural Intelligence is regarded as a competence based on “the knowledge of norms, practices, and conventions used in different cultural settings, acquired through education and personal experience” and individuals make use of “the knowledge of the economic, legal, and social systems of different cultures along with the value systems” (Ang & van Dyne 2008: 3).

The third one, Motivational Cultural Intelligence embodies a capability to orient “attention and energy toward acquiring and functioning in situations where cultural differences” materialise and individuals encapsulating high motivational cultural intelligence have “an intrinsic interest in cross-cultural situations” and are successful in forming cross-cultural effectiveness (Ang & van Dyne 2008: 4). A high score on the motivational cultural intelligence dimension also reflects a high level of self-efficacy on behalf of the speakers (Ng & Earley 2006).

Finally, Behavioral Cultural Intelligence refers to the capability to showcase “appropriate verbal and nonverbal behavior” in interactions with people coming from different cultures and individuals embodying high behavioural cultural intelligence have the suitable behavioural pattern in “cross-cultural settings as they demonstrate good verbal and nonverbal communication characteristics” and capabilities (Ang & van Dyne 2008: 4). They also have the capacity to use culturally appropriate words, tones, gestures, and facial expressions at the right time in the right place (Ang et al. 2007).

The relationship between cultural intelligence and language learning seems to be a field drawing the attention of researchers for a long time (Barac & Bialystok 2012; Bialystok 2009, 2010; Goh 2012; Gross & Dewaele 2018; Petrossian 2020; Oxford & Cuellar 2014). The studies yield the result that language learners are likely to be more successful learners if they have high cultural intelligence levels. Hence, this research is designed with the aim to find out whether bilingual or multilingual primary pupils have higher cultural intelligence levels or not.

Bilingualism is defined as the ability to operate on two different languages whereas multilingualism is the use of more than two languages, which are be-

lieved to be connected to cognitive operations (Bialystok, Barac, Blaye & Poulin-Dubois 2010). The effects of bilingualism on cognitivist characteristics and questioning skills have only recently become a topic of research (Bialystok & Martin 2004; Bialystok et al. 2010; Costa, Hernández & Sebastián-Gallés 2008; Mezzacappa 2004). From the beginning, bilingual research has been concerned with the domains of linguistic and metalinguistic performance. This notion highlights an understanding that bilingualism must have an impact on linguistic performance. One of the earliest studies showed that bilingual kids might experience mental confusion compared to monolingual kids (Saer 1923). The later studies maintain that monolingual and bilingual children do not show differences in non-verbal intelligence (Bialystok 1986, 1993, 2001, 2010; Peal & Lambert 1962) which set the stage for finding cognitive benefits of bilingualism or at least for refuting the old hypothesis of the disadvantages of bilingualism. Some studies have showcased that the experience of speaking two languages on a daily basis has consequences for how higher cognitive processes operate and result in more precocious development of attentional abilities. Therefore, multilingualism is taken into account in this study to verify whether individuals knowing more than two languages have higher cultural intelligence levels by addressing the following question: "What are the cultural intelligence levels of bilinguals and multilinguals?"

2. METHODOLOGY

2.1. Setting and participants

Turkey has been the country holding the largest number of immigrants worldwide since 2010. It is believed that there are more than 10 million refugees mostly from Syria, Iran and Afghanistan living in Turkey. The National Bureau of Immigration of Turkey states that in 2021, 3,688,238 Syrian refugees were offered citizenship status (Turkey Immigration Office Website) with millions waiting for being accepted as citizens. Most of them represent young demographics: the number of those aged between 15–24 is 743,005 and those under 10 years of age total 1,068,293 constituting 28.5% of the Syrians. Since these children were born in Turkey, they could speak and communicate with their counterparts successfully.

30 primary school pupils who are fourth graders aged between nine and ten studying in the south-east of the country participated in the present study voluntarily as the consent forms were obtained from their parents. Especially those cities near the Syrian border have large populations of primary school pupils with a minimum one third or fourth of the class being Syrian children born and raised in Turkey. This study was conducted with 19 bilingual and 11

multilingual learners of English. Bilingual students know Turkish and are in the process of learning English. On the other hand, multilingual students who know Turkish have already acquired either Arabic or Kurdish language as their mother tongues and they are learners of English as the third one. Out of 11 multilingual learners, 8 were Syrian (speaking Syrian as their mother tongue, Turkish with the B2 level and English with the A level proficiency) and 3 were Kurdish (speaking Kurdish as their mother tongue, Turkish with a high level of communicative competence and without accent and English with the A level proficiency).

2.2. Instrument

The main aim of this study was to investigate the correlation between cultural intelligence levels of bilingual and multilingual primary school students, so the data were obtained through "Cultural Intelligence Scale (CQS)" by Ang et al. (2006: 51) including 4 sub-dimensions which are metacognitive, cognitive, motivational and behavioural cultural intelligence. When it comes to the reliability coefficient of this scale, it was reported that the reliability scores exceeded 0.70 (metacognitive CQ=0.77, cognitive CQ=0.84, motivational CQ=0.77, behavioural CQ=0.84).

2.3. Procedure

As a first step, all 30 primary school pupils, fourth graders, and their parents were informed about the aim of this study. It was guaranteed that there would be no risk of harm to participants since children are vulnerable to exploitation. It was also ensured that data confidentiality would be maintained. When the consent forms were obtained from the participants, parents and the Ethics Committee approved of the researchers' study on primary school pupils, the cultural intelligence scale was administered to the students during their English class. By creating a comfortable classroom atmosphere, it was aimed that students would answer the items on the scale without any pressure. Each item was explained in detail to the pupils. Furthermore, they were asked to write the languages they know to reveal whether bilingual or multilingual students have a higher level of cultural intelligence.

2.4. Data analysis

The data collected from primary schoolers via the cultural intelligence scale were analysed through Statistical Package for the Social Sciences (SPSS) pro-

gramme. In this programme, the descriptive statistics showing mean scores and standard deviations of cultural intelligence including cognitive, metacognitive, motivational and behavioural cultural intelligence components were run to discover the cultural intelligence levels of bilingual and multilingual participants. Moreover, bilingual and multilingual participants' cultural intelligence levels were compared through independent samples t-tests to find out whether there is a significant difference between them or not.

3. RESULTS

The descriptive statistics displayed in Table 1 shows that the statement "I enjoy living in cultures that are unfamiliar to me" is the most popular item marked by bilingual participants with the highest mean score (2.47) representing their motivational cultural intelligence. "I know the legal and economic systems of other cultures" (1.15) falls into the least popular statement marked by bilinguals showing their cognitive cultural intelligence.

On the other hand, "I alter my facial expressions when a cross-cultural interaction requires it" (2.81) is the most frequently chosen item by multilingual primary school pupils referring to their behavioural cultural intelligence. However, "I know the legal and economic systems of other cultures" (1.45) was found to be the least popular item marked by multilingual learners as seen in Table 1 below.

Table 1. Descriptive statistics for cultural intelligence of bilingual and multilingual primary school students

Vocabulary Learning Strategies	Bilingual	Students	Multilingual	Students
	Mean	Std. Deviation	Mean	Std. Deviation
I am conscious of the cultural knowledge I use when interacting with people from different cultural backgrounds.	1.42	0.60	2.27	0.64
I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.	1.78	0.63	2.36	0.80
I am conscious of the cultural knowledge I apply to cross-cultural interactions.	2.26	0.73	2.36	0.67
I check the accuracy of my cultural knowledge as I interact with people from different cultures.	1.78	0.78	2.27	0.78
I know the legal and economic systems of other cultures.	1.15	0.37	1.45	0.68

Vocabulary Learning Strategies	Bilingual	Students	Multilingual	Students
	Mean	Std. Deviation	Mean	Std. Deviation
I know the rules (e.g. vocabulary, grammar) of other languages.	1.21	0.41	1.72	0.46
I know the cultural values and religious beliefs of other cultures.	1.42	0.50	1.63	0.50
I know the marriage systems of other cultures.	1.68	0.58	2.00	0.63
I know the arts and crafts of other cultures.	1.63	0.76	2.00	0.44
I know the rules for expressing non-verbal behaviors in other cultures.	1.47	0.61	1.90	0.83
I enjoy interacting with people from different cultures.	2.10	0.80	2.72	0.64
I am confident that I can socialize with locals in a culture that is unfamiliar to me.	1.52	0.61	2.18	0.75
I am sure I can deal with the stresses of adjusting to a culture that is new to me.	1.57	0.76	2.36	0.80
I enjoy living in cultures that are unfamiliar to me.	2.47	0.69	2.27	0.78
I am confident that I can get accustomed to the shopping conditions in a different culture.	1.84	0.76	2.27	0.78
I change my verbal behavior (e.g. accent, tone) when a cross-cultural interaction requires it.	2.21	0.91	2.63	0.67
I use pause and silence differently to suit different cross-cultural situations.	2.15	0.68	2.63	0.67
I vary the rate of my speaking when a cross-cultural situation requires it.	2.26	0.87	2.18	0.75
I change my non-verbal behavior when a cross-cultural interaction requires it.	2.26	0.93	2.63	0.67
I alter my facial expressions when a cross-cultural interaction requires it.	1.94	0.84	2.81	0.40

Source: This research drawing on "Cultural Intelligence Scale (CQS)" by Ang et al. (2006: 51).

After providing the descriptive statistics, the researchers tried to investigate whether bilingual or multilingual primary school students differ in their level of cultural intelligence. In this respect, the mean of overall cultural intelligence levels for bilingual students was found to be 1.81, whereas the mean of overall cultural intelligence levels for multilingual students was found to be 2.23. Hence, multilinguals' cultural intelligence level is higher than that of bilinguals which implies that there is a statistically significant difference between their cultural intelligence levels ($t = 4.11$, $p = 0.00 < 0.05$) as seen in Table 2.

Table 2. Results of independent samples *t*-test for cultural intelligence levels of participants

Group	<i>N</i>	<i>X</i>	<i>S</i>	<i>DF</i>	<i>T</i>	<i>P</i>
Bilingual Students	19	1.81	.29	28	4.11	.00
Multilingual Students	11	2.23	.22	0	0	0

**p* < .05

Source: current study.

As the third inquiry, bilingual and multilingual primary schoolers were compared in terms of their metacognitive cultural intelligence levels and it was detected that there is a statistically significant difference pointing out that multilinguals have a higher level of metacognitive cultural intelligence ($t=3.69$, $p = 0.01 < 0.05$) as seen in Table 3.

Table 3. Results of independent samples *t*-test for metacognitive cultural intelligence levels of participants

Group	<i>N</i>	<i>X</i>	<i>S</i>	<i>DF</i>	<i>T</i>	<i>P</i>
Bilingual Students	19	1.8	.34	28	3.69	.01
Multilingual Students	11	2.31	.38	0	0	0

**p* < .05

Source: current study.

Similarly, the comparison between cognitive cultural intelligence levels of bilingual and multilingual students indicated that there is a statistically significant difference between their scores ($t = 3.11$, $p = 0.04 < 0.05$) as seen in Table 4 below. It can be interpreted that multilingual learners have a higher cognitive cultural intelligence level than bilingual participants.

Table 4. Results of independent samples *t*-test for cognitive cultural intelligence levels of participants

Group	<i>N</i>	<i>X</i>	<i>S</i>	<i>DF</i>	<i>T</i>	<i>P</i>
Bilingual Students	19	1.42	.28	28	3.11	.04
Multilingual Students	11	1.78	.33	0	0	0

**p* < .05

Source: current study.

Nevertheless, it is noteworthy to stress that there was no statistically significant difference between bilingual and multilingual students' levels of motivational cultural intelligence ($t = 2.80, p = 0.09 > 0.05$) as shown in Table 5 below.

Table 5. Results of independent samples *t*-test for motivational cultural intelligence levels of participants

Group	N	X	S	DF	T	P
Bilingual Students	19	1.90	.46	28	2.80	.09
Multilingual Students	11	2.36	.36	0	0	0

* $p < .05$

Source: current study.

The findings revealed that bilingual participants' behavioural cultural intelligence level is low when it is compared to that of multilingual participants, implying a statistically significant difference between bilingual and multilingual primary schoolers in relation to behavioural cultural intelligence ($t = 2.21, p = 0.03 < 0.05$) as stated in Table 6.

Table 6. Results of independent samples *t*-test for behavioural cultural intelligence levels of participants

Group	N	X	S	DF	T	P
Bilingual Students	19	2.16	.52	28	2.21	.03
Multilingual Students	11	2.58	.42	0	0	0

* $p < .05$

Source: current study.

4. DISCUSSION

To compare bilingual and multilingual primary school pupils' cultural intelligence levels, the fourth graders were given a cultural intelligence scale designed to discover any differences in terms of their cognitive, metacognitive, motivational and behavioural cultural intelligence levels. The findings obtained from the scale were discussed in detail to gain a deeper insight into bilingual and multilingual primary school students' cultural intelligence levels in relation to four components one by one.

The findings point to the statement "I enjoy living in cultures that are unfamiliar to me" (2.47) as the most popular item among bilingual primary school students showing their empathy for being a part of different cultural contexts.

This is in line with the study of Oxford and Cuéllar (2014) who investigate the psychology of five Mexican language learners of Chinese crossing cultural and linguistic borders in terms of PERMA model which is a modern view of well-being and state that Mexican students enrich positive attitudes towards a new culture and become more open-minded to discover values and histories of target language community during their learning process of Chinese as a second language. In a similar vein, "I vary the rate of my speaking when a cross-cultural situation requires it" (2.26), "I change my non-verbal behaviour when a cross-cultural interaction requires it" (2.26) and "I am conscious of the cultural knowledge I apply to cross-cultural interactions" (2.26) are the items chosen frequently by bilingual participants of the present study. In this respect, Peal and Lambert (1962) show that the impactful intellectual functioning of bilingual children is higher than that of monolinguals and highlight the connections among bilingualism, class performance and positive attitudes of children. Their findings stress that bilinguals have better performance in both verbal and nonverbal intelligence, implying their high level of mental flexibility and awareness of the second language community.

When it comes to the multilingual students, the item stating "I alter my facial expressions when a cross-cultural interaction requires it" (2.81) comes to the forefront, which is considerably in line with the study of Bernardo and Presbitero (2018) who emphasise that speaking a second language and living in its culture offer multilinguals insights into the communication styles of people from a great variety of cultures. Furthermore, the items stating "I change my verbal behavior (e.g. accent, tone) when a cross-cultural interaction requires it" (2.63), "I use pause and silence differently to suit different cross-cultural situations" (2.63), "I change my non-verbal behavior when a cross-cultural interaction requires it" (2.63) and "I enjoy interacting with people from different cultures" (2.72) take place at the top among all the items marked by multilingual primary school pupils to represent their cultural intelligence. This suggests that multilinguals have already developed a high level of cross-cultural awareness allowing them to speak and behave appropriately in different cultural settings as signalled in other studies (Contini & Maturò 2010; Goh 2012; Juliánto & Subroto 2019). Accordingly, multilinguals are better equipped with the necessary skills for adaptation to cultures that are unfamiliar to them.

In the present study, the mean score of overall cultural intelligence level for multilingual students is found to be higher than that of bilingual students, suggesting that there is a statistically significant difference in their cultural intelligence levels, which complies with the studies carried out in this research area (Ang & van Dyne 2008; Daddino 2019; Dewaele, Heredia & Cieślícka 2020; Petrossian 2020). The reasons for this difference can be attributed to both the

number of languages participants know and the amount of language learning experience they have, which increases their cultural flexibility enabling them to sympathize with people who have different values and mindsets. The bidirectional relationship between culture and language implies that learning a new language brings along the knowledge of a new culture (Peal & Lambert 1962). Correspondingly, multilingual participants have an advantage over their bilingual peers in terms of appreciation of other cultures.

The detailed comparison of bilingual and multilingual primary school pupils' cultural intelligence levels pointed out that there is a statistically significant difference between their metacognitive, cognitive and behavioural cultural intelligence levels, which corroborates the previous studies conducted in this field (Canbay 2020; Chibaka 2018; Hofer & Jessner 2019). First of all, a higher level of metacognitive cultural intelligence in favour of multilingual primary schoolers was emphasised. This may be due to the fact that multilingual participants whose mother tongue is Kurdish or Arabic come into contact with Turkish culture while speaking that language proficiently, which paves the way for multilinguals to develop cultural consciousness. In their study, Hofer and Jessner (2019) compared the metalinguistic awareness of multilingual young learners at the primary level with their bilingual peers and laid stress on the superiority of multilinguals over bilinguals. Namely, multilinguals analyse their own language and culture, then they reflect on their analysis to apprehend their communication process with people from other cultures, which ends up with a higher level of metacognitive cultural intelligence.

With reference to the cognitive cultural intelligence representing the knowledge of economic, legal and social systems of a given culture, multilinguals score higher than bilinguals. At that point, Hofer (2021) states in her study of primary school pupils in different multilingual contexts that childrens' experience with various cultures enables them to expand their horizons in comparing and understanding cultural concepts. On the ground that multilinguals are rich in experience with another culture, multilingualism leads to both a creative thinking ability and an awareness of the social environment, which comes up with cognitive advantages on behalf of multilingual children.

At the level of behavioral cultural intelligence, multilingual primary schoolers are more successful than their bilingual peers, which yields similar results to the study of Barac and Bialystok (2012), which focused on six-year-old children and showed that speaking additional languages enables young learners to perform higher on both verbal and nonverbal tasks. The ability of multilingual participants to utilize culturally appropriate words and gestures is, in fact, an expected result as they grasp linguistic and social cues to maintain their com-

munication effectively by taking into consideration cross-cultural differences and similarities (Ang & van Dyne 2008).

However, regarding the motivational cultural intelligence levels, there is not a statistically significant difference between bilingual and multilingual primary school children. In this vein, Gross and Dewaele (2018) aimed to reveal the differences between bilingual and multilingual primary school pupils in relation to their attitudes towards social and cultural values. Although this study shows that bilinguals are not advantaged in this respect, Gross and Dewaele (2018) highlighted the conclusion that contrary to expectations, bilinguals have an inner drive to change in compliance with new cultural values. Put differently, they are more willing to learn about cultural differences and internalise them, giving rise to their high level of self-efficacy to anticipate and manage the challenges arising from different perspectives and insights in intercultural situations.

5. CONCLUSION

The present study has attempted to probe whether bilingual and multilingual primary school pupils differ from each other in their cultural intelligence levels including cognitive, metacognitive, behavioural and motivational cultural intelligence. Exploration of the correlation between cultural intelligence levels of bilinguals and multilinguals carried out through the cultural intelligence scale shows an overall superiority of multilingual participants.

The results of the study also showed statistically significant differences in the levels of cognitive cultural intelligence, metacognitive cultural intelligence and behavioural cultural intelligence in favour of multilingual primary school students. The fact that multilingual participants outperform bilinguals in the ability to rebuild their mindsets with the intention of meeting the requirements of cross-cultural situations takes its source from their increased interactions with another culture and its people. Nevertheless, it is important to emphasise the absence of a statistically significant difference between multilinguals and bilinguals in the level of motivational cultural intelligence, which can be ascribed to the assumption that both bilingual and multilingual primary school pupils are motivated to adapt to unfamiliar cultures and socialise within new cultures.

In light of these findings, the present study provides implications that further research should be carried out to see the underlying factors affecting their cultural intelligence. Based on these predictors of their cultural intelligence, it is essential to bring educational programs forefront for primary school pupils to gain control over challenging cross-cultural situations.

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KÜBRA AKSAK
Bursa Technical University
k.aksak@hotmail.com
ORCID: 0000-0001-5106-4686

FERYAL ÇUBUKÇU
Dokuz Eylül University
cubukcu.feryal@gmail.com
ORCID: 0000-0003-3313-6011

Badanie poziomu inteligencji kulturowej u osób dwujęzycznych i wielojęzycznych

ABSTRAKT. Przeprowadzono wiele badań na temat znaczenia poziomu inteligencji wielorakich u uczących się oraz ich znaczenia dla uczenia się języków obcych. Natomiast niniejsze studium koncentruje się na badaniu inteligencji kulturowej, jej składników oraz związku pomiędzy inteligencją kulturową a nauką języków obcych. Aby osiągnąć ten cel, wybrano dwujęzycznych i wielojęzycznych uczniów szkoły podstawowej, którzy zostali poddani badaniu kwestionariuszem inteligencji kulturowej w celu ustalenia, czy istnieje związek między tymi dwoma aspektami. Wyniki pokazują, że osoby wielojęzyczne mają wyższe wyniki w zakresie inteligencji kulturowej, co może świadczyć o tym, że ci, którzy są otwarci na inne kultury i potrafią łatwo przystosować się do nowych schematów myślenia, prawdopodobnie z większą łatwością uczą się języków.