Assessment of international-mindedness in International Baccalaureate Diploma Program schools: A comparative study in different school contexts in Turkey

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This study investigated International Baccalaureate Diploma Program students' perceptions of international-mindedness. The research used quantitative methods to explain perceptions of international-mindedness within three participating schools (two national schools and one international school) in Istanbul, Turkey. Using the conceptual framework of international-mindedness developed by Singh and Qi, the study applied a pre and post-test design to measure intercultural understanding and global engagement with Intercultural Development Inventory and Global-Citizenship Scale, respectively. The study compared data from schools with a Turkish (national) student body to a school that had international students and found no significant difference between and among students' pre and post levels of intercultural understanding and global engagement in terms of improvement after one year of International Baccalaureate Diploma Program education. The study provides important implications for practice to the other researchers and educators about the conceptualization, implementation, and assessment of international-mindedness for promoting global-citizenship pedagogy in different school contexts.

Keywords: Global engagement; International Baccalaureate; intercultural understanding; international education; international-mindedness

INTRODUCTION

'International education' is multilingual, multicultural learning environments where students study globally focused curriculum. Objectives of an international education are to celebrate diversity as desirable for improving the human condition, to promote understanding and respect for one's own and for other cultures, to encourage a knowledge of issues of global concern, to recognize the benefits of a humanist education, and to share with others an understanding of the human condition (Walker, 2002). International education can be provided through "values education for peace, conflict resolution skills, respect for cultural heritage and the environment and intercultural understanding" (Hill, 2012, p. 342).

One of the international education providers, the International Baccalaureate (IB), is a non-profit educational foundation that currently works with almost 5,000 schools in 150 countries to provide young people with academically rigorous educational programs (Primary Years Program, the Middle Years Program, and the Diploma Program (DP)).

The IB curriculum was designed to facilitate transnational mobility and internationalist perspectives: "a curriculum without borders, governed and operationalized beyond the nation" (Doherty, 2009 p. 2). The IB has originally served for "facilitating routes for transnational mobility of a cosmopolitan middle class" (Doherty, 2009, p. 5), but now it is also "strategically deployed to engage the local middle class consumer" (Doherty, 2009, p. 14). From this point of view, it may be critiqued that the appeal of the IB education may not be because it promotes cosmopolitanism, but perhaps because of the transnational capitalist class lifestyle or a global middle class concerned with their own positional advantages. This view is also supported by Quentin (2016) who examined the contribution of the IBDP to the reproduction of social inequality in Australia. Social inequality occurs due to providing education to privileged social groups who can afford the IB education or due to presenting superior opportunities to IB students. Maire (2015) illustrates that "economic and cultural capitals statistically function as *objective selection criteria* for enrolment that DP students tend to come from families possessing both cultural and economic capitals" (p. 191). Therefore, Maire (2016) puts forth the idea that a new form of educational differentiation is needed to devise a fairer distribution of educational chances for students.

Yet, the IB was designed to help students become engaged, internationally-minded world citizens who are active, compassionate, lifelong learners (IBO, n.d.). As stated in the mission statement of the IBO (IBO, n.d.), it aims to "develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding" (para. 4). Therefore, the development of an appreciation of other cultures and the ability to learn from them; in other words, international-mindedness is central to the ideals of the IB programs and international education.

So, what is 'international-mindedness'? International-mindedness can be defined as an openness to and curiosity about the world and people of other cultures and a striving towards a profound level of understanding of the complexity and diversity of human interactions. It could be defined in aspects such as multilingualism, intercultural understanding and global engagement (Castro et al., 2013). International-mindedness is described by the IB through the attributes in the IB Learner Profile. The IB Learner Profile covers all age groups through the IB Primary Years Program (PYP), the Middle Years Program (MYP) and the DP. It indicates the features that an internationally-minded person should ideally possess and, therefore, provides a framework for fostering international-mindedness. The IB Learner Profile identifies international-mindedness as the "continuum of international education, so teachers, students and parents can draw confidently on a recognizable common educational framework, a consistent structure of aims and values and an overarching concept of how to develop international mindedness" (IBO, 2006). The IB Learner Profile is a focus of developing a sense of continuum between the three programs and considered as a map to pursue international-mindedness (Wells, 2011). More specifically, international-mindedness can be developed in different aspects of students' education continually through curricular, co-curricular, and extracurricular activities. Metli et al. (2019) provides some examples of how students can develop their international-mindedness. For example, first, language learning activities may develop students' multilingualism; second, social responsibility (service) projects conducted as part of Creativity, Activity and Service (CAS) program may develop students' global engagement; third, the texts students study in the Group 1 and 2: Language and Literature courses from international authors will help students to

have intercultural interactions between one another; last, Theory of Knowledge conferences or Model United Nations conferences may develop students' intercultural understanding.

However, in reviewing the literature in the field of international education, it is clear that the assessment of international-mindedness has not undergone detailed investigation, as it deals predominantly with conceptualizations and reflective interpretations on international-mindedness. The purpose of the study reported in this paper is to provide more detailed investigation and shed light on the assessment of international-mindedness in the IBDP in a comparative way, in different school contexts. Specifically, the study analysed how students' levels of international-mindedness changed after one full year of DP and compare the patterns of improvement among IB schools in terms of intercultural understanding and global engagement.

The research study by Singh and Qi (2013), which is the basis of the conceptual framework of international-mindedness for this study, provides an account of the conceptualization of international-mindedness and existing instruments for assessing it. Based on a systematic analysis of official IB documents about international-mindedness, a comprehensive literature review on international-mindedness and other related constructs in the field, Singh and Qi (2013) note that, in the IB documents, international-mindedness is explicitly manifested in the three pillars of international-mindedness: multilingualism, intercultural understanding, and global engagement, which are embedded in the IB Learner Profile. Singh and Qi (2013) also identified a variety of instruments that have been used related to assessing international-mindedness, including: The Global-Mindedness Scale (GMS) (Hansen, 2010, p. 22–23, as cited by Singh & Qi, 2013); The Global Perspective Inventory (GPI) (Merrill, Braskamp & Braskamp, p. 356, as cited by Singh and Qi, 2013); The Global Competence Aptitude Assessment (GCAA) (Global Leadership Excellence, n.d., p. 2, as cited by Singh & Qi, 2013); The Global-Citizenship Scale (GCS) (Morais & Ogden, 2010, as cited by Singh & Qi, 2013) and; The Intercultural Development Inventory (IDI) (Bennett, 1986). Nevertheless, Sing and Qi found that the assessment of international-mindedness is an under-researched area and the instruments used to assess international-mindedness are limited. Thus, Singh and Qi (2013) concluded there is a need for a combination of instruments to account for multiple competencies inherent in international-mindedness and for the optimal measurement of international-mindedness.

With this suggestion in mind, the key research question for the current study is: Do students improve their levels of intercultural understanding and global engagement after one year in the DP? Also, is there any difference among schools in terms of patterns of improvement in intercultural understanding and global engagement? This research is important because promoting international-mindedness has become a significant responsibility of schools to advocate for "a better and more peaceful world" (IBO, n.d.)). Yet, enacting international-mindedness through internationalized curriculum does not have straightforward procedures, policies, or strategies for practicing and assessing international-mindedness. This study aimed to explore the assessment of international-mindedness in different school contexts for a greater clarification of its practices and conceptualization. This research was derived from a larger study conducted as part of a doctoral dissertation (Metli, 2018), which was funded by the International

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METHOD

Research design

The research utilized causal-comparative quantitative research design. The quantitative exploration of the development of international-mindedness comprised a pre-test and post-test analysis conducted at the three participating schools. The quantitative data of students' perceptions of intercultural understanding and global engagement were analysed to identify statistical significance related to students' development of international-mindedness.

Research context

The participating schools centred on two schools in Istanbul, Turkey, both selected because they are implementing the IB continuum (a continuum school offers all three programs of the IB education: PYP, MYP, and DP). The two participating schools were invited because they had the longest-running implementation of the IB continuum in Turkey, having been implementing PYP, MYP, and DP for over ten years. In addition to these continuum schools, another school from Istanbul was invited to be involved in the research. This DP school matched characteristics of the other participating schools (i.e., an IBDP school which has been authorized to offer DP over ten years; a private school rather than a state school; teacher profile including both national and international staff), except it was a non-continuum (a school which offers only one or two of the IB education programs). This third school served to enable comparisons of levels of intercultural understanding and global engagement between the continuum and non-continuum school.

Contextual information about the National School

The participating national school (called National School for the purpose of this study) was a co-educational private school authorized for PYP in 2005, MYP in 2002, and DP in 1995. The National School encompasses grades K-12 with the entire IB continuum: PYP, MYP, and DP. It became the first and only Turkish school authorized to implement all three IB programs; that is, PYP, MYP and DP. At the National School, there were 102 grade 11 students (IB and non-IB) in total. Of 102 students, 46 students were enrolled in the DP. Eighty percent of the grade 11 students had been through PYP and MYP. Twenty percent of the grade 11 students studied at different elementary and middle schools and then started the high school. Integrated into the national curriculum, MYP is implemented in grades 6 to 10. The DP is implemented in the final two years of high school for students who opt for it.

To be admitted to the DP, students are required to meet certain academic success criteria. This policy requires students to have a good level of English and also interest in studying the international curriculum program. The students in grades 11 and 12 have the option to choose the DP or to only focus on their university entrance examination preparations by opting for the non-IB track. The IB cohorts typically comprised about

40 to 50 students per year, with the cohort sizes varying from one year to another. Language development is supported in several ways at this school.

Students admitted to the high school are placed in either high school classes or in the prep class, depending on their achievement level in the English language proficiency test. The school program is heavily focused on Mathematics and Science, which are taught in English in the DP track. Turkish Language and Literature courses and Turkish culture courses are taught in Turkish. The extracurricular program at the school covers a wide range of topics, including sports and arts courses offered during school hours in which students have the option to choose among art, ceramics, and music based on their interests. With a wide range of student clubs, the National School aims at helping students to develop socially by engaging in at least one social activity per year. As well, each year, students host and attend numerous local and international conferences. Among such events are MUN (Model United Nations), International Theory and Knowledge Conference, ISTA (International Schools Theatre Association), TÜBİTAK (The Scientific and Technological Research Council of Turkey) science fairs, and international mathematics competitions.

Contextual information about the International School

The participating international school (called International School for the purpose of this study) is a co-educational private school authorized for PYP in 1999, and MYP and DP in 1996. International School encompasses grades K-12. The IB was integrated in 1997, with the entire IB continuum: PYP, MYP, and DP. When students finish grade 12, they receive a US diploma, and have the option to sit for DP external exams for achieving their IB certificate. The students in grades 11 and 12 do the DP with about 75 to 90 percent who choose to complete the "full diploma" with the qualifying DP exams.

Cohorts typically comprise about 40 students per year, with cohort sizes varying from one year to another. There were 45 students enrolled in the DP in the 2017–2018 academic year. The school expected this number to drop to about 35 after the first year. The school had about 20 grade 11 students who had been through PYP and MYP, 15 who joined the school before grade 7 (i.e., experienced some of the PYP at the school), and another five who joined at the beginning of the MYP years. Of the 45 students who were grade 11 students (IB and non-IB students), 30 students had studied at different elementary or middle schools and then started the high school.

International School is inclusive in that students can stay in the program without having to maintain any particular grades. This makes it distinct from the exclusive DP schools (common among the national IB schools in Turkey), which are based on meritocracy with certain levels of academic standards required. This school targets the children of diplomats and international businesses in Istanbul, so it is required that students have a non-Turkish passport to attend the school. Due to the mobility of its target population, there is a 20% turnover of students each year, with the average stay of students being three years. It was estimated that 80% of students (across grades) take part in at least one after-school activity each year. In terms of extracurricular activities, the school has athletic teams, theater, choir, and band, as well as MUN. The sports teams often go to regional tournaments in eastern Europe – places such as Moscow, Warsaw, Prague, or Bucharest.

Contextual information about the Additional School

The last participating school (called Additional School for the purpose of this study) was a co-educational private school authorized for DP in 1994. The Additional School encompasses grades K-12, and the IB was integrated in 1994, with only the DP. The Additional School aims at providing a learning environment which places importance on developing the knowledge and skills of students through interdisciplinary activities, projects and research tasks. The school included a population of 230 students in grade 11, 120 of whom were enrolled in the DP. The school expected the DP students' number to drop to about 90 after the first year. The students in grades 11 and 12 have the option to choose the DP or only focus on their university entrance examination preparations by opting for non-IB track. For the purpose of this study, 45 DP students in grade 11 were randomly chosen for participation in the study. At all grade levels, Turkish as the mother tongue and English as the second language are taught. German or French is also offered as a second foreign language starting in the 6th grade in order to help students achieve proficiency in their second foreign language. The school has a prep program which aims to admit students, who come from a wide variety of language proficiency and geographical backgrounds, to a level of English necessary for the literature-based curriculum of grade 9. Activities focus on art, community service, sports, science, human sciences, and environmental awareness. All school teams are included in the extracurricular activities. All extracurricular activities, which help students acquire skills, and experiences relevant to their physical, emotional, and social development, are initiated and run by students.

Sampling

At the National School, there were 102 grade 11 students (IB and non-IB) in total. Of the 102 students, 46 students were enrolled in the DP, who were all invited to participate in the research. At the International School, there were 45 students who were enrolled in the DP. All of the DP students at the International School were invited to participate in the research. Thus, the entire population of the IBDP at both the National and International Schools was involved in the research. At the Additional School, there was a population of 230 students in grade 11, 120 of whom were enrolled in the DP. For the purpose of this study, 45 DP students in grade 11 were randomly chosen through the simple random sampling method by the IBDP coordinator of the Additional School for participation in the study. An overview of the three schools, the number of participants who took the IDI in the pre- and post-tests and the number of participants who took the GCS in the pre- and post-tests is summarized in Table 1, 2 and 3, respectively.

Table 1. Information about the participating schools and sampling number

School	City	Year of Establishment	Year Started of DP	DP Students	IB Programs
National	Istanbul	1985	1995	46	PYP, MYP, DP
International	Istanbul	1911	1997	45	PYP, MYP, DP
Additional	Istanbul	1988	1994	120 (45 sampled)	DP

Table 2: The number of participants who took the IDI pre/post-tests

	Total DP students	Ss who did the IDI pre-test	Ss who did the IDI post-test	Ss who did both tests
National School	46	31	20	20
International School	45	36	29	29
Additional School	45	39	28	26

Table 3. The number of participants who took the GCS pre/post-tests

	Total DP students	Ss who did the pre-test	Ss who did the post-test	Ss who did both tests
National School	46	33	26	24
International School	45	41	31	28
Additional School	45	44	31	20

Instrument

As suggested by Singh and Qi (2013), the current study combined the Intercultural Development Inventory (IDI) with the Global-Citizenship Scale (GCS) to analyze improvements in students' levels of intercultural understanding (IDI) and global engagement (GCS). The Global-Citizenship Scale (see Appendix A) was developed by Morais and Ogden in 2010. It is a theoretically grounded and empirically validated scale to measure global-citizenship encompassing social responsibility, global competence, and global civic engagement and their sub-dimensions. The GCS assesses the three-dimensional construct of global-citizenship and consists of 33 items assessing social responsibility, global competence, and global civic engagement. The researcher also performed the reliability of coefficients of subscales of GCS (see Table 4).

Table 4: Reliability coefficients of subscales of Global Citizenship Scale (GCS)

Section	Subscales	Items	Cronbach's Alpha	
Social responsibility	global justice and disparities	1.1*,1.2*,1.3*, 1.4*,1.5*,1.6	.592	.670
	altruism and empathy	2.1,2.2*,2.3	.158	
	global interconnectedness and personal responsibility	3.1,3.2,3.3*,3.4	.216	
Global competence	self-awareness	1.1,1.2,1.3,1.4	.689	.791
	intercultural communication	2.1,2.2,2.3, 2.4,2.5,2.6	.568	
	global knowledge	3.1,3.2,3.3	.599	.883
Global civic engagement	involvement in civic organizations	1.1,1.2,1.3,1.4, 1.5,1.6,1.7,1.8	.860	.882
	political voice	2.1,2.2,2.3,2.4, 2.5,2.6	.748	

global civic activism	3.1,3.2,3.3	.604

*Reverse coded

The Intercultural Development Inventory (IDI) (see Appendix B) was developed by Hammer in 1998. It is conceptualized from Bennett's Developmental Model of Intercultural Sensitivity (1986). It measures the level of intercultural competence or sensitivity across a developmental continuum for individuals. The 50 item IDI with selected demographic questions was developed based on a cross-cultural sample of 591 culturally diverse respondents (Hammer et al., 2003). The IDI uses the five stages of development to assess individuals' intercultural understanding in perceived and developmental orientations: denial, polarization, minimization, acceptance, and adaptation (Bennett, 2004). As a theoretically-grounded measure, the IDI has been shown to be statistically reliable (Paige et al., 2003). The instrument has strong content and construct validity across a variety of group cultures (Paige et al., 2003). The researcher checked the reliabilities of the Perceived Orientation and Developmental Orientation scores in the IDI and found that both are well documented (.82/.83) in previous research with large cross-cultural samples (Hammer, 2011).

As part of the reliability and validity check, the researcher also piloted the study in a school in eastern Turkey in which the researcher had worked as the TOK teacher and high school principal for ten years beginning in 2008. Due to possible researcher bias, the researcher did not choose the pilot school as a main case study school. However, as a pilot school, it was convenient in terms of time, resources, and budget for testing the data collection tools. The results of the pilot study were used to improve data collection methods for the research. Based on the feedback received from the participants and the re-evaluation of the data collection methods, the researcher allocated more time for administering the demographic survey, GCS, and IDI. The researcher also worked with a Turkish colleague who had a level of upper-intermediate English language proficiency to simplify the language of the GCS, especially for non-native speakers of English. This colleague gave blunt and honest feedback about words and phrases that needed to be further simplified.

Data collection

Both the IDI and GCS were administered in their original language, English, as IBDP students are proficient speakers of English. The pre-tests for IDI and GCS were conducted for all the participating schools at the case study schools in October 2016. The survey and scales were completed by all participants in the same place and within the given time frame to help ensure a higher response rate. The administration of surveys was done in either computer labs or classrooms to manage time efficiently in terms of the data analysis. The IDI was available in an online format, and online Google Form was used for the GCS. Participants completed the IDI for 30 minutes and GCS for 30 minutes both for the pre-tests. The post-tests of IDI and GCS were conducted online for all participating schools in December 2017—more than a year after the conduct of the pre-tests. In order to have a high response rate, the researcher sent out a one page summary of the process of doing the surveys to the DP coordinator all in one place with all students. As in the pre-test stage, all participants were recommended to do the IDI and GCS for 30 minutes each.

Maintaining ethical considerations

As this research involved participants under age 18, a plan of research in Turkish including the protocols intended to be used was submitted to the MoNE (Turkish Ministry of National Education) by İhsan Doğramacı Bilkent University Graduate School of Education in early June 2016 for its approval. Formal permission from the MoNE was acquired on 20 July 2016 to conduct the research. In addition, parental consents were collected for all students who participated in the research. The anonymity of participants was maintained during the research process. The participant agreement form outlined the participants' consent to be a part of the study. Participants were asked to give their consent by signing this form before participating in this research.

Data analysis

Quantitative data instruments were entered into the statistical software program (SPSS) for statistical analysis. These data were analysed using descriptive and inferential statistical techniques (paired sample *t*-test and one way ANOVA with repeated measures). Analysis of the subscales for all items in each instrument was conducted to confirm reliability coefficients.

RESULTS

Since the number of participants at the three participating case study schools is less than 30, first an exploratory data analysis was conducted to determine if the pre-test and post-test scores of intercultural understanding (IDI) and global engagement (GCS) distribution was normally distributed. Results for the Shapiro-Wilk test for normality indicated that only the National School pre-test score distribution deviated significantly from a normal distribution in the IDI ($D = .898$, $p = .038$); and in the GCS ($D = .898$, $p = .038$). Therefore, rather than paired-samples *t*-test at the National School, Wilcoxon signed-ranks test was used to compare students' developmental levels of intercultural understanding and global engagement in their first year of DP and in their second year of DP. Both at the International School and Additional School, a paired-samples *t*-test was conducted to compare students' developmental levels of intercultural understanding and their levels of global engagement from Year 1 to Year 2 in the DP.

Findings about intercultural understanding

At the National School, Wilcoxon signed-ranks test indicated that the post-test scores of intercultural understanding in the second year of DP were not statistically significantly higher than the pre-test scores in the first year of DP, $Z = -.336$, $p < 0.737$. This result suggests that National School students have not improved their levels of intercultural understanding after one year of exposure to IB education. Despite the results not being statistically significantly different, there is a difference in terms of the mean of the pre-test ($M = 79.65$) and post-test ($M = 81.61$), so the National School students slightly improved their level of intercultural understanding. The related statistical information is provided in Table 5.

Table 5: Wilcoxon signed ranks rest results of the IDI at the National School

		Ranks	N	Z	p
National School	Pre/Post test Scores	Negative Ranks	10[a]		
		Positive Ranks	10[b]		
		Ties	0[c]	-,336	.737
		Total	20		

a. posttest < pretest, b. posttest > pretest, c. posttest = pretest

Similarly, at the International School, there was no significant difference in the scores for the developmental levels of intercultural understanding in the first year of DP (*M*=84.38, SD=14.80) and the levels of intercultural understanding in the second year of DP (*M*=81.06, SD=14.54); t (28) = 0.877, *p* = 0.388. These results again suggest that at the International School, not only was there no significant improvement, there was a slight decrease in the mean results. However, despite the results not being statistically significantly different, there is a notable difference in terms of the mean of the pre-test (*M*= 84.38) and post-test (*M*= 81.06). International School students slightly decreased their level of intercultural understanding. The related statistical information is provided in Table 6.

Table 6: Paired samples t-test results of the IDI at the International School

	Paired Differences					t	df	Sig. (2-tailed)
	M	SD	Std. Error of Mean	95% Confidence Interval of the Difference				
International School				Lower	Upper			
	3.32	20.38	3.78	-4.43	11.07	.87	28	.388

At the Additional School, there was no significant difference in the scores for the developmental levels of intercultural understanding in the first year of DP (*M*=81.53, SD=14.92) and the levels of intercultural understanding in the second year of DP (*M*=82.56, SD=13.83); t (25) = -.331, *p* = 0.743. These results once again suggest that Additional School students have not improved their levels of intercultural understanding after one year of exposure to IB education. However, despite the results not being statistically significantly different, there is a notable difference in terms of the mean of the pre-test (*M*= 81.53) and post-test (*M*= 82.56). Additional School students slightly improved their level of intercultural understanding. The related statistical information is provided in Table 7.

Table 7: Paired Samples t-test Results of the IDI at the Additional School

	Paired Differences					t	df	Sig. (2-tailed)
	M	SD	Std. Error of Mean	95% Confidence Interval of the Difference				
Additional School				Lower	Upper			
	-1.02	15.82	3.10	-7.42	5.36	-.331	25	.743

One way ANOVA with repeated measures was conducted to compare the effect of time (one year spent in DP) on the levels of students' improvement levels in intercultural understanding in the pre-test and post-test conditions at three schools. Normality checks and Levene's test were carried out and the assumptions met. The results of one way ANOVA with repeated measures indicated that there was statistically no significant difference among schools, Wilks' Lambda = 0.987, F (2, 72) = 0.478, p = 0.622. The related statistical information is provided in Table 8.

Table 8: One Way ANOVA with repeated measures results of the IDI

		Value	F	Hypot. df	Error df	p	Partial eta sq	Noncent. Parameter	Observed power
					Multivariate Tests				
Time	Wilks' Lambda	1.000	.001	1.000	72.000	.975	.000	.001	.050
Time*Schools	Wilks' Lambda	.987	.478	2.000	72.000	.622	.013	.955	.125

Findings about global engagement

At the National School, Wilcoxon signed-ranks test indicated that the post-test scores of global engagement in the second year of DP were not statistically significantly higher than the pre-test scores in the first year of DP, Z = -1.301, p < 0.193. This result suggests that National School students have not improved their levels of global engagement after one year of exposure to IB education. Despite the results not being statistically significantly different, there is a notable difference in terms of the mean of the pre-test (M= 163.75) and post-test (M= 157.13), so the National School students slightly decreased their level of global engagement. The related statistical information is provided in Table 9.

Table 9: Wilcoxon signed-ranks rest results of the GCS at the National School

		Ranks	N	Z	p
National School	Pre/Post test Scores	Negative Ranks	15[a]	-1.301	.193
		Positive Ranks	9[b]		
		Ties	0[c]		
		Total	24		

a. posttest < pretest b. posttest > pretest c. posttest = pretest

At the International School, however, there was a statistically significant difference in the scores for the developmental levels of global engagement in the first year of DP (M=148.86, SD=15.23) and the levels of global engagement in the second year of DP (M=138.79, SD=15.37); t (27) = 2.75, p = 0.010. The difference in means shows a decrease rather than an increase in developmental levels. The related statistical information is provided in Table 10.

At the Additional School, there was no significant difference in the scores for the developmental levels of global engagement in the first year of DP (*M*=153.70, SD=15.39) and the levels of global engagement in the second year of DP (*M*=152.10, SD=17.00); t (19) = 0.30, *p* = 0.763. These results suggest that Additional School students have not improved and even slightly decreased in their levels of global engagement after one year of exposure to the IB education—see related statistical information in Table 11.

Table 10: Paired samples t-test results of the GCS at the International School

	Paired Differences					t	df	Sig. (2-tailed)
International School	*M*	SD	Std. Error of Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
	10.07	19.36	3.65	2.56	17.58	2.75	27	.010

Table 11: Paired sample t-test results of the GCS at the Additional School

	Paired Differences					t	df	Sig. (2-tailed)
Additional School	*M*	SD	Std. Error of Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
	1.60	23.4	5.24	-9.36	12.56	0.30	19	.763

A one way ANOVA with repeated measures was conducted to compare the effect of time (one year spent in DP) on the levels of students' improvement levels in global engagement in the pre-test and post-test conditions at three schools. Normality checks and Levene's test were carried out and the assumptions met. The results of one way ANOVA with repeated measures indicated that there was statistically no significant difference among schools, Wilks' Lambda = 0.975, $F (2, 69) = 0.894$, $p = 0.414$. The related statistical information is provided in Table 12.

Table 12: One way ANOVA with repeated measures results of the GCS

		Value	*F*	Hypot. df	Error df	*p*	Partial eta sq	Noncent. Param	Obsv power
					Multivariate Tests				
Time	Wilks' Lambda	.925	5.612	1.000	69.000	.021	.075	5.612	.646
Time*schools	Wilks' Lambda	.975	.894	2.000	69.000	.414	.025	1.788	.198

DISCUSSION AND CONCLUSION

This study showed that regardless of the type of school DP students were enrolled in (i.e. national or international; continuum or non-continuum), there was statistically no significant difference between students' levels of intercultural understanding and global

engagement in the pre- and post-test one year into the program. This result also supports other recent findings on the assessment of international-mindedness. Beek (2017) examined the contextual interpretations of international-mindedness of DP students in a national school and an international school in Czech Republic. Similar to the present study, Beek's statistical analysis revealed no significant difference between participants from these two types of schools.

One possible explanation about why the participating schools from this research have not improved their levels of intercultural understanding and global engagement after one year of IB education may be due to the nature of international-mindedness as a process based development: "International-mindedness is never achieved as an end point or an outcome but it is a journey, a constant process of defining, acting, learning, reflecting and re (de)fining (Hacking et al., 2017, p. 47). Beek (2017) also supports this view that "international mindedness is developmental" (p. 14). She further explains her view that:

> Informed by the notion that international mindedness corresponds to the challenging shift from the socialized to the self-authoring mindset, I offer that most student participants feel a cultural identity is less important because they are still in the process of its construction. (p.17)

Similarly, Krajewski (2011) posits that "intercultural competence is a developmental process that evolves over an extended period of time" (p. 140). Additionally, Poonoosamy (2016), in her case study with two students, points out that "both students understood international-mindedness as an aim, but the tension is that it was not realized as a process" (p. 595). Hence, based on these prior reflections and findings from the literature, it is possible that the students from the current study may not have shown improvement because they are still in the process of developing international-mindedness.

Another possible reason why the levels of intercultural understanding and global engagement of students did not improve is because students did not have enough time during the DP's intense academic program for exploring what it means in their own lives and through academics to be internationally-minded. This is also reflected in the literature. Rizvi et al. (2014) found that time pressure and the intense focus on examinations within the DP do not provide opportunities for students to develop their learner profile attributes necessary to be internationally-minded. Considering the Turkish context, Martin et al. (2016), point out that "the competitive Turkish national university entrance examination—administered at the end of high school and required for entrance to Turkish universities—emphasizes academic achievement by assessing knowledge acquired through rote learning" (p. 121). Therefore, Turkish students who especially plan to stay in Turkey to study for their university become exam-oriented individuals due to their parents' high expectations on these high stakes examinations. Students get stressed over this university entrance exam which is based on knowledge, not skills and attitudes. This finding indicates that the realities of the educational system in the IB highlight the tension between the demands for assessment for students' futures in terms of tertiary education and the philosophy of the IB as being more than just about academic requirements.

Another reason for the decrease in levels of intercultural understanding and global engagement of students from both participating schools could be related to the external or internal contextual restrictions. "The local environment can present certain limitations or parameters to international-mindedness activity especially in a Middle East context" (Baker & Kanan, 2005, and Bunnell, 2008, as cited in Hacking, et al., p. 121). Such limitations may occur because of a lack of exposure to diverse environments. Similarly, Beek (2017) points out that exposure to diversity is an important contextual factor affecting the development of international-mindedness. Yet, it should be noted that developing international-mindedness will not happen by putting children of different nationalities in the same classroom (Cause, 2009). That is why, possibly, there was no statistically significant difference between the students' levels of intercultural understanding and global engagement at the National and International School. Hence, in their study of promising practices of international-mindedness at exemplary schools, Hacking, et al. (2017) underscored the importance of school's intentional practices and deliberate actions or efforts to support the development of international-mindedness.

Furthermore, there may be alternative explanations as to why there was virtually no large or significant positive shifts in students' cosmopolitan outlook. Since the sample was less than 30 students in each participant school in all phases of the study, the results of the current study may not be generalized: thus, future replication studies are recommended with larger sample sizes and/or with alternative assessment tools for the measurement of assessment of international-mindedness, not only as part of the DP but also other IB programs such as the PYP, MYP and Career-related Program (CP). Future replication studies which focus on the measurement, assessment or evaluation aspect of international-mindedness through quantitative tools may present a more comprehensive picture of students' development of international-mindedness through the IB education. Such studies, including the current findings of this research, may possibly challenge whether the IB promotes international mindedness at all, despite its claims.

The current research concludes that there need to be deliberate efforts to promote international-mindedness. Due to the several possible factors discussed above or reflected in the literature, IB educators and practitioners should specifically seek strategies (i.e., policy or strategic planning on the development of international-mindedness, professional development sessions for the faculty, developing a contextually appropriate definition of international-mindedness, and so on) to foster the development of international-mindedness in curricular, co-curricular, and extracurricular programs. For instance, a global-citizenship policy/guide developed by a school may illustrate the school's contextually appropriate definition of international-mindedness, school's examples of curricular, co-curricular, cross-curricular, extracurricular practices to promote international-mindedness, school's expectations from stakeholders (students, teachers, staff, parents, administrators) to promote international-mindedness, professional development (in house or external) sessions to help teachers enact the implementation of international-mindedness, assessment tools or rubrics embraced by the school to reflect on the implementation of international-mindedness. In addition, schools may come up with some other assessment and evaluation methods (i.e., portfolio on individual international-mindedness journey) to promote global-citizenship education. For example, a portfolio prepared by students showing examples of their journey in their development of international-mindedness will present some concrete evidences of how they become internationally-minded

through their engagement and involvement in various intercultural interactions or service projects. This will also enable students to capture honest reflections on how they have been progressing through time in terms of their development of international-mindedness.

Finally, since there is no recommended rubric or an assessment tool to evaluate students' development of international-mindedness, as pointed out before by Singh and Qi (2013), the current study also recommends that practitioners implement various methods of assessing and evaluating students' international-mindedness for the optimal measurement of students' development of international-mindedness, rather than using only one rubric, which may be merely focused on certain aspects of international-mindedness.

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APPENDICES

Appendix A: The Global Citizenship Scale (GCS)

Part A: Please indicate how strongly you agree or disagree with the following statements regarding your views of the world. Please check the circle that best describes your present thinking.

		Strongly Disagree — Disagree — Neutral — Agree — Strongly Agree
1.	I think that most people around the world get what they should have.	1 2 3 4 5
2.	Developed nations should make earnings around the world as fair as possible.	1 2 3 4 5
3.	It is OK if some people in this world have more opportunities than others.	1 2 3 4 5
4.	I think that people around the world get the rewards and punishments they deserve.	1 2 3 4 5
5.	The needs of the world's most fragile people are much more important than my own.	1 2 3 4 5
6.	My nation should imitate the more sustainable and fair behaviors of other developed countries.	1 2 3 4 5
7.	When there is inadequacy of food or resources, it is sometimes necessary to use force against others to get what you need.	1 2 3 4 5
8.	I feel that many people around the world are poor because they do not work hard enough.	1 2 3 4 5

9.	I do not feel responsible for the world's unfairness, injustice and problems.	1 2 3 4 5
10.	The world is generally a fair place.	1 2 3 4 5
11.	No one country or group of people should dominate and take advantage of others in this world.	1 2 3 4 5
12.	I respect and am concerned with the rights of all people, globally.	1 2 3 4 5
13.	After all that I have been given in my life, I want to give to others in the global society.	1 2 3 4 5

Part B: Please indicate how strongly you agree or disagree with the following statements regarding your abilities to function in the world. Please check the circle that best describes your present thinking.

		Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree
1.	I am confident that I can succeed and flourish in any culture or country.	1 2 3 4 5
2.	I unconsciously adapt my behavior, traits and habits when I am interacting with the people of other cultures.	1 2 3 4 5
3.	I often adapt my communication style to other people's cultural background.	1 2 3 4 5
4.	I know how to develop a plan to help ease a global environmental or social problem.	1 2 3 4 5
5.	I am able to communicate in different ways with people from different cultures.	1 2 3 4 5
6.	I am knowledgeable about recent issues that affect international relations.	1 2 3 4 5
7.	I know several ways in which I can make a difference on some of this world's most worrying problems.	1 2 3 4 5
8.	I am fluent in more than one language.	1 2 3 4 5
9.	I am able to get other people to care about the global problems that concern me.	1 2 3 4 5
10.	I am pleased with working with people who have different cultural values from me.	1 2 3 4 5
11.	I feel comfortable expressing my opinions about an insistent global problem in front of a group of people.	1 2 3 4 5

12.	I can help people from other cultures to interact better by helping them to understand each others' values and practices.	1 2 3 4 5
13.	I am able to write an opinion letter to a local media source expressing my concerns over global unfairness and issues.	1 2 3 4 5

Part C: Please indicate how likely it is that you will be doing each of the following actions by checking the circle that best corresponds with your present thinking.

	Strongly Disagree Disagree Neutral Agree Strongly Agree

1.	If possible, I will always buy fair-trade (legal and equitable trade) or local products and brands.	1 2 3 4 5
2.	In the future, I will contact a newspaper or radio to express my concerns about global environmental, social or political problems.	1 2 3 4 5
3.	In the future, I plan to do volunteer work to help individuals and communities abroad.	1 2 3 4 5
4.	In the future, I will express my views about international politics on a website, blog, or chat-room.	1 2 3 4 5
5.	In the future, I will participate in a walk, dance, run or bike ride in support of a global cause.	1 2 3 4 5
6.	In the future, I will sign an email or a request letter to help individuals or communities abroad.	1 2 3 4 5
7.	In the future, I will volunteer my time working to help individuals or communities abroad.	1 2 3 4 5
8.	In the future, I plan to get involved with a global humanitarian organization or project.	1 2 3 4 5
9.	In the future, I will deliberately buy brands and products that are known to be supportive of minority people and struggling places.	1 2 3 4 5
10.	In the future, I will contact or visit someone in government to look for public action on global issues and concerns.	1 2 3 4 5
11.	In the future, I plan to help international people who are in difficulty.	1 2 3 4 5
12.	I will boycott brands or products that are known to harm marginalized (demeaning) global people and places.	1 2 3 4 5
13.	In the future, I plan to get involved in a program that addresses the global environmental crisis.	1 2 3 4 5
14.	In the future, I will display and/or wear badges/stickers/signs that promote a more just and fair world.	1 2 3 4 5
15.	In the future, I will work informally with a group toward solving a global humanitarian problem.	1 2 3 4 5

16.	In the future, I will participate in a live music or theatre performance or other event where young people express their views about global problems.	1 2 3 4 5
17.	In the future, I will pay a membership or make a cash donation to a global charity.	1 2 3 4 5

Appendix B: The Intercultural Development Inventory (IDI)

The Intercultural Development Inventory (IDI) is the cross-cultural assessment of intercultural competence used to build intercultural competence to achieve international and domestic diversity and inclusion goals and outcomes. The Intercultural Development Inventory, or IDI, assesses intercultural competence through a 50-item questionnaire, available online that can be completed in approximately 30 minutes. Since it is a propriety instrument, the full version of the assessment cannot be shared. Only sample items can be provided from https://idiinventory.com/.

Samples for Denial

It is appropriate that people do not care what happens outside their country.

People should avoid individuals from other cultures who behave differently.

Samples for Defense

Our culture's way of life should be a model for the rest of the world.

Samples for Reversal

People from our culture are less tolerant compared to people from other cultures.

Family values are stronger in other cultures than in our culture.

Samples for Minimization

Our common humanity deserves more attention than culture difference.

Human behavior worldwide should be governed by natural and universal ideas of right and wrong.

Samples for Acceptance

I have observed many instances of misunderstanding due to cultural differences in gesturing or eye contact.

I evaluate situations in my own culture based on my experiences and knowledge of other cultures.

Samples for Adaptation

When I come in contact with people from a different culture, I find I change my behavior to adapt to theirs.

Samples for Cultural Disengagement

I do not identify with any culture, but with what I have inside.

I do not feel I am a member of any one culture or combination of cultures.