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Language Minority Students' Status: One Large Scale Exam and Two Countries[1]

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Abstract

Educational policies are dynamic and can be revised when needed. In order to analyze how successful a country is, what their rank is among others and what a country needs to improve, international exams, like PISA, are conducted by authorities. Also, there are many countries with a large immigrant population. In this regard, the educational policies should include some regulations for immigrant students' education. Canada and Belgium have been chosen as participant countries of this study since they are bi/multilingual countries. Even though they are similar to each other with their immigrant population, the education policies in these countries differ. This study aims to compare the success of the immigrant students in reading skills in both countries as well as their sense of belonging and their parents' education by utilizing PISA-2015 data. The results display that the immigrant students in Canada have outperformed their peers in Belgium. Furthermore, the immigrant parents in Canada are more educated than those in Belgium, and Canadian immigrant students show lower sense of belonging to school when compared to the peers in Belgium. Although these factors are controlled, the Canadian immigrant students outperform; therefore, some remarks for education policies in bi/multilingual countries can be made.

Keywords: PISA, language minority students, Canada, Belgium

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Introduction

Countries around the world have started to shape their educational policies according to the results of international large-scale exams. The Programme for International Student Assessment (PISA), which is conducted by the Organisation for Economic Co-operation and Development (OECD) every three-year for 15-year old students, is one of them. This study mainly deals with the comparison of PISA results belonging to two countries: Canada and Belgium. They have been chosen as the participant countries in this study since both of them are the members of OECD and have large population of immigrants. However, there is a distinction between their education policies in terms of the usage of minority languages: while the immigrant students in Canada can use their minority languages freely in schools, the ones in Belgium do not have the same opportunity. Although the related studies in this field are so scarce, socio-economic status of the families does not seem the only or dominant predictor for immigrant or language minority students' failure or success. The opportunity to be able to use the minority language, which is spoken at home freely, in schools can be a motivating factor for the students since the minority languages that are forbidden in schools may create inequality in education; thus, the sense of belonging of language minority students can be affected. Therefore, it is hypothesized that the restrictions on using the minority languages in the resident countries' schooling system may be another predictor for immigrant or language minority students' failure/ success.

Literature Review and Theoretical Background

The Programme for International Student Assessment

The Programme for International Student Assessment (henceforth PISA) has been administered to 15-year-old students, who are about to finish the compulsory education, by the Organization for Economic Co-operation and Development (OECD) in more than 90 countries since 2000. This exam is conducted triennially and based on science, reading and mathematics - one of which is targeted as a major domain every three year whilst the others remain as minor domains. The appliance of knowledge in real life by the students is also measured via the exam (OECD, 2013). In addition to these domains, the students' collaborative problem-solving skill and their global competence were assessed respectively in 2015 and 2018. Furthermore, as a part of PISA, some countries administer a financial literacy test. PISA does not only assess the students' knowledge and their use of knowledge in real

life situations, but it also conducts a questionnaire in order to get information about the participants' family, background, home, parents' education, language at home and so on and so forth. While PISA has been taken on paper-based format since its genesis, its computer-based version has been available since 2015.

Although PISA has been originally designed only for OECD countries, it is used globally today in more than 90 countries which can be either OECD-member or non-member (OECD, 2012, 2016). The countries around the world have been shaping their educational policies regarding the outcomes of PISA by seeing their place in a world ranking list and comparing the results. Also, the researchers have conducted studies to analyze the PISA results in order to put forward some suggestions for the education policies. For example, Hopkins, Pennock, Ritzen, Ahtaridou and Zimmer (2008) carried out a study in five countries (China, Spain, Canada, Norway and Poland) in order to see the impact of PISA results over participant countries' education and economies, and it was found that the countries were increasingly giving importance to the result. Also, both national and international media have great effect on it. Moreover, the results give insights not only between countries but also within a country by focusing on different minorities, genders, socioeconomic status and the like. In this respect, the countries can adapt or reform their education policies by analyzing their strengths and weaknesses for future.

Canada and Belgium: The Countries' Rank in PISA and Their Education Policies

This study mainly deals with the comparison of PISA results belonging to two countries: Canada and Belgium; thus, it will be worth mentioning briefly their education policies and PISA data.

Canada is a bilingual country giving equal status to English and French, which was recognized by the Constitution Act in 1867, and the country values immigrant population, so the gap between the native and immigrant students' performance in PISA is so narrow (OECD, 2015). The country pays considerable attention to the PISA results and makes changes and reforms accordingly (OECD, 2012) since the authorities in the Council of Ministers of Education, Canada (CMEC) mention that there is a strong relation between the performance of Canadian students in PISA and their postsecondary education and replacement at universities (2016). By taking this relation into consideration, the country redesigns the national assessment policy (e.g. in 2007) with an aim to improve its rank in PISA and the quality of schooling system.

O'Grady, Deussing, Scerbina, Fung and Muhe (2016) analyze and compare the data taken from PISA 2015 in which this study is interested. The major domain of PISA 2015 was science even though reading and mathematics skills were assessed as minor domains. According to the results, it is recognized that Canada is one of the top-performers in science – only there are three countries (i.e. Singapore, Japan and Estonia) that have outperformed. When the reading scores of Canadian students are analyzed, the rank of the country has gone up: it comes as the second among all the participant countries. The results also cover within-country analysis; accordingly, girls have performed better than boys, and the students in Anglophone school systems (language-majority schools) have performed better than their peers in francophone school systems (language-minority schools) (O'Grady et al., 2016). As for the students' sense of belonging, the difference between the immigrant students and native speaking students is so small (gpseducation.oecd.org), which can be another predictor for the success of Canada.

Belgium is also a country with three official languages: Flanders, the north part of the country uses Dutch as the official language; Wallonia, the south part uses French as the official language and has a small German-speaking region; Brussels, the capital city is a bilingual region with two official languages, French and Dutch. However, despite its potential, Belgium does not have a bi/multilingual education policy in theory since the country's law does not allow bi/multilingual education except from Fayer Project which is a project that supports bilingual education in Brussels by combining Dutch with Italian, Turkish or Spanish (Ağırdağ, 2010, p. 308). Therefore, the students do not seem to be proficient enough in French, German, and Dutch (Van de Craen & Soetaert, 1997; Tygat, 2011). In addition, the students' success and performance are directly related to their socioeconomic background. This makes immigrant students disadvantaged because those coming from immigrant background generally live in poor living conditions. Therefore, a gap among students occurs (European Union, 2016). According to the OECD 2006 data, Belgium has a big gap in terms of education inequity that are possibly caused by many different factors, but Hirtt, Nicaise and Zutter (2007) mention that this inequity mostly comes from language minorities' status. Clearly, with a great immigrant population, Belgium does not welcome the immigrant students' minority languages in schools (Ağırdağ, 2010), which affects their sense of belonging, identities and socio-economic status.

As the focal point of this study is PISA 2015, it is worth mentioning the country's rank and data. Belgium seems to perform better than most OECD countries in terms of

science domain, which is the major part of PISA 2015; its rank is 16 among participant countries. When the Belgium or Flemish students' reading test is analyzed, it is seen that the country outperforms many OECD countries with its rank at 19 (www.oecd.org). However, considering the equity in terms of the immigrant students, Belgium does not show the same success; it underperforms and is not as good as OECD countries' average. Most probably, related to this factor, the difference between the immigrant students and native speaking students in terms of their sense of belonging is one of the largest (http://gpseducation.oecd.org).

Language Minority Students

Language minority students (LMS) come from immigrant families whose first language is not English and acquire their home-language, or namely their mother tongue, while learning English or the language of the host country at the same time (August & Shanahan, 2010). In the theoretical background, having a minority language and being exposed to a host language in a resident country have two views: a deficit and an additive minority language (Ağırdağ & Vanlaar, 2016). In the deficit view of minority language, two languages (minority language/ mother tongue and host country's language) constantly compete against each other on certain tasks, so being an LMS can be an obstacle against academic success (Leseman, 2000; Mancilla-Martinez & Lesaux, 2011). On the other hand, the additive view of minority language refers to the cognitive mechanism of LMS. Clearly, Bialystok (1999) mentions that bilingual or multilingual students (LMS are bi/multilingual learners) can control the language mechanism; thus, they are supposed to be more successful than monolingual peers. Similarly, Cummins (1979, 2008) supports that having knowledge of a language has direct impact over learning other languages as people can transfer their conceptual and procedural knowledge. This is again an advantage for the LMS, who are bi/multilinguals, for their academic success.

Based on these views, when the related literature is investigated, it can be seen that the majority of the studies are about the comparison of the success of native (or native speaking students, NSS) versus with immigrant students (or language minority students, LMS). For instance, Dronkers and Van der Velden (2013) found that LMS had higher scores in PISA reading test in 2006. On the contrary, Schnepf (2007) and Levels, Dronkers and Kraaykamp (2008) compared NSS and LMS by using the data of PISA done in 2003, and found that the LMS displayed less achievement than the NSS. However, when the socio-economic status (SES) was kept under control, the difference between LMS and NSS was not

significant. In Cummins's study (2008), also, LMS performed less academic achievement compared with NSS. Ağırdağ and Vanlaar (2016) also found a statistically significant difference between NSS and LMS achievement in regard to reading and math skills. When SES was controlled, the gap between two groups narrowed but remained significant. Therefore, it could be deduced that SES may not be the dominant predictor of the students' success or failure.

Although there are many studies that display the direct positive relation between bilingualism and academic achievement (Bialystok, 1988; Cummins, 2000; Lutz & Crist, 2009; Zhou & Banskston, 1998), the immigrant or language minority students' experience and acceptance by others in a monolingual school setting (like in Belgium) have great impact over their academic achievement and failure (Ağırdağ, 2010). However, several countries with high immigrant population assume that bi/multilingualism creates problems for education system rather than being an advantage (Ağırdağ, 2009, 2010, 2014; Ağırdağ, Van Avermaet & Van Houtte, 2013). In this regard, OECD (2013) recommends that the LMS should improve their language knowledge of the host country and the policies should support it. Therefore, some countries have started to abandon the use of minority languages. For example, in Belgium, Turkish children are punished if they speak Turkish with their friends at school (Ağırdağ, 2010). Pulinx Van Avermaet and Ağırdağ (2016) also conducted a study with teachers and they found that the majority of teachers were in favor of forbidding the use of minority languages. These practices are mainly for integrating the LMS into the host society; however, it is not certain how supporting monolingual policies in a multilingual society or with minority students works.

Parents' Education

As it was mentioned, SES can be one of the determinants in a student's achievement and it is in a close relationship with parents' educational background (Lamerz, Kuepper-Nybelen, Wehle, Bruning, Trost-Brinkhues, Brenner, Hebebrand & Herpertz-Dahlmann, 2005). In this regard, parents' educational level can also be one of the factors having an impact on students' achievement on the nature of its relationship with SES of a family. Moreover, related literature proposes that SES and educational background of a family affect child's academic achievement (Bradley & Corwyn, 2002; Villiger, Wandeler & Niggli, 2014).

Baker and Stevenson (1986) found that children of educated mothers are more likely to show success. It may be the result of the fact that mothers with high SES are more involved in their children's school life and more supportive to achieve higher goals. On the other hand, the parents with low SES may not spare enough time for their children's school life because of their overwhelming conditions at work, which may be reason for a child's low achievement. Furthermore, Becher (1984) put forward that children whose parents are models for learning, more skilled in language use and problem-solving are more prone to higher achievement.

Sense of Belonging

Sense of belonging was defined as being involved in the school environment and to be able to feel like a part of the school community by Goodenow and Grady (1993), and it was reported that students who feel like a part of the school community are more active and engaged in the school events (OECD, 2017). In addition to active participation, Ma (2003) proposed that students' sense of belonging affects their motivation to learn in a positive way, and school and teachers play a crucial role to develop the sense of belonging to school. Moreover, people with high level of sense of belonging tend to be more open-minded (Panicacci & Dewaele, 2017), which can be an advantage in educational field as it was mentioned by Dörnyei and Ryan (2015) that openness characteristics of people may contribute to their learning as they are more welcoming for new cultures and situations. On the other side, related literature showed that sense of belonging may not be one of determiners of academic success as students in countries which have low sense of belonging rates may perform better in the exams (OECD, 2000; PISA Australia in Focus, 2018).

Research questions

This study grew out of the desire to explore the LMS' achievement in countries where minority languages are allowed to be spoken and where they are not. Belgium and Canada have been chosen as the participant countries in this study as both of them are the members of OECD and have large population of immigrants. However, there is a distinction between their immigrant policies: while the LMS in Canada can use their minority languages freely in schools, the LMS in Belgium (especially in Flemish schools) do not have the same opportunity. Although the related studies on this field are so scarce, SES does not seem to be the only or dominant predictor for LMS' failure or success (Hirtt et al., 2007). The

opportunity to be able to use the minority language that is spoken at home freely in schools can be a motivating factor for the students as assimilating or forbidden minority languages in schools may create inequality in education. Therefore, it is hypothesized that forbidding use of the minority languages in the resident countries may be another predictor for immigrant or language minority students' failure/ success. The following research questions guide this study:

1. Is there a significant difference between the reading scores of the LMS who live in Canada and Belgium according to the result of PISA-2015?
2. Is there a significant difference between the highest level of schooling of LMS' parents in Canada and Belgium?
    a. Is there a significant difference between the highest level of schooling of LMS' mothers in Canada and Belgium?
    b. Is there a significant difference between the highest level of schooling of LMS' fathers in Canada and Belgium?
3. Do the participants show statistically significant differences in terms of their reading scores in Belgium and Canada when the highest levels of schooling of LMS' mothers and fathers are kept under control?
4. Do the participants in Belgium and Canada differ from each other in terms of their sense of belonging to school?
5. Do the participants show statistically significant differences in terms of their reading scores in Belgium and Canada when their sense of belonging to school is kept under control?

Method

Participants

Randomly chosen 15-year old students in Canada and Belgium took the PISA exam in 2015. Both immigrant and native students constituted the sample group for the test. However, for the purposes of this study, only the immigrant students who were defined as LMS were focused on. Thus, the participants were 1535 LMS in Belgium and 3805 LMS in Canada, 5340 in total.

Instruments

The PISA 2015 survey was used as an instrument in this study. The exam aimed at assessing the students' reading, mathematics (as minor domains) and science knowledge (as a major domain). It also had a section to assess young people's financial literacy; however, it was not compulsory for all participant countries. The exam was administered via computer-based testing technology and lasted around two hours. Moreover, the students participated in a questionnaire that was about their background and lasted around 35 minutes. The background survey included items such as the students' homes, their school and learning experiences. In some countries, parents were asked to provide some background information about their child/ children's school experience, their support for learning as parents at home, their own education background and so on (OECD, 2016).

Data collection and data analysis

This section describes how the study was conducted. It explains, in as much detail as possible, what happened and how you carried out the investigation. This section is especially important in experimental studies that require a detailed description of the intervention. Examples of information to present in this section include a description of the training required to implement a new experimental teaching method and the types of instructions to be provided to respondents who were asked to complete a survey. This section should also contain a realistic timetable for the different phases of the study.

This research study adopted a quantitative research design. Both descriptive and inferential statistical analyses were conducted using SPSS statistics. Since the LMS in Belgium and Canada were compared to each other in terms of their reading scores, the levels of schooling of their parents, and their sense of belonging to schools, independent samples t-test was used for questions one, two, and four. Frequency analysis was also conducted for the second research questions. The aim of the third question was to analyze the differences between the participants reading scores after keeping their parents' levels of education constant. Thus, one-way ANCOVA was employed. The fifth research question was also examined via one-way ANCOVA and its purpose was to reveal the difference between the participants reading scores controlling the effect of their sense of belonging to their schools.

Results

This part is devoted to present the statistical analysis of each research question separately.

RQ1: *Is there a significant difference between the reading scores of the LMS who live in Canada and Belgium according to the result of PISA-2015?*

The first research question investigated reading achievement scores of participants in Belgium and Canada. To explore any differences between them, an independent samples t-test was conducted and the results can be viewed in Table 1 below.

Table 1. Independent sample t-test for reading scores

Group	N	Mean	SD	Mean difference	t	df	p
Belgium	1535	447.74	95.97	-49.75	-17.58	2612	.000
Canada	3805	497.50	87.32				

Table 2. Frequencies: the highest levels of schooling completed by LMS' parents in Canada

		Mothers' Education		Fathers' Education	
		Frequency	Percent	Frequency	Percent
Valid	ISCED level 3A	3256	85.6	3242	85.2
	ISCED level 2	288	7.6	265	7.0
	ISCED level 1	74	1.9	85	2.2
	She did not complete ISCED level 1	74	1.9	58	1.5
	Total	3692	97.0	3650	95.9
Missing	No Response	113	3.0	155	4.1
Total		3805	100.0	3805	100.0

Results of the test indicated that the students in Canada scored higher (Mean = 497.50, SD = 87.32) than the ones in Belgium (Mean = 447.74, SD = 95.97) at a statistically significant level with a mean difference of -49.75, t (2612) = -17.58, p = .000. The Cohen's *d* analysis revealed a medium effect size, r = -0.687.

RQ2:*Is there a significant difference between the highest level of schooling of LMS' parents in Canada and Belgium?*

Highest level of schooling of LMS' parents in Belgium and Canada were also investigated in that study. These levels were presented in the data based on International Standard Classification of Education (ISCED) levels which were developed by UNESCO (United Nations Educational, Scientific and Cultural Organization) to provide a reference framework for reporting information on education. According to that classification, levels 1, 2, and 3 correspond respectively to primary, lower secondary, and higher secondary education. Among A, B, and C categories, A refers to the highest level of education and C is the lowest one. Based on this information, frequencies regarding highest levels of schooling of LMS' parents in Canada and Belgium have been reported in Tables 2 and 3 below.

As shown in Table 2 regarding Canada, 85.6% of mothers and 85.2% of fathers have completed level 3A while 1.9% of mothers and 2.2% were graduates of only level 1.

Table 3. Frequencies: the highest levels of schooling completed by LMS' parents in Belgium

		Mothers' Education		Fathers' Education	
		Frequency	Percent	Frequency	Percent
Valid	ISCED level 3A	627	40.8	611	39.8
	ISCED level 3B - 3C	344	22.4	344	22.4
	ISCED level 2	206	13.4	205	13.3
	ISCED level 1	96	6.3	110	7.2
	She did not complete ISCED level 1	118	7.7	88	5.7
	Total	1391	90.6	1358	88.4
Missing	No Response	144	9.4	177	11.5
	System	1	.1	1	.1
	Total	145	9.4	178	11.6
Total		1536	100.0	1536	100.0

In Belgium, frequencies of LMS' mothers and fathers who completed level 3A were 40.8% and 39.8% respectively. 22.4% of mothers and fathers completed levels 3B and 3C while 6.3% of mothers and 7.2% of fathers were graduates of only level 1. To see any potential differences between these two countries, an independent samples t-test was conducted for the highest levels of education of mothers and fathers separately.

RQ2.a:*Is there a significant difference between the highest level of schooling of LMS' mothers in Canada and Belgium?*

For that data, higher scores show lower levels of schooling and lower ones indicate higher schooling. Thus, the analysis of mother's education revealed that mothers were significantly more educated in Canada (Mean = 1.30, SD = .85) than in Belgium (Mean =

2.09, SD = 1.27) with a mean difference of .79, t (1874) = 21.44, p = .000. The Cohen's *d* analysis revealed a large effect size, r = 0.990.

Table 4. Independent sample t-test for the highest levels of education of LMS' parents

	Group	N	Mean	SD	Mean difference	t	df	p
Mothers'Ed. (ISCED)	Belgium	1391	2.09	1.27	.79	21.44	1874	.000
	Canada	3692	1.30	.85				
Fathers'Ed. (ISCED)	Belgium	1358	2.06	1.22	.77	21.64	1829	.000
	Canada	3650	1.28	.82				

RQ2.b:*Is there a significant difference between the highest level of schooling of LMS' fathers in Canada and in Belgium?*

The results were similar for fathers as well. According to the analysis, LMS' fathers in Canada (Mean = 1.28, SD = .82) had significantly higher levels of education than the ones in Belgium (Mean = 2.06, SD = 1.22) with a mean difference of .77, t (1829) = 21.64, p = .000. The Cohen's *d* analysis revealed a large effect size, r = 1.011. The results are provided in Table 2 above.

RQ3: *Do the participants show statistically significant differences in terms of their reading ability in Belgium and Canada when the highest levels of schooling of LMS' mothers and fathers are kept under control?*

A one-way between-groups analysis of covariance (ANCOVA) was conducted to compare the reading scores of the LMS in Belgium and Canada. The independent variable was country of the participants, and reading score was the dependent variable in the analysis. Highest levels of schooling of mothers and fathers were used as the covariate that needs to be controlled for in this analysis.

Table 5. One-way ANCOVA for reading ability in Belgium and Canada after controlling for LMS' parents' education

	Reading ability				
	Descriptive			Adjusted descriptive	
Groups	Mean	SD	N	Mean	SD

Belgium	447.74	95.97	1535		464.76	2.44
				Mothers' Ed		
Canada	497.50	87.32	3805		494.40	1.45
Belgium	447.74	95.97	1535		466.15	2.48
				Fathers' Ed		
Canada	497.50	87.32	3805		494.86	1.47

Analysis of descriptive statistics showed that participants in Belgium (Mean = 447.74, SD = 95.97) scored lower than the ones in Canada (Mean = 497.50, SD = 87.32) in their reading ability. After controlling for the effect of highest level of education of their mothers, adjusted mean values of the participants in Belgium increased while a slight decrease was observed in the adjusted mean values of the participants in Canada (Belgium adjusted mean = 464.76, *SD* = 2.44; Canada adjusted mean = 494.40, *SD* = 1.45). The effect of the fathers' highest level of education was also controlled for in the analysis to see the changes in adjusted reading scores of the learners. The results showed a greater increase in adjusted mean values of participants in Belgium while they remained nearly the same for those in Canada (Belgium adjusted mean = 466.15, *SD* = 2.48; Canada adjusted mean = 494.86, *SD* = 1.47).

Preliminary checks were conducted to ensure that there was no violation of the assumptions of reliability, correlations, linearity, homogeneity of regression slopes, and reliable measurement of the covariate. After controlling for the highest level of education of mothers, there was a significant difference between the participants in Belgium and Canada on their reading ability scores, F (1,5080) = 103.79, p = .000, partial eta squared = .020. The results were similar after controlling for the effect of the highest level of education of fathers as well. It was revealed that a statistically significant difference was available between the two groups of participants, F (1,5005) = 94.32, p = .000, partial eta squared = .018.

RQ4:*Do the participants in Belgium and Canada differ from each other in terms of their sense of belonging to school?*

Subjective wellbeing of the learners was also explored in that study using their scores for sense of belonging to school. An independent samples t-test was conducted to see any potential differences between the students in Belgium and Canada. The results showed that students in Canada (Mean = -.146, SD = .99) reported weaker sense of belonging to their school compared to the ones in Belgium (Mean = -006, SD = .92) at a statistically significant

level with a mean difference of .14, t (5173) = 4.61, p = .000. The Cohen's *d* analysis revealed a very small effect size, r = 0.128. Table 4 below can be viewed for the results.

Table 6. Independent sample t-test for the students' sense of belonging to their schools

	Group	N	Mean	SD	Mean difference	t	df	p
Sense of belonging	Belgium	1423	-006	.92	.14	4.61	5173	.000
	Canada	3752	-.146	.99				

RQ5:*Do the participants show statistically significant differences in terms of their reading ability in Belgium and Canada when their sense of belonging to school is kept under control?*

A one-way between-groups analysis of covariance was conducted to compare the reading scores of the students in Belgium and Canada after controlling for the effect of the participants' sense of belonging to schools. The independent variable was country of the participants, reading score was the dependent variable, and the participants' sense of belonging to schools was the covariate in the analysis.

Table 7. One-way ANCOVA for reading ability in Belgium and Canada after controlling for sense of belonging

	Reading ability				
	Descriptive			Adjusted descriptive	
Groups	Mean	SD	N	Mean	SD
Belgium	447.74	95.97	1535	454.66	2.34
Canada	497.50	87.32	3805	499.11	1.44

As can be seen Table 5 above, participants in Belgium (Mean = 447.74, SD = 95.97) scored lower than the ones in Canada (Mean = 497.50, SD = 87.32) in their reading ability. After controlling for the effect of the participants' sense of belonging to their school, adjusted mean values of the participants increased in both countries although only a slight one was observed in Canada (Belgium adjusted mean = 454.66, *SD* = 2.34; Canada adjusted mean = 499.11, *SD* = 1.44).

Preliminary checks were conducted to ensure that there was no violation of the assumptions of reliability, correlations, linearity, homogeneity of regression slopes, and reliable measurement of the covariate. After controlling for the effect of the participants' sense of belonging to their school, there was a significant difference between the participants in Belgium and Canada on their reading ability scores, F (1,5172) = 261.68, p = .000, partial eta squared = .048.

Discussion

In this study, the reading scores of the immigrant students in Canada and Belgium in PISA exam were presented since these two countries have different policies on immigrants.

According to the results of the study, the immigrant students in both countries showed success in their reading scores, which is supported by Bialystok (1999) who claimed that bi/multilingual students are expected to be successful. On the contrary, Leseman (2000) and Mancilla-Martinez and Lesaux (2011) who assert that two languages may inhibit each other are in contrast with this study. Furthermore, the results of the study showed that the immigrant students in Canada outperformed those in Belgium in reading scores. The difference between the immigrant students in both countries may appear due to Belgium's language policy as it does not welcome minority languages at schools (Ağırdağ, 2010), and the gap in the inequity may result from their language minority status (Hirtt et al., 2007).

In addition to reading scores of the immigrant students, the highest schooling rates of parents in Canada and Belgium were examined, and it was found that both fathers and mothers were more educated in Canada. The results of reading performance and schooling rate of parents overlap with the related literature (Bradley & Corwyn, 2002; Lamerz et al., 2005; Villiger et al., 2014) as education level of the parents may have a positive effect on students' performance. Hence, it can be inferred that more educated parents can provide better conditions to their children as their living standards are expected to be higher, and they can contribute to their children's academic achievement.

To see the potential effects of the schooling of parents on their children's achievement, schooling rate of parents was kept under control and reading scores of students were reanalyzed. When the education level of mothers was kept under control, it was found that LMS in Canada outperformed those in Belgium. However, when the results of countries were analyzed within themselves, it was recognized that there was an increase in the scores of students in Belgium and a slight decrease in the scores of students in Canada. In this regard, it can be assumed that the mothers' education can be a determinant factor over the students' academic success, which is in line with the results of Baker and Stevenson (1986) and Scott-Jones (1987) who mentioned that the more educated a mother becomes, the more importance and support she gives to her children's education. On the other hand, when the schooling rates of fathers were kept under control, the results indicated that there was a greater increase in the scores of students in Belgium, and the students in Canada got almost the same scores.

When the results are blended, it can be deduced that low schooling rate of parents considerably affects the students' performance in a negative way while high schooling rate of parents has a slight effect. Overall results of schooling rate when it was kept under control showed that there was still a significant difference between the immigrant students in Canada and Belgium.

As for the participants' sense of belonging, the data revealed that immigrant students in Canada were found weaker than those in Belgium. Thus, the results of the study contradict with the statements of Ma (2003) who proposed that teachers and school are the focal factors to increase sense of belonging, thereby affecting their motivation to learn positively. Moreover, the results are also in contrast with the statements of Panicacci and Dewaele (2017) who mentioned that students with higher sense of belonging rate are expected to be more open-minded which can contribute to their academic achievement according to Big Five Model (Dörnyei & Ryan, 2015). Furthermore, the results after keeping the participants' sense of belonging under control indicated that LMS in Canada outperformed the ones in Belgium with a significant difference. Hereby, on the contrary to related literature, it can be claimed that the sense of belonging rate of the students has no direct effect on their reading ability because of the fact that the use of minority languages such as Turkish and Arabic are restricted in Belgium (Ağırdağ, 2010; Pullinx et al., 2016), still the students in this country show higher sense of belonging when compared to their Canadian peers.

Conclusion

This research study has been initiated to investigate PISA results belonging to two OECD countries, Belgium and Canada which were chosen because of the differences between their minority languages policies. Unlike Belgium, Canada allowed their LMS to speak their native languages at school. The LMS in these two countries were compared to each other based on their reading scores. The findings of the study revealed that the LMS in Canada scored higher than their peers in Belgium where native language use is forbidden for the minority learners. Thus, it can be inferred, according to PISA 2015 results, that allowing LMS to speak their native languages at school has positive relationship with their reading success. When the effect of their parents' levels of schoolings has been controlled for, the difference between their scores was still significant. Although schooling of parents has a little influence on the scores of the learners in both countries, it is not a highly crucial factor affecting their scores. Finally, the participants' sense of belonging to their schools was

investigated and findings revealed that LMS in Belgium, where L1 use is not allowed, scored higher in that variable than those in Canada. However, after controlling for the influence of their sense of belonging to school, LMS in Canada again outperformed their peers in Belgium, displaying that sense of belonging to school has not been a crucial variable to increase the reading ability of the LMS.

Many other factors such as LMS's positive emotions regarding the learning environment or physical conditions at their homes and schools may be influential on the results and further research is suggested to investigate them.

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