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Regina J. Giraldo-Garcia
Cleveland State University, reginagiraldo@gmail.com

Joshua G. Bagaka’s
Cleveland State University, j.bagakas@csuohio.edu

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Cover Page Footnote
Note: Correspondence regarding this article should be addressed to Regina Giraldo-Garcia, 2121 Euclid Avenue, JH 376. Cleveland State University. Cleveland, OH 44115. Contact: reginagiraldo@gmail.com
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Critical Analysis of the Educational Success of African Immigrants and African Americans in the United States

Regina J. Giraldo-García and Joshua G. Bagaka’s
Cleveland State University

Abstract

Using the cultural-ecological and culturally relevant theory as the theoretical overarching framework, this study works to quantify the high school achievement gap in mathematics and reading IRT scores between immigrants and U.S.-born black minorities as well as between these students and whites. Based on a nationally representative sample of 1,669 black and 8,682 white students from the NCES Education Longitudinal Study of 2002, a hierarchical linear regression model confirmed that the achievement in mathematics and reading was statistically significant and higher for voluntary compared to involuntary black minorities, but with a small effect size of about one-tenth of a standard deviation. The black-white achievement gap among native black students in these subjects was found to be approximately three times that of voluntary immigrants. The study recommends a critical analysis of individual and structural variables that influence the academic performance of diverse black minority students.

Introduction

Research indicates that immigration to the United States is marked by a common goal for academic achievement and a better life for the immigrant families, a concept which is often referred to as “the American Dream” (Hill & Torres, 2010). As defined by Adams in 1931, the American Dream is “that dream of a land in which life should be better and richer and fuller for every man, with opportunity for each according to his ability or achievement” (as cited in McNamee, 2009, p. 2). Wamwara-Mbugua and Cornell (2010) argue that African immigrants, like other immigrant groups, come to the United States to better their opportunities for social and economic improvement. With increased globalization, the United States has been the primary “migrant receiver,” which has significantly increased the level of
diversity within its borders. Increased diversity often has a consequence of promoting inequality among the immigrants who enter new societies to which they have to adapt. On the other hand, for minority groups such as African Americans who have inhabited in the United States for a longer period of time and are therefore considered native to the country, the paths to prosperity, academic achievement, and the American Dream seem to be vanishing.

Barone (2006) discusses Bourdieu’s (1986) analysis, stating that cultural capital transferred in different forms from one generation to another can either advance or impede one’s movement through the dominant culture. The analysis helps explain the challenges that minorities face in trying to achieve an education. Considering that culture encompasses shared values, beliefs, and attitudes, it can be seen as a channel for shared achievement and societal success. Some minority groups, including native Africans, experience cultural difference among themselves which makes the initial dissonance in Western societies a true obstacle to progress. Individuals whose cultural capital is different from that of the dominant culture carry a set of tools that, though valid and valuable, can actually hinder their achievement (as cited in Barone, 2006).

Ogbu and Simons (1998) discuss the cultural-ecological theory of school performance among minority groups, comparing voluntary black immigrants and nonimmigrant black minorities. Research provides various explanations for the achievement differences between these groups as well as between them and the dominant majority. Two major views are illustrated by Ogbu’s (1991, 1998) and Galletta and Cross’ (2007) work on immigrant and African Americans as involuntary minorities (Galletta & Cross, 2007 as cited in Fuligni, 2007). The latter looks at the under-achievement and oppositional identity of contemporary black students as a consequence of structural elements of the educational system as well as educational policies that define integrated schooling.

The role of voluntary and involuntary minorities in the achievement gap was explained by Ogbu and Simons (1998), who argue that native African Americans were brought by force to America and subsequently developed an oppositional identity in order to maintain a sense of cultural self-definition, an identity which holds general implications for their school performance. The argument indicates that blacks continue to show resistance against their expected positive performance in the school environment even when nested in educational institutions characterized by fairness, opportunity, and choice. However, Galletta and Cross (2007) contest the “legacy of slavery thesis” based on Ogbu’s view (as cited in Fuligni, 2007), while others like Massey, Mooney, Charles, and Torres (2007) explore the discrepancies between black immigrants and black natives attending selective post-secondary institutions in the United States and the impact that newer generations of black immigrant students have on the achievement gap. These contrasting positions and the possible cultural-generational influences on the academic performance of black minority groups make clear the need for a closer analysis of voluntary and involuntary black minorities in the United States.
Purpose of the Study

The analysis of the achievement gap among students of African descent and between these and their white American peers needs to be addressed from an empirical perspective embedded in a cultural-ecological framework. This study examines the groups’ academic achievement based on a nationally representative sample of students and is intended to work towards a better understanding of the achievement gap between high school-age black minorities and white students in the United States. Accounting for a more accurate classification and distinction among sub-groups of black students, a distinction which measures the effect of school type and urbanicity, might have implications for policy and practice beyond the sole measure of the achievement gap.

The purpose of the study is to use a nationally representative sample of high school students to empirically examine Ogbu’s cultural-ecological theory of “voluntary” and “involuntary” minorities in the United States. The study aims to provide quantitative evidence for Ogbu’s cultural-ecological theory by incorporating current findings into the body of literature and further the discussion about possible structural determinants of the groups’ academic performance. The study uses gender, socioeconomic status (SES), urbanicity, and school type (public or private) as control variables. The literature review and discussion sections of the study also address educational approaches to culturally diverse black minority groups in the United States. This study uses Ogbu and Simons’ (1998) classification in the context of immigrants of African descent (voluntary black immigrants) and native black students (involuntary black immigrants) and seeks answers to the following research questions:

1. Is there a statistically significant achievement gap in mathematics and reading between voluntary and involuntary black immigrants in the United States?
2. Is there a statistically significant achievement gap in mathematics and reading between voluntary black immigrants and white students in the United States?
3. Is there a statistically significant achievement gap in mathematics and reading between involuntary black immigrants and white students in the United States?

Theoretical Framework

Ogbu and Simons (1998) present an argument which focuses on differences among “voluntary immigrants”—that is, those who had not been born in the United States—and “involuntary immigrants” or minorities, described as black students whose parents were native to the United States. The argument favored voluntary immigrants’ academic performance when compared to involuntary immigrants, generating both supportive and dissenting discussions among educational anthropologists and other researchers (Galletta & Cross, 2007 as cited in Fuligni,
Ogbu and Simons’ (1998) classification of voluntary and involuntary minorities is an explanation of his cultural-ecological theory of minority school performance. The children of these two kinds of minorities are differentially successful in school because of the different models their subcultures have developed to adapt to their host societies.

The cultural-ecological theory states that a cultural model is observed in a pluralistic society where members of cultural groups come to understand over time what skills they need to survive economically and socially (Ogbu, 1991). In this context, Ogbu (1991) and Ogbu and Simons (1998) state that one must introduce the group’s “cultural model” in order to get a better description of the factors involved in group performance differences. This conception of how it is possible for the group to enhance their status mobility can be seen as a model of their situation. The concern was based on the perception that other authors were not aware of a history where black Americans have experienced the burden of “acting white” and, further, held an oppositional collective identity and cultural frame of reference (Ogbu, 2004).

In this context, Galletta and Cross (2007) question Ogbu’s “legacy of slavery thesis.” They view the low-achievement and opposition of contemporary black students as something that can be attributed to structural elements and educational policies that feature integrated schooling. Galletta and Cross (2007) contend that Ogbu underestimated the role that policies and practices had in helping to produce the oppositional attitudes of black youth (as cited in Fuligni, 2007).

In agreement with Ogbu and Simons (1998), Jenkins, Harburg, Weissberg, and Donnelly (2004) test Ogbu’s “cultural-ecological” model regarding the effect on educational achievement of being a “voluntary” or “involuntary” minority at the college level. Jenkins et al. (2004) measured rates of attrition and aspects of college performance. They found that selected measures of academic performance, such as placement tests, were found to be more predictive for the voluntary than they were for the involuntary immigrant group. The researchers discussed the implications of these results and argued around the idea that people often come to the United States to escape political oppression, but in general “they come to better the social and economic prospects for themselves and their families” (Jenkins et al., 2004, p. 1). The assumption is that immigrant or second-generation children will better the family status through educational attainment, which makes immigrant parents place the emphasis on having their children perform well in school in ethnic minority communities.

Ogbu (1991) argues that the differences among minority groups are not a matter of a genetically stronger endowed group having immigrated to the new society. In Ogbu’s view, it can be demonstrated that, when viewed in their country of origin, a given group whose language and culture are relatively consistent with the dominant group performs poorly in school. Conversely, when they emigrate, members of this group do well in the new country where their language and culture are quite different from that of the dominant group in the host setting. On the other hand, according to Ogbu and Simons (1998), native-born minorities experience greater and more persistent language and cultural difficulties; consequently, they are less
economically and academically successful than voluntary minority groups. Ogbu and Simons (1998) argue that children of immigrant minorities are also classified as voluntary minorities, although they were born in the United States.

**Review of the Literature**

Students from minority groups from different generations of immigrants make up a significant amount of the student population in the United States, and their academic performance is shaping the future of the country from multiple perspectives. A recent study by Manuel, Taylor, and Jackson (2012) explored ethnic-related heterogeneity in SES among black persons in the United States. The authors hypothesized that there were ethnic and racial differences across seven indicators of SES and found differences between Caribbean blacks and African Americans in only five of the seven indicators, depending on Caribbean’s country-of-origin or duration-of-stay in the United States. According to Manuel, Taylor, and Jackson (2012), Caribbean blacks were found to have an advantage when compared to African Americans in most of the indicators included in their analysis.

Scopilliti and Iceland’s (2008) findings indicated few differences between Caribbean blacks and non-Hispanic whites, in contrast to the greater prevalence of African-American and non-Hispanic white differences. This also supports the thesis of black ethnic-related heterogeneity in the economic context: according to the authors, “Blacks are not a homogenous racial group” (Scopilliti & Iceland, 2008, p. 569). These differences among the sub-groups of black minorities are also present in their academic achievement patterns (Pinder, 2012). Pinder’s (2012) findings show that, when including family background factors, Afro-Caribbean students outperformed African Americans in the sciences, with the difference being statistically significant. Although the groups share a similar history of slavery as African descendants, there are other factors that may influence such differences in their academic performance.

A critical explanation of the marked differences in academic performances found between Caribbean blacks and African-American students from generation to generation is provided in Valenzuela’s (1999) discussion of the structure of the American educational system. Valenzuela (1999) argues that the way that schooling is organized in the United States has an adverse impact on U.S.-born students and that its structure reduces the access to resources especially to those from the lowest societal strata. Given this scenario, low-income African-American students, as a native-born group, are at a disadvantage when compared to black immigrant students who might hold a similar or higher socioeconomic status and face the challenges of the American educational system from a different perspective. Although the Caribbean blacks are also distant from being a monolithic group, differing in many cases among themselves in important aspects such as language and cultural background, “their social networks operate to provide assistance to their members locally, nationally, and transnationally” (Taylor, Forsythe-Brown, Taylor, & Chatters, 2014, p. 149).

The difference in achievement across generations of immigrants could indicate that socioeconomic status is a major factor affecting the students’ school
performance with an effect that is reflected not only on the students’ level of achievement but also evident in the lack of resources in underserved public schools, which many low-income students attend. Minority students from low-income areas, namely Caribbean blacks, African Americans, or whites, develop their academic skills within an environment frequently lacking key material and cultural resources. Nonetheless, the issue of differences in the educational performance across all races in the United States arises from the economic inequality that emerges from the country’s class based social structure, and the way in which the American school system is organized (Jarosz & Lawson, 2002).

**Voluntary vs. Involuntary Immigrants**

Historically, the United States of America has received numerous immigrant groups from multiple origins: from Europe—including Irish, Jews, Italians, and Greeks, among others—initially perceived as ethnic groups and later on becoming “whites,” as well as diverse immigrants of African descent, among other groups (Hayduk & Jones, 2008).

The cultural-ecological theory differentiates black voluntary and involuntary minorities to the United States as those who have immigrated voluntarily and those who were brought by force to the country during slavery, respectively (Ogbu & Simons, 1998). According to Djajic (2003), immigrants tend to assimilate to a new society in different dimensions and at different rates, which also differs from the way their children assimilate later on. Such varying rates of assimilation are connected to a higher rate of human capital for the second generation of immigrants, but could have an adverse effect on other dimensions such as language, gender, housing, and neighborhood selection (Djajic, 2003).

Research also provides evidence of how residential, cultural, and economic life makes distinct the differences between black immigrants and native African Americans. However, when it comes to American politics, it is assumed that black political behavior in America is unified by a homogeneous perspective based on common ancestry (Alex-Assensoh, 2009). Alex-Assensoh (2009) states that African immigrants see themselves in terms of national identities (e.g., Ethiopian or an ethnic identity like Mandingo), and research evidence indicates that the top countries of birth for black immigrants are Jamaica, Haiti, and Trinidad and Tobago (approx. 58 %), while Africa is the next largest regional sender (22.7 %), especially from Nigeria and Central America (Scopilliti & Iceland, 2008.)

**Caribbean Immigrants**

Caribbean-born groups represent a significant part of the black immigrant population in the United States. Massey, Mooney, Charles, and Torres’ (2007) exploratory analysis of the National Longitudinal Survey of Freshmen (NLSF) finds discrepancies between black immigrants and black natives attending selective post-secondary institutions in the United States. The study included 1,028 blacks, 998 Asians, 959 whites, and 916 Latinos over the course of four years. The findings of that study allowed the researchers to frame reasonable explanations for why
Caribbean immigrants are more represented in the U.S. post-secondary institutions than African-Americans (Massey et al., 2007).

Massey et al. (2007) found that admissions representatives might target immigrants for recruitment based on their understanding that Caribbean students are more driven, motivated, and likely to succeed than African-Americans, or because they hold objective characteristics such as better test scores or grades. In reviewing Massey et al. (2007), Hanniford (2012) discusses the possibility that admission officers consider documented information indicating that whites generally feel more at ease with black immigrants than they do with black natives. The context of Caribbean black immigrants in comparison with their native African-American counterpart shows black immigrants as a heterogeneous socioeconomic group (Manuel, Taylor, & Jackson, 2012). Caribbean black immigrants also significantly outperformed African Americans in school sciences, influenced by family background factors (Pinder, 2012).

**Sub-Saharan African Immigrants**

In the case of Kenyan immigrants, Wamwara-Mbugua and Cornwell (2010) examine the acculturation of this group as a dialogical process. The researchers interviewed immigrants in the South of the United States and found that black immigrant acculturation was a process of adaptation characterized by dialogue rather than as a mere integration of dominant culture to culture of origin. The findings show that immigrants tend to keep their culture of origin but also to move towards the dominant culture, both having an effect on their performance in the new society. Wamwara-Mbugua and Cornwell’s (2010) findings suggest that Kenyan immigrants might come to the United States “… to better the social and economic prospects for themselves and their families” as also argued in Jenkins’ et al. (2004) work, but their adaptation process is impacted by their race and colonial history (p. 69). It is noteworthy to mention that the Institute of International Education (2007), in the 2006-2007 academic year, reported that there were 6,349 students from Kenya studying in the United States (down 3.2% from the previous year). Kenya is the 19th leading place of origin for students coming to the United States, following France, which had 6,704 students in the United States in the same academic period (as cited in Wamwara-Mbugua & Cornwell, 2010).

Comprehensively, Afolayan (2011) evaluates the differences in culture and communication that prevented 14 Nigerian immigrants living in Manchester, New Hampshire, from social and economic success in America. Afolayan (2011) found that the longer these Nigerians spent in America, the more difficult it was for them to acquire employment. Nevertheless, such findings are based on the study of a very small group, which limits the chances of generalizability of the findings to the entire group of Nigerians living in the United States. On the other hand, Nwangwu (2012) argues that education is one of the strongest motivators for African immigrants coming to the United States. Critical dimensions of parenting practices to prepare immigrant Nigerian children for college in the United States were observed in relation to cultural orientation, early childhood education, and continuous parental involvement in school activities (Amayo, 2009).
Qualitative research findings on Somali youth suggest that East African Muslim immigrants have experienced religious and cultural discrimination in mainstream U.S. schools (Basford, 2010). It sounds contradictory that the United States, as a Western country traditionally seen as a receiver of immigrants, uses a one-size-fits-all approach giving all children the same mainstream curricula. According to Ajrouch (2004), Western schools expect that all students respond in the same way to practices in their school environments without considering the multiple cultures, religions, and gender differences of the students (Ajrouch, 2004 as cited in Basford, 2010). In the case of Somali students, culturally relevant pedagogy could play an important role in their lives inside and outside the classroom environment.

Somali families who have entered the country as refugees face a number of challenges while making their transition to public schools in the United States (Roxas, 2008). Research provides information on the socio-cultural factors that constrain the academic success of Somali Bantu males in high school, describing their contribution to an increasing diversity in the characteristics of refugee students (Roxas, 2008). According to Roxas (2008) there is deficient diversity in teachers, a group which is predominantly white and mono-lingual.

**Culturally Relevant Pedagogy**

The review of the literature on voluntary and involuntary immigrants’ diverse characteristics and their performance in the American educational system sheds light on individual and contextual factors impacting the students’ experiences in school. It also makes a strong case for suggesting a culturally relevant pedagogical approach to learning. A school environment that drastically differs from the students’ culture and learning styles could have a harmful effect on the pace of progress and level of academic achievement of the students.

Culturally relevant pedagogy (CRP), a term examined by Hubert (2014), is an intricate process that has the objective of making teaching culturally applicable to students. In this regard, a culturally relevant pedagogy would honor the cultural heritages of the students and a diversity of learning styles, improving the African-American students’ attitudes and interest toward mathematics, among other disciplines (Hubert, 2014). African American students reported positive perceptions of culturally relevant interventions when comparing it to traditional mathematics instruction, and expressed their preference for school activities in home-like classrooms, an environment with a prevalent ethic of caring and participation and technology-use opportunities (Hubert, 2014). Likewise, Houchen (2013) describes important lessons derived from the classroom experience and methods of integrating student perspectives and learning needs into course design as a practice of CRP.

In the case of immigrant students, CRP seems to be a key practice for promoting engagement in the classroom and recognizing the presence of African-born immigrants in the U.S. educational system. Harushimana and Awokoya (2011) emphasize the need for a culturally sensitive curriculum that addresses the cultural complexity of African-born immigrants, especially those from the sub-Saharan
Africa. The argument is based on the limited inclusion of African students’ voices and cultures in a multicultural curriculum. In addition, the negative portrayal of African countries as primitive, diseased, and underdeveloped areas in the media reinforces stereotypes that diminish the cultural richness of sub-Saharan countries. The inclusion of cultural activities in the classroom would help African immigrant students maintain the continuity of their home culture and build the bridge between their sociocultural roots and their integration into the American society (Obiakor & Afoláyan, 2007).

In summary, the academic performance of students is described in the literature as defined by many aspects including individual characteristics such as race, gender, and learning styles, and contextual factors such as culture, religion, and socioeconomic status, but also by a key aspect such as structural characteristics that frame the educational system in the United States. For voluntary and involuntary black minorities, these differences have an impact on the academic performance of high school students and provide a scenario where particular characteristics need to be considered and the pedagogical approach to the groups needs to be adjusted.

Research Methodology

Data Analysis and Procedures

Research Design. The study used a hierarchical linear regression model to examine the achievement gap in mathematics and reading IRT scores between voluntary and involuntary black minorities when students’ individual variables such as gender and socioeconomic status and school variables including school urbanicity or attending a public or private school are controlled. In addition, the model examined the black-white achievement gap in these two subjects in the context of both voluntary and involuntary immigrants.

Data Source. The data source was The Education Longitudinal Study of 2002 (ELS: 2002) from the National Center for Education Statistics (NCES). The ELS: 2002 followed a cohort of students from the time they were high school sophomores through the rest of their high school careers, using survey questionnaires and tests (math and reading) as the primary instruments for the collection of information on the students’ academic experiences. This data base includes information from multiple respondents across time from the base line year in 2002 through 2004 to 2006 to 2012 as follow-up data-collection points.

Sample. The initial sample drawn from the ELS: 2002 longitudinal study consisted of 2,020 black non-Hispanic students and 8,682 white, non-Hispanic students. Data for the analysis were selected from the base year (2002) and the second follow-up (2006) after the expected completion of high school. This sample was delimited to respondents who had information about their Item Response Theory (IRT) mathematics and reading scores and had valid information to determine their generational status. The selection of item response theory (IRT) mathematics and reading scores was made because IRT trait estimates are more suitable to assess the
relationship between test scores and outcome measures, if compared to summated scores (Xu & Stone, 2012). The literature supports that IRT trait estimates have an interval scale that is a property assumed for dependent variables by the majority of statistical procedures utilized in educational research (Xu & Stone, 2012).

These criteria yielded an analytic sample of 1,669 black students (11.3 % of voluntary and 88.7% of involuntary immigrants) and 8,682 white students. Likewise, 50.4 % of the students were male and 49.6 % were female. The weighting used by NCES for the sample in the final analyses served to reflect the probability of selection for each student and was used to permit valid inferences about the respective populations from which the sample was drawn and to ensure that the results are fully representative of the national population.

Variables. The participants’ self-reported immigration status was treated as the primary independent variable of the study. First and second generation (children who are born outside the United States and U.S.-born children with at least one foreign-born parent) were categorized as voluntary immigrants in contrast to involuntary immigrants of black non-Hispanic participants from third and later generation (U.S.-born children of U.S.-born parents). Gender (Male = 1; Female = 0) and SES were used as control variables. The SES of the students was measured in a composite variable that includes the following factors: family income, parents/guardian educational level, and parent/guardian occupation. In addition, the model includes school urbanicity (urban vs. suburban/other schools), and whether the students attended a public or private school as independent variables. The dependent variables used as measure of academic achievement were IRT mathematic and reading scores at the end of 12th grade. The IRT scores were used because the test analysis’ procedure allows the estimation of a student’s ability while accounting for each test question’s difficulty, guessing factor, and discriminating ability.

Limitations

The study uses a large data set from NCES, ELS: 2002, which is considered secondary data. This characteristic represented an advantage and allowed the researchers to make informed inferences for all voluntary and involuntary black minorities and white students in the United States. However, it also limited the researchers’ ability to develop their research work beyond the characteristics of pre-existing data, limiting the flexibility for analysis.

Likewise, the study uses data collected during 2002-2006, not accounting for more recent changes in the contexts of the achievement gap between the groups that could indicate a shift in the pattern of performance. Lastly, the study looked at national characteristics overseeing local differences (e.g., students’ performance in regions of the country with different concentrations of poverty and voluntary/involuntary black minorities). Therefore, generalizations might not apply to certain areas of the country with particularly different characteristics.
Findings

Immigrant Status

In general, the findings indicate that both immigrant and native blacks have significantly lower mathematics and reading IRT scores in comparison to white high school students. The findings also revealed a statistically significant difference between voluntary and involuntary black minority students’ academic performance in mathematics and reading.

Table 1: Multiple Regression Analyses Results for the Prediction of Students’ Mathematics and Reading IRT Scores by Migrant Status (Vol vs. Invol), SES, Gender, Urbanicity, and School Type

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Reading</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>β</td>
</tr>
<tr>
<td>Model 1 Voluntary vs. Involuntary</td>
<td>1.76</td>
<td>.07</td>
</tr>
<tr>
<td>Model 2 Voluntary vs. Involuntary</td>
<td>0.87</td>
<td>.03</td>
</tr>
<tr>
<td>SES</td>
<td>3.70</td>
<td>.29</td>
</tr>
<tr>
<td>Gender(1= Male)</td>
<td>-1.15</td>
<td>-.07</td>
</tr>
<tr>
<td>Urban/Suburban-other</td>
<td>-.23</td>
<td>-.01</td>
</tr>
<tr>
<td>Public School</td>
<td>-3.45</td>
<td>-.07</td>
</tr>
</tbody>
</table>

Specifically, research findings presented in Table 1 show that, when considered as a single factor, voluntary immigrants have statistically significant higher scores in both mathematics ($\beta = 0.08$, $p < .001$) and reading ($\beta = 0.07$, $p < .001$) compared to the involuntary black immigrants. The achievement gap between these two groups is less than one-tenth of a standard deviation and accounts for approximately 0.5% of the variance in students’ mathematics and reading IRT scores. Even after isolating the impact of this immigrant status by controlling for factors such as SES, gender, urbanicity, and school sector, the variation between voluntary and involuntary immigrants remains statistically significant in both reading ($\beta = 0.03$, $p < .001$) and mathematics ($\beta = 0.05$, $p < .001$) IRT scores, but with an achievement gap of 0.03 standard deviation in reading and 0.05 in mathematics. The other four predictors (SES, gender, urbanicity, and school sector) were all statistically significant predictors of both mathematics and reading IRT scores. The full model with five predictors accounted for approximately 10% of the variance in reading and mathematics IRT scores.

The voluntary black immigrant versus white achievement gap in reading and mathematics was examined in a similar manner. The results presented in Table 2
reveal that, when considered as a single factor, voluntary immigrants have statistically significant lower scores in both mathematics ($\beta = -0.11, p < .001$) and reading ($\beta = -0.09, p < .001$) compared to white students. The black-white achievement gap in the context of the voluntary immigrants is about one-tenth of a standard deviation in both mathematics and reading IRT scores and accounts for approximately 1% of the variance in students’ mathematics and reading IRT scores. When the four other factors (SES, gender, urbanicity, and school sector) are included in the model, voluntary immigrants’ achievements remain significantly lower in both reading ($\beta = -0.07, p < .001$) and mathematics ($\beta = -0.08, p < .001$) IRT scores with an achievement gap of less than one-tenth of a standard deviation in both reading and mathematics. The other four predictors (SES, gender, urbanicity, and school sector) were also all statistically significant predictors of both mathematics and reading IRT scores. The full model with five predictors accounted for approximately 15% and 16% of the variance in reading and mathematics IRT scores respectively.

Table 2: Multiple Regression Analyses Results for the Prediction of Students’ Mathematics and Reading IRT Scores by Migrant Status (Vol vs. White), SES, Gender, Urbanicity, and School Type

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Reading</th>
<th>Mathematics</th>
<th></th>
<th></th>
<th>Reading</th>
<th>Mathematics</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>$\beta$</td>
<td>P-value</td>
<td>$R^2$</td>
<td>B</td>
<td>$\beta$</td>
<td>P-value</td>
<td>$R^2$</td>
</tr>
<tr>
<td>Model 1 Voluntary vs. White</td>
<td>-5.82</td>
<td>-0.09</td>
<td>.000</td>
<td>.008</td>
<td>-8.320</td>
<td>-0.11</td>
<td>.000</td>
<td>.011</td>
</tr>
<tr>
<td>Model 2 Voluntary vs. White</td>
<td>-4.53</td>
<td>-0.07</td>
<td>.000</td>
<td>.149</td>
<td>-6.446</td>
<td>-0.08</td>
<td>.000</td>
<td>.164</td>
</tr>
<tr>
<td>SES</td>
<td>4.91</td>
<td>0.35</td>
<td>.000</td>
<td></td>
<td>6.420</td>
<td>0.38</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Gender (1= Male)</td>
<td>-1.70</td>
<td>-0.09</td>
<td>.000</td>
<td></td>
<td>1.221</td>
<td>0.05</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Urban/Suburban-urban-other</td>
<td>-.191</td>
<td>0.008</td>
<td>.000</td>
<td></td>
<td>-.853</td>
<td>0.03</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Public School</td>
<td>-1.860</td>
<td>-0.06</td>
<td>.000</td>
<td></td>
<td>-1.572</td>
<td>-0.04</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

The black-white achievement gap in the context of involuntary immigrants was also examined using a similar hierarchical regression model. The result of this analysis is presented in Table 3. It reveals that, when considered as a single factor, there is a statistically significant black-white achievement gap in both reading ($\beta = -0.28, p < .001$) and mathematics ($\beta = -0.33, p < .001$) IRT scores. The black-white achievement gap in the context of involuntary immigrants is about three-tenths of a standard deviation in both mathematics and reading IRT scores and accounts for approximately 8% and 11% of the variance in students’ reading and mathematics IRT scores, respectively. When the four other factors (SES, gender, urbanicity, and school sector) are included in the model, involuntary immigrants’ achievement are
significantly lower in both reading ($\beta = -0.20, p < .001$) and mathematics ($\beta = -0.23, p < .001$) IRT scores with an achievement gap of about two-tenths of a standard deviation in reading and one-quarter of a standard deviation in mathematics. The other four predictors (SES, gender, urbanicity, and school sector) were all statistically significant predictors of both mathematics and reading IRT scores. The full model with five predictors accounted for approximately 20% and 24% of the variance in reading and mathematics IRT scores respectively.

Table 3: Multiple Regression Analyses Results for the Prediction of Students’ Mathematics and Reading IRT Scores by Migrant Status (Invol vs. White), SES, Gender, Urbanicity, and School Type

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Reading</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>$\beta$</td>
</tr>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involuntary vs. White</td>
<td>-7.577</td>
<td>-0.283</td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involuntary vs. White</td>
<td>-5.301</td>
<td>-0.198</td>
</tr>
<tr>
<td>SES</td>
<td>4.698</td>
<td>.336</td>
</tr>
<tr>
<td>Gender (1= Male)</td>
<td>-1.610</td>
<td>-0.084</td>
</tr>
<tr>
<td>Urban/Suburban- other</td>
<td>-0.104</td>
<td>0.014</td>
</tr>
<tr>
<td>Public School</td>
<td>-1.90</td>
<td>-0.056</td>
</tr>
</tbody>
</table>

The primary hypothesis, which examined Ogbu’s theory, revealed that, though statistically significant, the achievement gap between voluntary and involuntary black minorities was rather small at less than one-tenth of a standard deviation, accounting for approximately 0.5% of the variance in students reading and mathematics IRT scores. However, by separating voluntary and involuntary black immigrants, the black-white achievement gap can be further quantified. In this case, the hierarchical regression model revealed that, when four educational predictors (SES, gender, urbanicity, and school sector) are accounted for, the black-white achievement gap is about 0.08 and 0.23 of a standard deviation in mathematics IRT scores among voluntary and involuntary immigrant students, respectively. Similarly, the black-white achievement gap is about 0.07 and 0.20 of a standard deviation in reading IRT scores among voluntary and involuntary immigrant students, respectively. In other words, the black-white achievement gap among native blacks is approximately three times that of involuntary black immigrants.
Other Factors

Students’ SES had a statistically significant positive relationship with students’ mathematics and reading IRT scores across all groups. The factor was the strongest of the five predictors in all three models in predicting students’ reading and mathematics IRT scores with effect sizes ranging from .29 and .27 in reading and mathematics, respectively in comparing voluntary versus involuntary immigrants to .35 and .38 in reading and mathematics, respectively in comparing voluntary versus white students. Gender was also a statistically significant factor across all models, with female students significantly outperforming in reading and underperforming in mathematics compared to their male counterparts. However, the gender achievement gap in all cases was less than one-tenth of a standard deviation. Additionally, though with small effect sizes, students in the urban school and those in public schools had a statistically significant lower reading and mathematics IRT schools compared to their non-urban and non-public schools.

Conclusions and Discussion

The findings suggest that, when distinguishing between voluntary and involuntary black minorities, there is a significant difference in students’ mathematics and reading IRT scores between the groups, though with very small effect sizes. While Ogbu’s cultural-ecological theory can be quantitatively tested and be found statistically significant, the small effect sizes indicate a case of little practical significance. According to this finding, the role of culture, while significant, has a small effect on explaining the black-white achievement gap, leaving more space for socioeconomic factors to play a role in the achievement gap. Regardless of the small effect, the authors consider that there is a need for meeting cultural needs in the learning environment while keeping in mind that there are other factors that educators and educational anthropologists should consider. These other factors might be linked to structural characteristics of the educational system.

The data analysis also revealed that students in both groups have significantly lower scores in the two subjects compared to their white counterparts. The black-white achievement gap in these subjects was approximately a quarter and a tenth of standard deviations for native and non-native blacks, respectively. This analysis provided a quantified view of the differences between and within groups at the high school level beyond the commonly documented black-white achievement gap. Though the study revealed marked variations in both reading and mathematics achievement according to the students’ immigration status, while controlling for four factors of SES, gender, urbanicity, and school sector, the full model accounted for less than 20% of the variance in students’ mathematics and reading IRT scores, leaving over 80% of the variance to be attributed to other factors outside the model.

Consistent with the literature, SES had a positive relationship with student achievement in the two subject areas. The factor remains to be the most dominant predictor in the model. It is also important to note that the gender achievement gap in both reading and mathematics was statistically significant across all groups, with female students underachieving in mathematics but out-performing their male
counterparts in reading IRT scores. As argued by Valenzuela (1999), “U.S.-born youth from a low-income community are themselves symptomatic of the ways that schooling is organized to subtract resources from them” (p. 5), which also aligns with Galletta and Cross’ (2007) discussion about the low achievement of black students and their oppositional identity as a consequence of structural elements that define integrated schooling in the United States as well as the effects of educational policies.

These assertions would situate low-socioeconomic-status native at a disadvantage when compared to black immigrants and white students. However, the gender achievement gap in favor of girls in reading and boys in mathematics seems to be consistent across all groups considered in the study, regardless of their generational status or SES.

The cultural-ecological theory helped to identify the distinction between the two subgroups of students. The cultural context in which each group has lived, their SES, and the ingrained expectations of both black minority groups seem to make a difference when they are compared to white students. This study corroborates the view of Jenkins et al. (2004), which holds true for groups such as Kenyan, Caribbean, and Nigerian immigrants, whose adaptation processes are impacted by their race and colonial history (Wamwara-Mbugua & Cornwell, 2010) as part of the larger immigrant group. In the context of this study, the influence of the distinction between black students, as native or immigrants, seems to be adverse for those groups that have inhabited the United States for a longer period of time.

This study unveils differences among black minorities’ academic performance, however, the existence of a statistically significant achievement gap between voluntary and involuntary immigrants demands further scrutiny. Immigration status accounts for 1.1% and 0.8% of the variance in mathematics and reading IRT scores, respectively among voluntary immigrants and 10.8% and 8% in mathematics and reading, respectively among involuntary immigrants. There are therefore more factors not included in the model that explain high school students IRT scores in mathematics and reading among involuntary than voluntary immigrants.

**Implications for Practice**

The results of this empirical study confirm that the size of the achievement gap is on a continuum, narrower between voluntary immigrants and white students and wider between involuntary immigrants and white students. This finding allows us to recommend that the support services provided to black students should be based on their diverse needs. Although the findings indicate that voluntary immigrants have significantly higher scores than involuntary immigrants, there is an indication that the advantage they hold over the involuntary immigrants may not be sustainable (Martin, 1988). Considering the findings of this and other studies, indicating a gap in favor of recent immigrants (Jenkins, et al., 2004; Giraldo García, 2014), it is reasonable to recommend the integration of culturally relevant support services in which the facilitators’ knowledge of students’ cultural backgrounds in instruction would help to narrow down the achievement gap between both blacks and whites as well as between black sub-groups. However, the study also recommends a critical
analysis of individual and structural variables that influence the academic performance of diverse black minority students as a whole.

Considering Valenzuela’s (1999) view of how the school system in the United States is organized to subtract resources, especially from low-income U.S.-native born students, a culturally relevant pedagogy would provide opportunities for adding culturally related activities to the curriculum such as international or multicultural days that help improve the perceptions about African immigrants, their cultures, and characteristics (Harushimana & Awokoya, 2011). Nevertheless, given that cultural and socioeconomic variables do not act in isolation, a culturally relevant practice in the classroom should be characterized by a caring teacher-student interaction where all students, especially low-income students, are expected to achieve higher and be supported in such a way that they can attain their academic goals in a timely manner (Houchen, 2012). It seems that the interplay of the culture of origin of voluntary minorities of African descent and their openness to the new culture works in their favor when compared to African-Americans. However, the achievement gap between these groups also seems to be a result of the way in which schooling is organized in the United States, wherein economic inequalities and a class-based social structure define the quality of resources minority students receive in underserved areas (Jarosz & Lawson, 2002).

In any case, it is recommended that a culturally relevant pedagogy be used to improve the chances of success for both groups, especially “addressing the needs of today’s diverse students” by including a culturally diverse curriculum (Gay, 2010). For example, classroom practice that emphasizes the integration of the students’ cultures of origin combined with the “ethic of caring,” described by Hubert (2014) as the teacher’s natural inclination to meet the student’s needs. Likewise, low-income minority students especially need to have access to resources and opportunities for the use of technology in a home-like classroom (Hubert, 2014). It is therefore important that all intervention programs and support services be provided to meet both the educational and cultural needs of minority groups, helping them to raise their academic performance and closing the overall black-white achievement gap in United States.

**Future Research**

The recommendations for further research include the use of more recent data on black minority students collected after 2006 so that recent changes observed in the context of voluntary and involuntary black minorities and white students can be examined in addition to changes in the achievement gap between the groups. Moreover, a thorough analysis of native versus immigrant minorities’ performance should be done in local contexts, and it is further important to add a qualitative approach to the research. This qualitative approach will help to analyze groups’ experiences in their academic lives in the United States in regions of the country with varying levels of concentration of voluntary and involuntary black minorities. The study also recommends the analysis of structural variables related to the educational system that may influence the academic performance of black students.
References


