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# English as a gatekeeper: Inequality between Jews and Arabs in access to higher education in Israel

Yariv Feniger<sup>a,\*</sup>, Hanna Ayalon<sup>b</sup>

<sup>a</sup> Ben-Gurion University of the Negev, Israel <sup>b</sup> Tel Aviv University, Israel

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#### ABSTRACT

Access to the universities and many colleges in Israel is conditioned on the attainment of a specific matriculation certificate that includes a passing grade in advanced level English. Arab students in Israel are required to study English in addition to Arabic and Hebrew, unlike Jewish students, who are not obliged to take a second foreign language in addition to English. This puts Arab students in an inferior position. An analysis of a large sample of high school graduates showed that the English requirement incurs larger gaps than two other subjects that were examined: history and math. Logistic regression models confirmed that the gaps in meeting the English requirement can help explain the Jewish-Arab discrepancy in enrollment in higher education.

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#### 1. Introduction

According to recent data of the Israeli Central Bureau of Statistics wide gaps in access to higher education exist between the Jewish majority and the Arab minority in Israel. For example, only 30% of Arab high school graduates enroll in higher education within eight years after completing high school, compared to 49% among Jews. Furthermore, in 2012 only 9% of the undergraduate students in Israeli universities and colleges were Arabs, although Arabs constitute about 20% of the Israeli population (Central Bureau of Statistics, 2014). In this paper we develop and test the hypothesis that this gap can be attributed to, among other factors, the admissions policy of Israeli higher education institutions. All the universities and many colleges require a passing grade in advanced level English in the matriculation examination. This requirement is especially difficult for Arab students in Israel. First, Arabic features a state of diglossia in which the modern standard Arabic, known as literary Arabic, is used for writing, while spoken Arabic dialects are used for everyday communication. Arab students have to learn literary Arabic, in effect a second language, which complicates their learning processes. Second, all Arab students in Israel are required to study both Hebrew and English, in addition to Arabic, in contrast to lewish students for whom Arabic is not a compulsory subject in the matriculation diploma. The majority of Jewish students, then, study only one foreign language, English, while all Arab students study two. Thus, we hypothesized that among Israeli high school graduates who are eligible for a matriculation certificate, Arabs are disadvantaged in comparison to Jews in their odds of attaining a passing grade in the advanced English examination and that this gap can contribute to explaining Arabs' underrepresentation in higher education.

\* Corresponding author. Tel.: +972 8 6461720; fax: +972 8 6472897.. *E-mail address:* fenigery@bgu.ac.il (Y. Feniger).

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### 2. The Israeli context-compulsory and higher education

Education in Israel is compulsory and free from kindergarten to the end of secondary education (12th grade). The education system consists of five main types of schools: Jewish state secular, Jewish state religious, Arab state, Arab independent Christian and Jewish independent. The last mainly caters to the ultra-Orthodox communities.

The Jewish and the Arab school sectors are almost completely separate. Most Arab students study in Arab state schools, where the language of instruction is Arabic and the staff is Arab. Although financed by the state, these schools suffer from longstanding discrimination in budget allocations and services. On average, Arab schools have larger classes, fewer teachers per student, and less psychological and special education counseling than Jewish schools (Abu-Saad, 2004; Al-Haj, 1995). For political and historical reasons, the two religious minorities within the Arab population, the Druze and the Christians, enjoy better educational opportunities than the Muslims. The Christians benefit from a system of independent and selective schools, owned by Christian denominations, which are characterized by high educational standards and strict policies regarding students' behavior. Druze students study in a separate education system that was detached from the state-run Arab school system in the mid-1970s through a Druze initiative to preserve their identity and heritage. This step helped the Druze communities to obtain larger government budgets for their schools because of the state's interest in forming a distinct Druze identity consolidating the special relations of the Druze with the Jewish state (Al-Haj, 1995). Yet, their average achievement is generally similar to that of Muslims.

In addition to Jewish-Arab inequality, there is further inequality within the Jewish sector itself. Jews of Middle Eastern or North African origin (*Mizrachim*), the Jewish disadvantaged ethnic groups, are characterized by overrepresentation in the vocational tracks (Ayalon & Shavit, 2004) and in the less prestigious advanced subjects (Ayalon, 2006), and by underrepresentation in higher education (Feniger, Mcdossi, & Ayalon, 2014).

There is also inequality within the Jewish population between immigrants and the Israeli-born. The two major immigrant groups are natives of the former Soviet Union (FSU) and of Ethiopia, respectively. Whereas students of Ethiopian origin suffer from educational disadvantage at all levels, the achievements of FSU students in secondary education display a polarized pattern. They are more likely than native Israelis to drop out; but those who did not (the vast majority) scored relatively high on the matriculation examinations. Also, FSU immigrants tended to enroll in vocational tracks and to study science and technology more than Israeli-born students (Chachashvili-Bolotin, 2010).

#### 2.1. High school curriculum and matriculation examinations

The curriculum in Jewish and Arab high schools is generally similar. It consists of a core of compulsory subjects and a variety of elective subjects. Compulsory subjects include civics, Hebrew (as a first language in the Jewish sector and a second language in the Arab sector), English, math, history, and literature. Arabic is a compulsory subject in the Arab schools, but elective in the Jewish ones. Bible is a compulsory subject in the Jewish schools only. There is a substantial difference between the Jewish and Arab high school curricula in two main respects. First, vocational education is common in Jewish schools, but relatively rare in Arab schools. Second, Jewish students can choose among a wide variety of elective subjects, whereas Arab students have very restricted options. These differences are a consequence of the different resources available in the two educational sectors (Al-Haj, 1995). Paradoxically, however, sociological and educational research, in Israel and in other countries, suggests that a scarcity of vocational tracks and a relatively restricted curriculum are associated with better educational outcomes and less inequality (e.g., Ayalon, 2002; Bryk, Lee, & Holland, 1993; Shavit, 1990)

The matriculation examinations are administered by the Ministry of Education and are taken during the last years of high school, mainly in the 12th grade. The matriculation system is based on study units (each study unit is equal to three weekly hours per year or one weekly hour per three years). Examinations can be taken at either the basic level (2–3 units) or advanced level (4–5 units). To be eligible for a matriculation certificate, the student must take a total of at least 20 units and sit for exams in all compulsory subjects and at least one advanced subject. One failure is allowed. However, this basic diploma is insufficient for admission to a university, or to most academic programs in the colleges. That requires passing grades in the math exam (at least at the basic level) and an advanced-level English exam. These requirements were established by the universities in the early 1980s in reaction to a reform in the matriculation system in the 1970s.

### 2.2. Israeli higher education

The Israeli higher education system has undergone significant expansion and diversification since the 1990s (Ayalon & Yogev, 2005; Menahem, Tamir, & Shavit, 2008). Until the 1990s, Israeli higher education consisted mainly of six publicly supported research-oriented universities, one scientific institution for graduate studies, and an Open University. Some colleges existed at that time, but they were not licensed to grant an academic degree and were not considered part of the higher education system. The six universities offer graduate and undergraduate programs and are considered quite selective. Admission to their undergraduate programs is based almost exclusively on a combination of the matriculation grade and a psychometric score. The latter is based on the Psychometric Test, which is a general aptitude test and required by the universities. Programs differ in their cutoff score, which mainly depends on supply and demand.

The expansion has been due to the creation of new collegiate institutions, *michlalot*, offering undergraduate studies, and to the grant of academic accreditation to the undergraduate programs of the older-established ones. The decision to expand

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### 2.3. High school subjects and access to higher education

As noted, the Israeli matriculation certificate is indicative of having passed exams in several subjects. Educational and sociological research shows that the gap between majority and minority students is larger in specific areas of study such as math, sciences and foreign languages. These gaps are explained, for example, by differential family resources (Kao & Thompson, 2003) and by school policies such as tracking and ability grouping, which enhance disparities (e.g., Oakes, 1990). Another line of reasoning emphasizes the opposition of some minority students to the majority's culture and institutions as an explanation for low achievements. Ogbu, a prominent scholar of this theory, claims that members of involuntary minorities, such as Afro-Americans, are more inclined to develop an oppositional identity, in conflict with the school's norms and curriculum. Ogbu demonstrates this conflict with the resistance of Black students to using "White English" in school (e.g., Ogbu & Simons, 1998; Ogbu, 2003).

There has been very little Israeli research on the achievements of different ethno-religious groups in different matriculation subjects. Regarding math and sciences, Ayalon (2002) shows the absence among 12th-graders on the academic track of any significant disparities between Jews and Arabs in enrollment in advanced courses (see Figure 1, p. 64). Moreover, with regard to taking advanced math and science courses, there is greater gender equality in the Arab sector than in the Jewish sector. Thus, math is not supposed to be a major obstacle for the Arab minority students in Israel, contrary to the situation of minority students in other countries such as the U.S. (Campbell, Denes, & Morrison, 2000; Riegle-Crumb & Grodsky, 2010).

As opposed to math, however, English can constitute a serious obstacle for Arab students in Israel. In addition to the fact that English is a third language for Arabic-speaking students in Israel, among the Arab population there is a shortage of native English-speaking teachers, as opposed to the Jewish sector where many English teachers are native English speakers (Spolsky & Shohamy, 1999). Within the Arab population, there is a gap between Christians on the one hand, and Muslims and Druze on the other. Students who attend Christian schools will benefit from better English (and other foreign language) teachers than students who attend Arab state schools (see, e.g., Ichilov & Mazawi, 1996).

The Arab minority in Israel lives in a state that was founded by the Zionist movement as a national home for the Jewish people. Moreover, the establishment of the Jewish state entailed a violent conflict between the Jewish immigrants and the indigenous Arab population, which constituted the majority of the population in Palestine before the 1948 war. The nature of Israel as a Jewish state is reflected in its institutions, including, of course, the education system. With regard to particular subjects, such as history, this situation can result in a conflict between the curriculum, which is formulated by the Ministry of Education, and the Arab community, which has a different narrative about its own history. Research in the United States indicates that such cultural conflict can affect educational achievement and widen the minority-majority achievement gap (Smith-Maddox, 1998). According to Al-Haj (2002), in the Arab schools' history curriculum "the Arab nation is mentioned in general terms, with no reference to the Palestinian people", and there is an emphasis on "understanding and appreciation of the Jewish people's contribution to human culture and advancement" (p. 177). Al-Haj concludes that such a curriculum "leads to the widening of cultural gaps and the deepening of group alienation" (p. 182). It is therefore reasonable to assume that history might be an obstacle for Arab students in Israel.

### 3. Theoretical explanations for social inequality in enrollment in higher education

The vast literature on factors affecting enrollment in higher education and on the sources of social inequality in access to universities and colleges emphasizes three main types of explanations: the effects of family resources, the effects of high school learning and organization, and the admission policies of tertiary institutions. The present study focuses on the latter two types of explanations while it takes into account family resources (parental higher education, standard of living and the number of siblings).

### 3.1. School effects

A large body of research in sociology of education concentrates on school effects on educational opportunities. This research mainly focuses on two interrelated questions: (1) how schools sort students into different groups for instruction (i.e., tracking); and (2) which subjects are offered to students and what the level of instruction is in each subject (e.g., basic or advanced). The first question has preoccupied researchers and educators for several decades. Proponents of tracking claim that it enables students to take courses that are in accordance with their abilities and interests, and that tracking produces

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homogeneous classes, which make teaching easier and more efficient. Opponents of tracking view it as a practice that preserves and even enhances educational inequality (for a recent comprehensive review of the research on tracking, see Gamoran, 2010). While the first question mainly deals with within-school differentiation, the second one also highlights between-school differences in access to knowledge. Sociological research has shown that the curriculum a school provides to students is related to the characteristics of its student body. For example, Ayalon (1994) showed that in Israel prestigious high school subjects at the highest level are offered less often in schools in which the majority of students come from underprivileged social groups. As noted, in the present study we focus on differences in access to high-level English.

### 3.2. Policy of higher education institutions

Enrollment in higher education and the choice of institution and field of study are also affected by the policy of higher education institutions. Institutions usually set specific goals regarding the numbers and the profiles of their students. These goals are the basis of the student recruitment policy, which has three major aspects: (1) distribution of information regarding curricula and admission, (2) setting of admission criteria for the institution and the various fields of study, and (3) assisting students, mainly through scholarships. Admission policy has a direct effect on the odds of enrollment in higher education, whereas information and scholarships have indirect and more complicated effects on these odds (Grodsky & Jackson, 2009). Due to the link between family background and achievements in school, high requirements for enrollment in an institution or in a specific field of study within it exclude disadvantaged groups, thus producing social and ethnic homogeneity.

### 4. Aims and hypotheses

The aim of this study was to examine how high school processes and the admission policies of universities and colleges affect ethno-religious inequality in enrollment in Israeli higher education. We therefore focus on those who have completed secondary education. In the first part of the analysis we compare three matriculation subjects: math, history and English. All three are compulsory subjects that can be taken at either a basic or advanced level. Regarding history and math, we examined the percentages of students who passed at least a basic level matriculation examination, because most higher education institutions do not require a passing grade at the advanced level in these subjects. With regard to English, we examined the percentages of students who passed the advanced-level examination because that is a prerequisite in most institutions. This analysis included all students who sat for at least one matriculation examination. Our first hypothesis is that inequality between Jews and Arabs is the highest in advanced English, Jews enjoy an advantage also in history, but math is not an important source of inequality.

In the second part of the analysis we examined whether the prerequisite of a passing grade in the advanced-level English examination can help explain ethno-religious inequality in actual enrollment in higher education. Here we included in the analysis those who were eligible for a matriculation certificate, thus focusing on the difference between those who achieved an "ordinary" matriculation certificate and those who achieved a "university-qualifying" matriculation certificate. Our second hypothesis was that inequality between Jews and Arabs in enrollment in higher education will be considerably reduced when the English requirement is taken into account.

# 5. Methods

### 5.1. Data

The dataset used in this study was prepared by the Israeli Central Bureau of Statistics (CBS) by combining data from the 1995 population census with data of the Ministry of Education and from tertiary educational institutions. It includes information on a representative sample of 20% of all Israelis born between 1978 and 1982. Members of this cohort were aged 13–17 years at the 1995 census, and most of them were sampled in their parents' households. By merging the file of the 1995 census with several additional files, we were able to follow these cohorts through high school into higher education. The extended questionnaire of the 1995 census provides data on subjects' socio-demographic characteristics and socioeconomic background.

The census file was merged with the matriculation files of the Ministry of Education, which contain information on school subjects, the number of units of each subject, and the matriculation grade. Information on postsecondary education was drawn from the application files for undergraduate studies provided to the CBS by the six universities and all 29 colleges (the Open University was included in this study). We excluded from the analysis individuals who attended independent ultra-Orthodox schools, since the vast majority of this community does not go on to higher education because of religious considerations.

# 5.2. Variables

# 5.2.1. Independent variables

**Ethno-religious group**: We constructed six dummy variables using information on both parents regarding religious affiliation and paternal grandfather's country of origin: (1) Mizrachim—Jews of North African or Middle Eastern origin, (2) Ashkenazim—Jews of European or American origin, (3) mixed-origin families in which one of the parents is *Mizrachi* and the

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other Ashkenazi, (4) Jews who immigrated to Israel from the FSU (i.e., new immigrants), (5) Christian Arabs, and (6) Muslim and Druze Arabs. We merged Muslims and Druze because of the small number of Druze in our sample and because their socioeconomic status and attainment is largely similar to those of Muslims. Recent Jewish immigrants to Israel from countries other than the FSU were excluded from the analysis due to their relatively small numbers and heterogeneity. Jews whose paternal grandfather was born in Palestine before 1948 were coded as Ashkenazim because most of the Jewish population of pre-statehood Palestine was of European origin.

Number of siblings: Calculated according to the number of births of the subject's mother.

Standard of living: The number of electronic appliances present in the subject's home in 1995.

Parental higher education: A dummy variable coded 1 if either parent completed academic education, otherwise 0.

#### 5.2.2. Dependent variables

As noted above, in the first part of the analysis we compare three matriculation subjects: math, history and English. In history and math we present the percentages of students who passed at least a basic-level matriculation examination, and in English we present the percentages of students who passed the advanced-level examination. For each subject we constructed a binary variable in which 1 denotes a pass and 0 otherwise.

In the second part of the analysis, the dependent variable is enrollment in higher education. For this purpose we constructed a binary variable. 1 denotes enrollees and 0 non-enrollees in higher education.

### 6. Findings

We begin by presenting the ethno-religious differences in attaining a passing grade in the matriculation examinations in history, math and English among high school graduates who sat for at least one matriculation examination. As noted above, our hypothesis was that in English and history, Jewish students will have an advantage over Arab students. We did not expect a similar gap for math. Table 1 shows that there are ethno-religious gaps in all three subjects. In line with previous research, Ashkenazim had the highest odds of passing these examinations. Muslims and Druze had the lowest odds of passing in math and English, but higher chances than new immigrants from the FSU and Mizrachim of passing the history examination. In all three subjects, Christian Arabs had considerably higher chances than Muslims and Druze of passing the examinations. In fact, Christian Arabs had higher chances than most Jewish groups of passing the history and math examinations.

Table 1 also shows that in both Arab groups the percentage of those who passed the English examination is much lower than the parallel percentages for history and math. Jews did not exhibit a similar pattern. Thus, our hypothesis regarding the Arab disadvantage in English was supported by the findings presented in Table 1. The hypothesis concerning history was largely refuted by the analysis. The percentages of Muslims and Druze and Christians who passed the history examination were higher than those of Mizrachim and immigrants from the FSU. Regarding math achievement, our hypothesis was neither supported nor refuted. The percentage of Christians who passed the examination was lower than that of Ashkenazim but higher than Mizrachim. The parallel percentage for Muslims and Druze was lower than that of all Jewish groups, but the difference between Muslims and Druze and Mizrachim was much smaller than in English.

The next stage of our analysis focuses on those who obtained a matriculation certificate. Table 2 presents the percentages of enrollees in higher education within each ethno-religious group. It shows that about two-thirds of those eligible for the matriculation certificate enrolled in universities and colleges. Ashkenazim had the highest enrollment rate, at about 75%. The parallel figure for Christian Arabs was about 55%, and for Muslims and Druze only 50%. Thus, a clear pattern of inequality between Arabs and Jews emerges from Table 2.

Our main research question is whether this inequality can be explained by the gap in meeting the prerequisite of a passing grade in advanced-level English. In order to answer this question, we estimated logistic regression models predicting enrollment in higher education. To control for a possible sample selection bias, we conducted a preliminary probit regression analysis for matriculation eligibility. We computed the Inverse Mills Ratio ( $\lambda$ ) (Heckman, 1979) and added it to the multivariate analysis. In the first model we examined ethno-religious differences in enrollment, while controlling for

Table 1

Percent passing at least a basic-level matriculation examination in history and math and an advanced-level examination in English, by ethno-religious groups.

Ethno-religious group	History (%)	Math (%)	English (%)
Ashkenazim	70.8	78.0	83.6
Mixed origin	62.2	71.0	72.9
Mizrachim	50.9	63.1	56.9
FSU	49.5	76.2	70.6
Muslims and Druze	57.2	56.9	27.4
Christians	68.9	70.7	52.8
Total population	59.7	69.0	63.8

N = 57,222. In all three subjects the differences between the groups were statistically significant at the .001 level according to  $\chi^2$  tests. It is worth noting, however, that when using large samples, as we do, significant tests usually tend to yield significant results.

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#### Table 2

Enrollment in higher education among those eligible for a matriculation certificate, by ethno-religious groups.

Ethno-religious group	Did not enroll (%)	Enrolled (%)	
Ashkenazim	24.6	75.4	
Mixed origin	30.7	69.3	
Mizrachim	38.8	61.2	
FSU	35.1	64.9	
Muslims and Druze	50.2	49.8	
Christians	45.8	54.2	
Total population	33.7	66.3	

N = 37,259. The differences between the groups were statistically significant at the .001 level according to a  $\chi^2$  test. It is worth noting, however, that when using large samples, as we do, significant tests usually tend to yield significant results.

socioeconomic background. In the second model we added a dummy variable indicating a passing grade in the English examination. The ethno-religious reference group in these analyses is Mizrachim.

Model 1 in Table 3 shows that the ethno-religious differences in enrollment in higher education cannot be fully explained by socioeconomic discrepancies. After controlling for the number of siblings, standard of living and parental education, the gaps between the ethno-religious groups remain considerable and statistically significant. Ashkenazim and persons of mixed origin have higher odds than Mizrachim of enrolling in higher education, while both Arab groups and immigrants from the FSU have lower odds than Mizrachim. In contrast to the findings in Table 2, here the gap between Christians and Mizrachim is larger than the gap between Muslims and Druze and Mizrachim. This may be explained by the higher socioeconomic status of Christians and their higher odds of attaining the matriculation diploma. On average, Christian families have fewer siblings, higher parental education, and are in a better economic situation than Muslims and Druze. In fact, from a socioeconomic perspective, Christian Arab families are more similar to Jewish families than to Muslims and Druze. Still, their rate of enrollment in higher education is much lower than that of Jews.

Our hypothesis regarding the role of English in access to higher education in Israel is supported by the findings of Model 2 in Table 3. After controlling for a passing grade in advanced English, the gap between Muslims and Druze and Mizrachim in the odds of enrolling in higher education completely disappears. The gap between Christians and Mizrachim is reduced, but remains statistically significant at the .01 level. The gaps between Mizrachim and Ashkenazim and between Mizrachim and those of mixed origin are also slightly reduced, but do not disappear. Hence, among high school graduates from a similar socioeconomic background with a passing grade in advanced English, there is no gap between Mizrachim and Muslims and Druze in the odds of enrolling in higher education. On the other hand, after socioeconomic background and the English examination are taken into account, Christian Arabs are still disadvantaged compared to Mizrachim in their chances of entering higher education.

#### 7. Summary and conclusion

Table 3

Our objective in this study was to examine inequalities among the ethno-religious groups in Israel in access to higher education. In Israel, access to the universities and many colleges is conditioned on the attainment of a specific matriculation certificate that includes a passing grade in advanced-level English. This requirement proved to generate pronounced inequality between Jewish and Arab high school graduates. Arab students in Israel are required to study English in addition

Variable	Model 1	Model
Ethno-religious group (Reference group: N	1izrachim)	
Ashkenazim	.233**	.179
Mixed origin	.117**	.075
Muslims and Druze	217**	006
Christians	$409^{**}$	306
FSU	191**	189
Men	329**	377
No. of siblings	051**	033
Standard of living	.068**	.056
Parental academic degree	.280**	.258
Advanced English		1.022
Selection	-1.556**	-1.108
Intercept	1.038**	.090

n = 37,259.\* n < .05.

\*\* p < .01.

to Arabic and Hebrew, unlike Jewish students, who are not obliged to take a second foreign language in addition to English. This puts Arab students in an inferior position. Our findings confirmed that the English requirement produces larger gaps than the two other subjects examined: history and math. Regarding English, Christian Arabs are in a better position than Muslims and Druze because a considerable percentage of them attend private schools where English instruction is of high quality. However, even for the Christians, whose educational achievements are similar in other subjects to those of Ashkenazi Jews, the English requirement remains an obstacle to potential access to higher education.

Our multivariate analysis confirmed that the gaps in meeting the English requirement can help explain the Arab disadvantage in enrollment in higher education. After controlling for the English requirement, the gap between Muslims and Druze and Mizrachim completely disappeared. According to our analysis, Christian Arabs are also affected by this requirement, but their disadvantage in enrollment in higher education is also related to other factors that were not included in our data.

Previous research in Israel suggested several explanations for the underrepresentation of Arabs in the universities and colleges. Al-Haj (2003), for example, maintains that educational disparities between Arabs and Jews begin at the earliest stages of education, namely in kindergarten. They continue throughout elementary and secondary education, at which point they influence the odds of proceeding to higher education. Another important explanation for the relatively low proportion of university graduates among the Arab population in Israel is the limited opportunities of Arab graduates to find suitable employment (Al-Haj, 1995, 2003). It can be argued, then, that Arabs in Israel are less motivated than Jews to enroll in higher education. It suggests that high school processes and the admission policies of higher education institutions are also crucial to the understanding of this inequality.

Research in the sociology of education shows that selection mechanisms, such as those practiced by Israeli higher education institutions, usually favor stronger social groups. One reason for this is that policymakers are "social context blind." They do not take into account the fact that disadvantaged social groups have different starting points from other groups. In our case, we do not have evidence indicating that the universities and colleges consciously wish to deny access to Arabs. Nevertheless, the requirement of advanced English, which has been adopted by the universities and most of the colleges, serves, in practice, as a gatekeeper that excludes many Arabs from access to higher education.

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