

Hebron University

Faculty of Graduate Studies

The Perception of Cultural Bias in The Psychometry Exam by Arab Minority Students in The
Israeli Context

MA Thesis in Applied Linguistics and the Teaching of English

Prepared by: Nadira Gheith

Supervised by: Dr. Raghad Dwaik

Co-supervisor: Dr. Adnan Shehadeh

This thesis is submitted in partial fulfillment of the requirements for the degree of Master of Arts in Applied Linguistics and the Teaching of English, College of Studies and Scientific Research, Hebron University.

May 2013

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MA Thesis in Applied Linguistics and the Teaching of English

By

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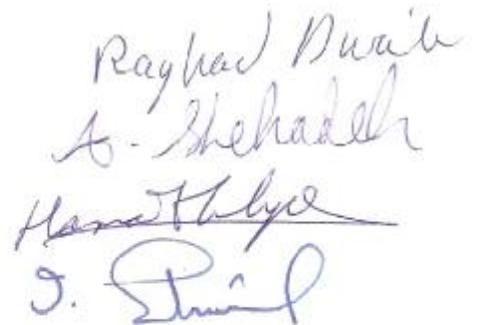
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الخلاصة

تلقي هذه الدراسة الضوء على إدراك طلاب الأقلية العربية في المجتمع الإسرائيلي للتحيز الثقافي في اختبار قياس العمليات الذهنية الموحد "السايكومتري" الشائع باسم البسيخومتري والذي يعدّ متطلباً رئيساً لمواصلة التعليم العالي في الجامعات الاسرائيلية. تتكون عينة هذه الدراسة من 160 مشارك؛ مائة منهم من العرب وستون آخرون من الإسرائيليين. وينحدر أفراد العينة من منطقة النقب في جنوب إسرائيل. وقد تبنى الباحث أداتين لاستقصاء المشكلة القائمة وهما الاستبيان والمقابلة الشخصية. فاحتوى الاستبيان الأول على عناصر قسم اللغة الانجليزية الفرعي من امتحان العمليات الذهنية الموحد من السنوات 2009 و 2010 لغاية استنباط مواقف المشاركين نحو مدى استصعابهم واستغرابهم لتلك العناصر. بينما بحث الاستبيان الآخر في خلفيات المشاركين التعليمية والاقتصادية-اجتماعية. وقد اتهرت النتائج بتباين بارز بين المشاركين في خلفياتهم في النواحي الاقتصادية-اجتماعية وكذلك التعليمية. وعكست النتائج أيضاً تفوقاً بارزاً في المواقف السلبية لدى المشاركين العرب نحو عناصر قسم اللغة الانجليزية الفرعي من امتحان العمليات الذهنية الموحد بالمقارنة مع مواقف المشاركين الاسرائيليين. لذلك، فإن نتائج الدراسة تؤكد على أن امتحان العمليات الذهنية الموحد يحمل بُعداً انحيازياً ضد الأقلية العربية في إسرائيل.

ABSTRACT

The current study sheds the light on the perception of cultural bias in the Psychometry exam by Arab minority students in the Israeli context. This exam is considered a main requirement for pursuing higher education at the Israeli universities. The sample of this study consists of 160 participants; 100 participants are from the Arab sector and 60 others from the Israeli one. The sample comes from the Negev in the southern part of Israel. The researcher used two tools for the investigation of the current problem which were two questionnaires and interviews; one questionnaire contained Psychometry English subtest items from the years 2009 and 2010 to track the participants' attitudes toward their difficulty and unfamiliarity; the other questionnaire handled the participants' socioeconomic and educational backgrounds. The results of the study showed significant differences in all aspects; economic, social, and educational backgrounds between the two groups of the study. The results reflected a surplus in the negative attitude given by the Arab participants toward the Psychometry English subtest items compared to their counterpart, the Israeli participants. Consequently, the study asserts the Psychometric exam hold a bias dimension toward the Arab minority in Israel.

DEDICATION

To the souls of my late parents for their moral support.

To my husband, Abdullah, to my kids, my family and friends who have been a source of steadfast love and inspiration throughout my life.

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CHAPTER ONE

1.1 Introduction:

This study focuses on the possible reasons behind the poor performance of the Arab minority students (Zeidner, 1985) who sit for the placement exam at Israeli universities. This exam is called "The Psychometric Exam" and it usually qualifies high school students to pursue their higher studies at Israeli universities. A number of reasons may stand behind the poor performance of Arab minority students in this exam, such as: the inclusion of culturally biased items on the test, and the poor educational background that the Arab students suffer from which in turn does not equip the students with the proper skills to handle the items on the test. Additionally, there are some individual factors related to the students themselves, such as: their socioeconomic status which is determined by their parents' level of education and income (Kaplan & Saccuzzo, 1982).

Placement tests are important as they affect the future decision of the students who spend twelve years of their life studying to finish school so as to move to another significant stage where they seek improvement in their social position and status. However, in certain communities such as the Bedouin sector in the southern part of Israel, students face many obstacles. They encounter many difficulties in the entrance exam (the Psychometric exam) especially in the English subtest which is considered essential for selecting the preferred colleges by the students. Statistics show a noticeable gap between the performance of the Israeli and Arab students and this gap is consistent (Rosenblum, 2002). Some researchers supported the notion that this exam might hold cultural bias (Rammohan, 2007; Jaschik, 2010) which may be the main obstacle that faces the Arab examinees. In addition to highlighting possible elements of cultural bias, The status of English at the level of its priority in the teaching system (in the Arab and Israeli schools)

helps in determining the students' competency in the English language. Arab learners are exposed to the English language as a third language (after Arabic and Hebrew) which adds more burden on their acquisition of English as a foreign language which is not the case for the Israeli learners. Moreover, this difference demonstrates that both examinees experience different conditions and this causes inequality in the surrounding opportunities. Shohamy (2002) criticized the exam developers who establish the same exam for all the examinees whether they learn English as a second language as the Israeli students or as a third one like in the case of Arabs.

Upon the previous issues, the researcher, who is a teacher in one of the Arab villages in the Southern part of Israel (the Negev), found it necessary to shed the light and study the degree of the Arab minority students' perception of the cultural bias in the Psychometry exam. Therefore, the researcher decided to perform the current study to verify the presence of such element in their perception of the Psychometry exam.

1.2 Theoretical Background:

The researcher depends on the theory that focuses on bias in tests such as some famous standardized exams like TOEFL and SAT and on other aspects that have an impact on the examinees' attitudes toward the exam items like their socioeconomic status and their educational background. Researchers conclude that bias in tests can have various forms such as misinterpretation of scores, racism in content, no equality replication of performance, and the content may be unfair especially for the subgroups (Nitko, 1983). Accordingly, the issue of cultural bias in testing is an old controversy which many books and studies have dealt with for a long period of time. Many studies found that students from high-socioeconomic class performed better in tests than those who come from a lower socioeconomic one (Eels et al, 1951). Hence, the scores that the latter group achieve usually have an impact on the decisions

they make for their future. Gregory (2004) defines test bias as "objective statistical indices that examine the patterning of test scores for relevant subpopulations" (p. 242). So, when students are tested, it is important to ensure that all the examinees belong to the same culture and background and if these examinees belong to backgrounds and culture different from the one in which the exam is presented, this may lead to invalid results (Brescia & Fortune, 1988). Furthermore, exam developers should take the examinees' background and experience into account for the sake of a well-constructed test (Whiting and Ford, 2006). Culture and language are closely connected to each other. Interaction among people is controlled by these people's cultures since "people uphold culture to cope with problems that deal with them" (Haviland, 1993: 29).

Many of the conducted studies were concerned with examinees from the minority who sit for some standardized tests like TOEFL, GRE, SAT and others in order to prove that the examinees from the minority who study in poor quality schools and belong to low socioeconomic status, besides the fact that their culture is different from examinees belonging to the majority, are deprived from a basic right which is to attend a fair exam that suits them. For instance, Jay Rosner, the executive director of Princeton Review Foundation who worked on SAT exam for bias analysis in the year 2003 conducted a study with a sample of 100000 test takers. He found that the Whites answered 99% of the test questions correctly at a rate that was higher than what the Blacks and Latinos did (Rammohan, 2007).

Some other studies were concerned with American Indians in the 1960s and found that the cultural difference among examinees was the probable source of bias in tests (Thamzil, 2008).

A study was conducted on children who were attending the Progressive Achievement Tests of Reading Comprehension and Reading Vocabulary (PAT-RC & RV). These children descended from Polynesian and European origin. Results showed that some items were

considered culturally biased and some others were not suitable and difficult for the Polynesian children (Beck & Ross, 1983).

Dealing with the Israeli context, the concern of the current study, a study was conducted on Arab and Israeli students to test cultural differences in aptitude achievement besides the differential construct and predictive validity. "The predictor battery shows comparable factor structure across cultural group" (Zeidner, 1987: abstract). In addition, the same researcher held a study which included samples from the minorities in the Israeli society, Arabs and Druze, to prove that the Psychometric exam was not biased and the deficiency of performance of the mentioned minorities was more related to their bad performance (Zeidner, 1985).

Accordingly, these findings motivated the researcher of the present study to conduct an investigation that may negate what the Israeli researcher concluded in his study and to investigate all the circumstances that surround the Psychometric exam and the reasons behind the Arab examinees poor performance.

1.3 Statement of the Problem:

One may easily notice that the number of Arab learners who attend the Israeli universities is markedly less in comparison with the number of the Israeli students. Due to the low scores achieved by Arab students in the Psychometric test year after year and to their limited chances of enrollment at Israeli universities in addition to the continuous gap between the Arab and the Israeli learners which is estimated at 100 points (Rosenblum, 2010). The researcher felt it was necessary to think of the reasons behind this deficiency and to find solutions after investigating the real causes that affect the students' poor performance.

1.4 Purpose of the study:

The researcher has felt the absolute necessity of conducting such a study due to the conflicting results of previous research on these aspects on the one hand, and to the special characteristics of the southern setting on the other. Some Israeli studies show that cultural bias is not the main reason behind the poor performance of the Arab minority students (Zeidner, 1987). Besides, to the best of the researcher's knowledge, no efforts have been made to follow up the Psychometric exam questions in order to detect the items which reveal cultural bias in various cultural settings; the evidence of that was the Arab participants' responses to the researcher in the pilot study.

Therefore, this study aims to investigate the genuine reasons behind the perception of the Arab examinees toward the Psychometric exam. Furthermore, students' personal factors such as their low socioeconomic status and educational have their influence on their performance.

1.5 Significance of the study:

This study is significant for researchers, test developers, teachers and curriculum designers in different dimensions. A standardized exam like the psychometric should suit all the examinees whether they belong to the majority or to other subgroups in order to be valid exam and fair. So, the study aims to fill an important gap in research about this vital issue and it responds to important questions raised about this exam such as the possible cultural bias in the test items. It is also important to focus on the differences between the examinees which reflect the unfair procedures directed towards them by the exam developers and the Israeli Testing Agency which deals with the examinees as equals and neglects the social and economic gap between them.

1.6 Research Questions:

1. To what extent do Arab teachers judge the English subtest items of the 2009 and 2010 Psychometry exams as culturally biased?
2. To what extent do the participants of both groups (Arabs and Israelis) judge the English subtest items of the 2009 and 2010 Psychometry exams as culturally biased?
3. To what level do the differences in the educational background between Arab and Israeli participants influence their attitude toward the Psychometry test items?
4. To what level do the differences in the socioeconomic status between Arab and Israeli participants influence their attitude toward the Psychometry test items?

1.7 Limitations of the study:

The sample of the study was selected from the Arab and the Israeli population in the southern part of Israel. This population may have special characteristics especially the Arab minority who suffers from ignorance and poverty (Lithwick, 2000). Hence, this group is not highly representative of the Arab and the Israeli community in general. Besides, the number of the Arab and the Israeli sample of students was not identical and the Arab sample was bigger due to the difficulty that the researcher faced in distributing the questionnaires for unjustified reasons from their part. But some concerned people supplied the researcher with a piece of information that made sense; it seems that distributing questionnaires in Israeli academic institutions goes through a complicated process of getting permission from the heads of the institutions or those who are responsible for that work and the topic seemed unwelcome by them. However, in the Arabic sector, lecturers helped the researcher a lot in that process.

1.8 Definition of Terms:

Cultural bias: any test which is considered culturally unfair is the one that favors one group over another (Reynolds, 1998). Sandifer (2001) says that “bias in testing refers to an unfair advantage of a group of examinees on a single test item or on an entire test” (p.39). He continues that an item which is biased is the one that shows less familiarity of the given content to the examinees or the item does not interest them and causes negative emotional reaction such as fear, inferiority, danger and other negative feelings. This concept was measured by studying the influence of the participants’ socioeconomic, educational and psychological aspects on their familiarity to the Psychometry English subtest items.

Psychometric exam: a placement exam held at Israeli universities as an essential requirement for admission. It consists of eight sections and each section examines one of the following areas which are: verbal reasoning, quantitative reasoning and English. The English section deals with three areas: gap filling, restatement and comprehension (Educational Testing Services).

Bagrut Exam: an achievement exam that includes the four skills of learning: reading comprehension, listening, speaking and writing (Educational Testing Service). This exam is given to students upon finishing their high school.

Arabs: Palestinian Bedouins who live within the Israeli borders and hold the Israeli citizenship. They represent a minority in the Israeli community and distributed in some villages and unrecognized Bedouin small communities who suffer from poverty and ignorance (Lithwick, 2000).

Israelis: Jews who used to belong to different countries and different cultures around the world, and they represent the majority of the Israeli society. They mostly live in large and modern communities and some live within communal settlements.

Interviews: A tool for data collection that the researcher used for getting information about the students' level in school especially the Arabs.

1.9 Summary:

This chapter has dealt with the various dimensions of the current study which included a general theoretical background, statement and significance of the problem, research questions and definition of terms. The researcher included some studies about certain standardized exams such as the TOEFL and SAT which were considered culturally biased toward the examinees from the minority. In addition, elaborate views were given about the psychometric exam which the researcher found important to reveal the nature of that exam and what theory was written about it in order to be familiar with all the circumstances that surrounded it.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction:

In this chapter, the researcher sheds light on the studies that were concerned with bias in testing. Focus will be given to the cultural bias in the test items of some standardized exams like the TOEFL and SAT due to the lack of studies on the Psychometric exam in Israel except for very few direct studies that were performed by the Israeli researchers Zeidner (1986) and Ben Shakhar and Bellar (1983). The studies that treated the standardized tests spotted the difficulties that the minorities all over the world face in handling these tests properly similar to the case of the Psychometry exam. Besides, other studies, that focus on the examinees' educational and socioeconomic features which in all affect their performance, will be presented in the literature to show the connection of these aspects with the learners' performance.

2.2 Bias in standardized tests:

A lot of arguments among researchers have focused on the issue of bias in standardized exams. Evidence shows that people from certain backgrounds feel penalized when they are required to sit for an exam that has been established in a different culture from their own. Black Americans, an example of a minority who takes exams of other cultures, are estimated at the lowest range of the social scale and that appeared in the average income. Accordingly their performance in the standardized exams is generally poor and eventually they score less than the examinees from the majority (Kaplan & Saccuzzo, 1982).

Some researchers like Carrel (1984) concluded that the test items may be biased when they neglect the examinees' background; as a result, they may not check the readers' ability accurately. The examinees' culture has a close relation with their environment and the background they belong to. Figures show that unemployment, educational level, and areas

which they inhabit affect their performance in exams. Statistics show 84% of superiority of the Whites over the Blacks; however, Hernstein and Murray (1994), as reported in Miller (1995), believed that socio-economic factors may play an essential role in the deficiency of the Blacks performance in the IQ tests and he concluded that 37% of the difference is due to socio-economic status which is low in the case of the African Americans (Miller, 1995).

In line with the findings of the researchers cited above, a study was conducted by a black sociologist called Adrian Dove on a test called the Chitling Test (2003) to show whether Blacks and Whites do talk the same language. The result shows that scores of the Whites were lower as they were not exposed to Black culture (Kaplan & Saccuzo, 1982).

Stafford Hood, a professor of psychology in education at Arizona State University, declared on many occasions that some standardized tests like TOEFL, GRE, SAT, and others are examples of these tests that are considered culturally biased. He also commented that such controversial issues have not been settled till now (Rammohan, 2007). In these standardized exams, the Educational Service has done a big effort to review them in order to eliminate any items that may be categorized as racially biased, or may hold other types of bias, but these efforts have not reduced the problem yet (Rammohan, 2007).

Jay Rosner, the executive director of Princeton Review Foundation who worked on SAT exam for bias analysis in the year 2003 conducted a study with a sample of 100,000 test takers. He found that the Whites answered 99% of the test questions correctly at a rate that was higher than what the Blacks and Latinos did (Rammohan, 2007).

Accordingly, fairness of exam is a fundamental requirement for good results and fairness is combined with the reliability of the test which means not to favor one group over another. Sometimes the test writers may be unaware of some linguistic terms which are odd for the subgroup clients. The examinee may portray them differently and the chance of dealing with all the items in relief may be affected and the scores will be lower than those

examinees that are from the same cultural background of the examiner and the test writer (Hambleton & Rodgers, 2011). To prove this theoretical view, a study was conducted on children who were attending the Progressive Achievement Tests of Reading Comprehension and Reading Vocabulary (PAT-RC & RV). These children descended from Polynesian and European origins of which seventy-one Polynesians and seventy two Europeans took the PAT-RC while 80 Polynesians and 82 Europeans took PAT-RV. Some items of the tests were considered culturally biased and some others were not suitable and difficult for the Polynesian children as their L1 wasn't English (Beck & Ross, 1983).

2.3 TOEFL Exam:

In order to demonstrate bias in some items of the TOEFL, a study was conducted on native Indonesian students from different universities in Makassar. They were twenty participants of different ethnicity, language and background. The aim of the study was to find out cultural expressions in the given items of the TOEFL exam which were unusual to students in content and the students' lack of knowledge of English and the strategies used to answer the questions affected their performance in the exam. In this study, the researcher used open-ended and closed-ended questionnaire to retrieve information about the subjects of his study; such as, ethnicity, mother language, place of birth, education and difficulties the examinees face in answering TOEFL exam. The researcher found that most of the items in the listening section were culturally biased where six out of sixty nine questions were considered biased due to the use of idiomatic expressions. Twenty-three percent answered metaphor questions correctly and metaphor is considered one of these aspects that are culture-related issues. Idioms are one of the difficulties that the examinee faces in the exam. The examinees may translate the given idiom literally as they do not have an equivalent in their L1. For instance, the Indonesian participants in the mentioned study interpreted the

meaning of an idiom 'Mary left her job for good', so the examinees answered for her health while it meant for ever (Thazmil, 2008).

2.4 SAT Exam:

A study was conducted on the SAT exam (another standardized test that is established to measure the native speakers' intelligence and doesn't include the schooling experience or training) in the USA found out that the performance of the African Americans was not only due to the economic disadvantages but was also due to the bias of some items in the test in favor of the majority. It was estimated that the African American scores in comprehension were 99 points behind their White colleagues' average in this exam. However, defenders for this exam justified this saying that the exam was unbiased and that difference in scores was attributed to the American society. It seemed that wealthy students perform better than non wealthy ones, and by this they excluded race as a main point which affected the fairness of the exam (Harvard Educational Review, 2010).

Wollen (2008) objects that the SAT is established to measure the native intelligence of the test taker and doesn't include the schooling experience or training. She says that the questions measure schooling experience, the examinees' background and proficiency of English. Lemann (1999) added that "native intelligence hypothesis is dead" (p. 34). In 2002, White Americans scored 527 on the verbal section English, while African-American scored 430 and Hispanics scored 457. This result implies that scores between ethnic groups could be culturally biased (Fredele, 2002). Besides, in 2000, 54% of White students answered the SAT questions correctly, while 40% of the African Americans gained the same results (Young, 2003).

Bachman (1990) pointed that test scores showed the ability of the examinees who belong to the same group, in the test. However, if there are systematic differences in the

examinees' performances that are referred to as the differences in the examinees' individual social and economic characteristics, they prove bias in the given test. This is the case of the Arab examinees who attend exams of other peoples' cultures with different individual features and all of this is neglected by the exams' developers. To ascertain this point, a critique was written on the Psychometric exam which focused on three main characteristics. First of all, the test proved its deficiency as a probe that predicts the success of an applicant. Second, the consistent gap between the Arab students and Israeli ones is evidence that there is a cultural deviation which accompanies this exam and its implementation, and so standardized tests have been categorized into two states: the first state is a social one that is affected by the examinees' educational, environmental background, and the second is a technical one where "the subpopulation's scores do not fall upon the same regression line or relevant criterion" which applies to the psychometric exam (Settles, 1992: 616). Third, some supporters for this exam insist on referring the gap to the earlier stage of high school teaching and learning process that draws attention to the processes and methodologies applied in these schools especially in the Arab sector schools (Rosenblum, 2010) and that determined the 100 points in average between the Arab examinees and the Jewish ones, which in turn shows a sense of discrimination in the whole system of education which will be discussed later as an independent variable that affected the Arab examinees' performance in the exam. And so, this exam has the same characteristics of other standardized tests like the SAT which is considered as being biased and affected negatively by the students' parental education as well as their income (Atkinson & Geiser, 2009; Gerald & Haycock, 2006; Soares, 2007) .

2.5 Psychometric Exam:

The insistence of the educational authorities that the psychometric exam as the most important requirement for admission to the university deprives the Arab students of the

chance to join Israeli universities and of completing their higher education. Arar, a professor at Beit Berl College, cited in Cook (2009) showed that a big number of Arab students seek studying in the neighboring countries like Jordan due to the strong reliance on the Psychometric exam as an essential demand to join the Israeli universities. The heads of Israeli universities always claimed that the exam was for all the population. Had this been true, they should have taken into consideration all the examinees' own culture and environment. But in practice this has never been the case. Hassan Jabareen the director of the Israeli Arab Legal Rights Center said in one of his lectures, "Twenty years ago, I sat for one of these tests in Tel Aviv University. One of the test items asked who Einstein was. I answered with confidence that he was one of the biggest scientists in the world. But the answer was wrong because that Einstein referred to an Israeli singer" (McGreal, 2003).

Several researchers like Samuda (1975) and William (1983) and others who investigated the Israeli scene, and claimed that these aptitude tests, the psychometric tests, are biased in content and usage when dealing with the subgroups who come from poor backgrounds and these tests are even biased in procedure. So they considered this test as being unsuitable to assess the minority group in Israel. Moreover, the psychometric exam is responsible for the small number of Arabs who join the Israeli universities yearly. However, empirical studies which were conducted to examine this test and to assure its bias against the Arab minority in Israel did not succeed to prove that (Jensen, 1980).

Accordingly, an Israeli researcher called Zeidner conducted a research on Arab and Israeli candidates from the Northern part of Israel. The analysis focuses on all the subtests in the exam and the English section was included as one subtest which is the focus of this study. He concludes that reliability indices by culture showed that the grades of Arab students were slightly less reliable. However, he argues a very significant issue which is the criterion measure which may be considered biased as it reflects the values of the Western institutions

and excludes the non-Western subgroups. He says that the state of Israel is concerned with the Western culture and contributes in every phase in the state like the political, social and even academic ones; therefore, it is normal to have differences among groups and this leads to differentiation in the criterion measure (Zeidner, 1985).

Another study was conducted on Arab and Israeli students to test cultural differences in aptitude achievement besides the differential construct and predictive validity. The Jewish sample consisted of 1778 participants and the Arab students were about 1017. The admission indices consisted of five aptitude subjects composed in Arabic and Hebrew versions. "The predictor battery shows comparable factor structure across cultural group" (Zeidner, 1986: abstract).

Once again, the Israeli researcher Zeidner conducted another study on Israeli students from different ethnicities in addition to other ethnic minority groups like the Arabs and Druzes, and his purpose of that study was to negate the bias hypothesis in the Israeli Scholastic Aptitude Test (SAT). He tried to prove that the previous researchers' claims about the Psychometric exam, as being biased in content, its usage toward the minority group and even in procedure and how this affects the exam validity and its efficiency in assessing the exam as well as in predicting the scholastic performance of the examinees, are wrong. But before relating to his own study which aimed to defend his theory that the Psychometric exam is biased against the minorities in Israel and to defend the exam developers' claim that this exam is presented to various sub-cultural groups and reflects the nature of that community which is multiethnic and has pluralistic nature, it is important to note that some critics criticized the Psychometric exam such as Lewis, (1979) and Stahl (1977) and said that those exams are disadvantageous to students whose origin is non-Western. Furthermore, Kleinberger (1969) charged these exams and considered them unfair for those examinees who come from Oriental background. Supporting Kleinberger's charges, Berman (1985)

announced that the Psychometric exam is culturally biased especially against those examinees whose origin is African or Asian. Slutzki (1985) attacks the exam referring to the fact that shows that it is applied on a minority that comes from a lower-class group. Again, very few empirical studies have been conducted to show bias in this exam. Only one study was conducted by Ben Shakhar and Beller (1983) on predictive bias in the entrance exam in Israel and was published in the Israeli Social Science Literature. Those researchers tried to investigate the 'heterogeneity of regression of GPA' among these tests against the scores gained by students, who come from various ethnic backgrounds, enrolled in the faculty of Humanities and Social Science at the Hebrew University. They found no bias even though the slight over prediction of the scholastic performance for those students whose background is Oriental and a slight under prediction of the Western students' performance.

Zeidner (1987) wanted to check in his study whether these tests measure equivalent constructs of Israeli content candidates who come from various ethnic backgrounds, whether the scores gained from these tests are equally reliable for all the sub groups, and if the scores gained from the exam do predict the college GPA for first year students of various ethnic backgrounds. The sample of the study was 1538 students who wanted to join major Israeli campus. He divided the sample according to the father's country and so three categories were formed: Oriental Israeli group from Asia and Africa, European/ American Israeli group and the Israelis who included the Arabs and Druze. The results show that a small percentage of the Israeli students from both Eastern and Western ones failed to keep with the cutoff score for being accepted to the campus but non Jewish population , Arabs and Druze, scored 'one standard deviation below the Jewish ones (Zeidner: in press-b). Despite the difference that the results have revealed, the researcher comments that the data given in this study provides little evidence to call the Psychometric exam as being biased, and to justify his claims he points to the idea that states that Arab's and Druze's deficiency is referred to their bad performance.

A similar study reported by Angoff (1989) claims that TOEFL does not favor American examinees on other groups who are not Americans. That study was conducted on two groups of test takers those who live in the U.S.A. and the other from overseas to show that knowledge of the history of America and its geography could decide a kind of advantage in the psychological and technical aspects of the examinees and that means good performance for the American group over the other. Findings showed no significant evidence which supports that some items in the TOEFL favor students who have lived in the U.S.A. for any length of time (Angoff, 1989). Other studies were conducted on American Indians in 1960s and found that the cultural differences among examinees were the probable source of bias in tests (Thamzil, 2008).

Speed may be an obstacle that faces some examinees especially from the minority. Some experimental studies found out that the effect of test speed may affect a group more than another and they showed that groups from different ethnic backgrounds systemically differ from each other in the time required for completing the similar number of test items; therefore, the given test time will not equally be sufficient for all test takers. For instance, students in the SAT exam from a minority didn't complete the test items at the same rate like the majority. Accordingly, this factor affects the performance of the students from the minority group (Doran, 1993). Relating to the Psychometric exam, its structure is a multiple choice type in which each item has four or five options and the time given is administered by the University Test Unit. This indicates that it suits the mentality of the Israeli learner as it represents the majority which its style of living which is very close to the Western life and its speedy rate (Zeidner, 1985).

2.6 Detecting Bias:

In this section, the researcher felt the necessity to include testing trials that were held by some researchers to detect bias and did not achieve the goal as all the testing agencies usually claim that they use sophisticated and fair techniques in testing. Israeli researchers and the Testing Agency always claim that the psychometric exam is not biased against the minorities. However, researchers who detected bias in standardized exams had an opposing opinion that they were not able to eliminate bias totally. Some of those trials were conducted by a number of scholars who created a database of eight trillion of scores and questions on a range of tests and they included all the standardized tests which are used for college admission. This database bears trillions of questions in which, deliberately, bias has been designed. After analyzing the samples results, it showed negative bias. This conclusion shows that analyzing question by question cannot always detect bias easily (Jaschik, 2010).

Besides, some strategies were adopted by test developers; one of these strategies was to bring judges from different ethnic backgrounds for these items in a study that was conducted on 100 undergraduates who were selected to judge 30 items from the exam WISC-R. Analysis revealed that half of these items were more difficult for the minority (Mexican American or Blacks) than for the majority (Anglo Americans). However, half of the items had the same difficulty for the three groups. The undergraduates from 3 different ethnic backgrounds were asked to limit the items which were more difficult for either the Mexican or the Black examinees than for the Anglo Americans, and to identify which items were equally difficult. The conclusion for this proved judgment inability to determine accurately which items were more difficult for the minority (Sandoval & Millie, 1980).

A supportive study was done in San Francisco in order to show if judges can identify whether the given items in the test function differently for White and Black test takers. So, these judges were asked to predict differential item functioning without any empirical data.

The number of these judges was 42 and they were divided into three committees. Each committee was asked to examine 40 items. Agreement between the judgmental and empirical indices of DIF (differential functioning items) was determined. However results revealed that the agreement between them was not far away from the accidental conclusion that a person may come out with (Engelhard, Hansche, & Rutlege, 1990). Eversole (2010) reported that some researchers from the University of Colorado-Denver and others from the University of Memphis, Tennessee tried to assess the instruments that are used to find out test bias by establishing a fake exam that shows different responses among the test takers who were from different groups but failed when they analyzed the data. The researchers built millions of biased tests scores and they tested random samples of the scores but the results showed that there was still no test bias. Accordingly, they assured that bias is present in these tests like the entrance exams but it can't be detected (Eversole, 2010).

Another researcher who wrote about eliminating bias concluded that all the effort which was made to eliminate item-biased in the standardized test does not give genuine results and elimination of bias is still slight (Jencks & Phillips, 1998).

2.7 Socioeconomic Background:

Some researchers assured that socioeconomic status is considered as the second great dominant factor that determines the students' performance (Dossett & Munoz, 2000). Dealing with the Israeli context, there was lack in the studies that concentrated on the Arab social and economical status, especially, in the south. The Arab examinees' parents suffer from unemployment and if they are employed they share in low-status jobs that give little income such as construction workers, laborers, guards...etc. which in turn have an effect on the students' performance in school. Arab schools suffer from lack of facilities that should be, partially, supplied for them by their students' parents, but this kind of support is usually very

little because the parents are, mostly, busy thinking about their living and all of this was investigated and the given survey shows that none of these Bedouins and may be very few of them can work in companies like Motorola and others. In 1998, Bedouins contributed 2.5% of all the industrial jobs in the southern part of Israel. Until now, it seems that there is no change (Lithwick, 2000). The only justification for that was declared in many occasions that Bedouins don't gain high education and that is the reason behind not accepting them in high position jobs. However, there are many governmental jobs that do not need a B.A degree as an essential requirement for people to be accepted in these jobs (Lithwick, 2000). So, the Bedouin families do not gain good salaries and that affected the kind of support their children get for school like computers and other items. All of this contributes to bad performance in school (Sirin, 2005). Stats show that the income of the Bedouin family is less than half of what an average Jewish family earns in Beer-Sheva (Lithwick, 2000). A researcher called Alissa & Gregg (2010) showed in her paper that students whose family has good income and the most important long lasting income score better in exams.

Furthermore, parental level of education is very important and it determines socioeconomic status as it is constructed and accompanies the child from an early age (Krashen, 2005). Page (2002) said that the students' involvement in technology reinforces the students' self-esteem which makes them feel worthy and this creates a successful and positive environment for learning.

According to Nannyonjo (2007), students whose fathers had university degree gained the highest scores in exams. Okumo et al. (2008) also found out that students whose parents are educated have less chances of dropout from schools since their effective mothers will help them in homework and their educated fathers will help them to access networks which assist them in their education.

Moreover, a study was conducted in St Jude Malaba primary school in Uganda in the year 2010 to find out the relationship between the educational level of parents and its impact on their children's performance. Besides, the study was concerned with the family's income and its effect on performance. The study found out that the parents' level of education affected the children's performance and those parents with low income had negative influence on their children (Onzima, 2010). Besides, Popham (2007) declared that these tests which do not assess the variables that are related to the examinees experience like socioeconomic status, the family social and educational background and others are unfair tests.

Garzon (2006) considered the significance of the students' socioeconomic status in the learning and teaching process and the strategies implied in class even to change the process of assessment and evaluation for these students. Accordingly, Toutkoushian & Curtis (2005) said that in the schools where the majority of their students come from low socioeconomic status produce low scores.

Showing similar conclusions, Wenglinsky (1998) found out that students who belong to low socioeconomic class do not have the same educational opportunities of those who belong to the middle or upper class and that parents' education plays a role in the success of these students. Blevins, 2009 said that educated parents can supply schools with financial support and that affects the performance of students in a positive way. The low economic status deprived students from attending courses and tutoring because of the high expenses, and that records a disadvantage (Helms, 2008).

Researchers believe that students who come from advantageous environments perform better in exams than those who come from less advantaged one. Students also who come from an educated family become familiar with the academic language and that facilitates their performance in exams and even in school performance (Williams, 1983).

Many theories assured that socioeconomic-status affects the performance of students (Eamon, 2005; McNeal, 2001). Those students from low socioeconomic status score less than those from high socioeconomic status (Eamon, 2005; Hochschild, 2003). It is justified that these disadvantaged students do not have the opportunity to access resources around them which in its role enriches their knowledge and also reduces feelings of stress at home (Jeynes, 2002). Moreover, when parents are educated, the students' interests toward education will be bigger (Majorbanks, 2005). High quality environment helps students to do better in school and those who are from poor neighborhood perform badly (Eamon, 2005).

To prove the abovementioned information provided by the researchers, a study was applied on tenth grade students, in Kansas, to identify the factors that affect the students' scores in a composite test. The data were taken from a longitudinal study conducted in 2002 and compiled by National Center of Education Statistics. The sample includes 1221 public, private and catholic schools. The study included eight hypotheses but the recent study is interested in two hypotheses: the first talked about the relationship between students' performance and their family's academic status as well as the second one which concentrated on the importance of expectation on grades. The study concluded that students who show poor academic status score less than those of good academic status. The second hypothesis emphasized that students who have high expectations score better than those who show low expectations (Barry, 2005).

A study was held in 2001 on a million students who were involved in PISA (program for international student assessment) in order to measure students' performance in Math, reading, and literacy skills. That study tried to find out the impact of the students' socioeconomic status and achievement, in other words, to check if the possessions the family has already possessed at home had a positive effect on students' performance or not. It was found that students who possess more items like dictionaries, calculators...etc. perform

better. A point which is important to be mentioned is that the students' performance and their socioeconomic status is strongly portrayed in reading more than in Math and literacy skills because the success of students in this skill depends on students' background than the two other skills. Lara-Cinisomo et al. (2004) reported that researchers of RAND corporation showed in some studies that they conducted that the socioeconomic status (SES) plays a more essential role in the students' achievement than race, ethnicity and others. For instance, in a study applied in 65 neighborhoods in Los Angeles, they found out that poverty and the mothers' education affected the students' performance. Another study conducted in high schools to check students' achievement in Math concluded that improving the conditions of Blacks and Latinos decreased the gap which seems to have been consistent between the Blacks and the Whites as well as between the Latinos and the Whites (Lara-Cinisomo et al., 2004). Asserting the notion that students' performance is greatly affected by their socioeconomic status, a longitudinal study was conducted on children who were born in 1984 in Manitoba to assess their performance in the 12th grade examination with relation to their socioeconomic status. The study asserted again that those from low socioeconomic status do not perform well in schools (Noralou et al, 2006).

A similar study was performed to investigate the effects of socioeconomic status and students' achievement in college. Data were collected from three colleges in Guirat and results showed that students who had stable socioeconomic status, educated parents and owned things that facilitated learning enhanced their achievement (Saifi & Mehmood, 2011).

An important study was conducted on Missouri public schools to determine if there is correlation between the students' socioeconomic status and their performance on Missouri standardized tests. The study included 19 urban schools in Kansas city. Five thousand students were the subjects of the first sample, while in the second sample only 1500 students were taken to cover some rural areas in Missouri between the years 2008-2009. The study

found a significant correlation between students' socioeconomic status and their performance in the given test (Blevins, 2009).

Moreover, a study was done on a sample of students who gained scores for three years on the Primary Benchmark exam. This exam was applied in the years 2002, 2003, and 2004. The sample was divided into two groups, one who was regarded as students from low socioeconomic status and the other was not. The scores were the outcome of two exams, Math and Literacy. The results showed no confirmation to the other findings that consider low socioeconomic status affects the students' performance in exams. The group from low socioeconomic status didn't score lower than the students who were qualified as those from low socioeconomic status. However, the researchers gave a justification for that finding which refers to the small number of the sample on which the study was conducted in contrast to the other studies which were applied on a bigger population and proved the opposite (Harding University, 2002). In a different context, McDiarmid (1972) conducted a study on Indian children and found out that poverty, broken homes, social conflict and motivation play a big role on the interpretation of the test items. And that is also similar to what Fortune (1985) found out in a study applied on American Indians that those examinees were not able to understand the exam instructions due to their little experience.

Now dealing with the Israeli context, it seemed that Arab learners belong to poor environment socially and economically. Arab children have, sometimes, to walk long distances to reach their schools. Facilities like libraries, studios, labs, and computers are very little in Arab schools in comparison with the Israeli ones. Researchers found out that computers enhance the teaching and learning process and students' performance will be better (Crosnoe et al 2004 bi; Eamon, 2005). A recent report shows the difficulty faced by Arab students in obtaining computers which are considered the only means that let these learners be exposed to others' cultures and technology in order to cope in the exams and in

daily life (Shaalán, 2011). Even, teachers' training for Arabs does not take its chance and it is insufficient to cover the educational needs. So, discrimination in education which is applied by the Israeli authorities seems to be a main source for the students' poor performance. The staff of Dirasat (2009) (an Arab Centre specialized in law and politics in northern Israel), who benefited from an empirical study made by Yogav and Ayalon (2000), conducted a research which showed that the psychometric exams failed to assess applicants and to give them chance for success. The reason behind this deficiency is that these participants are rooted in a poor socioeconomic background. Arab students are considered the minority of these examinees who do not gain the benefits and privileges of citizenship as the Israeli students (Mustafa, 2009). In the past, Eastern Israelis shared the same challenges that Arab students have like poverty; however, their government provided them, unlike the Arabs, with other resources in order to improve their academic performance such as extra academic hours and remedial programs during the school day and even in the afternoon. Besides, some of them get the chances to study in vocational schools. It is worthwhile to add that even school policies and the representative of the minority benefit students from this minority (Bali & Alvarez, 2004).

The Israeli developers of the exam tried to change their policy due to the talks which required them to take into account the socioeconomic background of the test takers which affects their performance in exams. Accordingly, in 2003, those exam developers suggested a new track to give chance for students from low socioeconomic status like Ethiopians to gain more seats in the universities by scrapping this exam but they reversed it when it revealed that more Arab students gained larger number of seats in the universities. There was also a comparison between years when psychometric exam was not an official admission requirement for attending the university which showed that Arabs benefited a lot with a

percentage of 52%. However, in the year when the psychometric exam became a basic requirement the percentage fell down to reach 29% (Sa'ar, 2003).

2.8 Educational Background:

The examinees' educational background is the second feature that is assumed to affect the examinees' performance in the exam. Unfortunately, few studies were conducted on this area but a lot of theory was written about this aspect in order to show the Arab examinees' poor environment. These students suffer from the shortage of facilities like computers and library resources which are important for good quality of teaching and learning process (Mazawi, 1996) and that was not the case in the Israeli schools.

This aspect affects the examinees' level in the exam. Students who study in low-quality schools perform less than those who study in high-quality ones (Helms, 2008). In the educational system in Israel, the Arab students are segregated from the majority Israeli students. This educational institution consists of two educational systems; both systems are separated administratively and spatially. The Arab schools lack equipment, facilities and equal range of sources. It is estimated that 85% of Jewish students finish their high school while only 50% of Arab students graduate from the high school (Mazawi, 1996). Even vocational schools which may be another possible option for the students who drop out from regular school are absent. One fundamental issue which should be raised here is the attitude toward the quality of education in the Arab sector (Al Haj, 1995). It is known that the Arab educational system suffers from the lack of libraries, buildings, language labs, budget allocations and others (Human Rights, 2001 & Shaalan, 2011& Kilbawi, 2005). Even, teachers' training does not take its chance and it is insufficient (Mazawi, 1996). So, discrimination in education which is sponsored by the Israeli authorities is a main point which affects the students' performance in the exam and decreases their chances for

admission to universities. Eastern Jew students face similar challenges to those that Arab students have such as poverty. However, the government provides them with resources in order to improve their academic performance such as extra academic hours and remedial programs during the school day and even in the afternoon. Besides, some of them gain the chances to study in vocational schools. Some contenders may say that Arab students receive enrichment by remedial programs. A study which was carried out by the Hebrew University in 2005 shows that money invested in the Israeli schools is three times more than the Arab schools and this means unfair opportunities of education for examinees, the Arab and the Jewish.

The Israeli government admits that the educational Arab system is inferior to the Jewish one. Israel in its independence declaration announced that Israel is a state for the Jewish people which excludes the Arabs in Israel and determines them as a minority group that deprives them from adequate access to the state resources (Rouhana, 1997). This minority suffers from living in the margins and it is always neglected by the Israeli state (Bishara, 2000). The Israeli majority is dominant in every aspect of life such as the social, political and the economic domains (Shavit, 1990).

Students who are exposed to modernization and technology seem to know more topics than those who come from poor environments. Many findings asserted that reading comprehension and vocabulary tests depend much on the examinees' prior knowledge. When the examinees are familiar with the exam material, they can answer the questions more efficiently. Also, they said that prior knowledge affects inferences the examinees make when they try to comprehend the given text. It affects the examinees' interpreting of the given passage due to the schemata which enable the test taker to understand easily (Samuda, 1975).

A study was conducted on students who belonged to different countries for a placement test to indicate the students' performance and to give them marks. The aim of the

study was to show the possibility of establishing placement tests which indicate unfair decisions applied on the examinees from different countries and this means different backgrounds, different culture and educational status. The subjects of the study were 350 foreign students from different countries and the instrument used for conducting this study was a placement test. The result of this study supported what many researchers found that the students from different groups do not have the same performance in all the subtests. On the contrary, the same group may score well in one test and fail in another subtest and vice versa due to the different background and different language of the examinees (Farhady, 1979).

Good educational background in learning English means that students acquire the target language and use it in daily life situations and also in handling exams for any function in life. However, there are many factors that affect the acquisition of a second language such as the nature of L1, culture, environment and methods used for acquisition and even the effort invested in applying these methods. There is what is called DIF which means different item functioning when the examinees from equal ability but they come from different groups are not able to respond equally to this item. Accordingly, Kim (2001) said that DIF “poses a considerable threat to validity. The DIF may relate to cognates.” A study was done on 207 learners from in the eighth grade to investigate if the original language of the examinee has an effect in dealing with the exam. The examinees of the current sample are from two different races with different mother tongue languages; one consists of Arabs who speak the Arabic language and the second consists of Jews who speak the Hebrew language. It is known that so many words of the modern Hebrew language are borrowed from other Western languages, mostly from English which contributes for less difficulty in translating the words of the test items; therefore, that resulted in better performance by Israeli students due to the high frequency of cognates between English and Hebrew. Chen and Henning (1985) conducted a study on some Japanese and Spanish learners and found out that Spanish

students performed better than the Japanese due to Spanish cognates. Besides, Sasaki (1991) conducted a study on 262 Chinese and 81 Spanish and found that vocabulary items which contained English-Spanish cognates showed a gap when (DIF) analysis was performed which favored the Spanish group over the Chinese (Allalouf & Ben Shakhar, 2004). Angoff (1989) in his study on students and their performance in TOEFL found that performance of Spanish and Portuguese was high in reading comprehension and vocabulary due to the similarities between these languages and English.

Even in the school life, the Israeli students usually get better grades in the Bagrut exams with almost 26-30 points higher in average (Ministry of Education, 2003a & 2003b). Kelbawi (2005) commented on that gap and related it to many factors and the main one is the shortage of budget offered to schools in the Arab sector. Lithwick (2000) reported that even influential people in the Ministry of Education confess that gap in educations between Arabs and Israelis is very big and difficult to be narrowed. Israel is one participant in the convention against discrimination in Education and the law said that if Israel is insisting on having separate systems of education, one for the Israelis and the other for the Arabs, the government should apply the same standards on both sectors.

Besides, the advantage of benefiting from native speaker teachers has been limited to Israeli schools and those teachers are appointed by the (TASP) agency which supports graduates of English to study MA in applied linguistics under one condition which is participating in a two year program to teach English in Tel-Aviv public schools (Jewish Agency).

Every successful institute must take all the responsibility to improve the students' performance through classroom practice that is achieved with the help of a skillful teacher (Linn, 2000). However, Arab schools lack this advantage and that is clearly reflected in the low achievement of Arab students in the Psychometric exam, and the reason behind that is

that a huge number of the Arab graduates choose to teach in schools because of the few number of opportunities open to them so their application for teaching as a career relates to their need for a job and a salary even if they do not have the desire to work as a teacher (Kiblawi, 2005). Besides, McCoy (2005) stated that poor funding of schools prevents recruiting and retaining teachers who are well qualified. And all of this refers to political consideration executed by the Israeli authorities. Quality of English teachers is under a question mark due to less opportunities and the shortage of money provided to schools for teachers' training. Furthermore, teaching in Arab schools is mostly frontal teaching while in the Israeli educational system; there is diversity in the methods used there. A study was conducted by Inbar cited in Schmidt and Shohamy (2004) concluded that good quality instructional methods can affect the learners positively and strengthen their motivation even if the groups of learners have political tension among them. Textbooks contain unsuitable topics to Arab learners and the organization of these books is poor. So, when the curriculum is written by Israeli educators, the Arab learners' needs will be neglected. Arab students suffer from deficiency in acquiring vocabulary since it can be best acquired by being exposed to oral input as well as to the written one which very seldom is in the Arab sector (Kiblawi, 2005).

It is known that the Arab students learn three languages: Arabic, Hebrew and English, while the Israeli students master two languages, their mother language which is Hebrew and English. So, an Israeli researcher found it unfair for the minority who holds the burden of learning three languages to attend the same English test (Shohamy, 2002) like the examinees from the majority who are not forced to learn the Arabic language. Besides, students whose parents come from a sociolinguistic context where English is their mother tongue, which is the case for many Israeli students whose parents immigrated from English speaking countries like: USA, Canada, South Africa and other parts of the world, have an advance in their scores

in contrast to Arab students who are not exposed to the same circumstances and do not have this opportunity. The Arab subgroup also has no representation in the assessing methods. These tests are presented in an undemocratic way which favors one group over another and the internal intention behind them is to carry the agenda of politics and incorporate all this in the educational system (Shohamy, 2002). One way of showing the control of the dominant group is in selecting the content of the test which reflects the culture of this group and eliminates the knowledge and culture of the minorities. Unfortunately, the testing agencies are tools in the hands of those who have the authorities and they are servants to them. As reported in Shohamy (2002), Broadfoot says about tests that "its current pre-eminence as a mood of control, however, is the result of a protracted struggle between different interest groups, and its growth as an ideology embodied in notions such as standards, quality, indicators, and targets is reflexively related to the need and ability of the dominant groups to retain their dominance" (p.231).

2.9 Summary:

The focus of the above chapter was demonstrating the theory and research that dealt with test bias, as well as the other factors that affected the examinees' bad performance in exams like: educational background and the examinees' socioeconomic status. The cited studies were conducted on some famous standardized tests like TOEFL and SAT and how the minorities performed poorly due to these exam unfamiliarity to the examinees' culture and environment. Moreover, the researcher included what was written about the placement exam in Israel, the psychometric exam, in order to help in highlighting its impracticality to the Arab examinees and its negative effect on their attitude toward the exam which in turn affected their performance and deprived them from gaining good grades to join the Israeli universities.

CHAPTER THREE

METHODOLOGY

3.1 Introduction:

This chapter focuses on the sample of the current study, research design, the instruments that are used for collecting data, validity and reliability procedures; as well as data analysis.

The reason behind conducting this study is focusing on the case of the Arab students in the Israeli setting who try to take the placement exam as a requirement to gain a seat at Israeli universities and to investigate the genuine reasons behind their poor performance in the mentioned exam.

3.2 Population and sample:

The population of the current study was the college and university students in the universities and colleges in the southern part of Israel and candidates who were still waiting for acceptance. The choice of this population was to make sure that they had taken the Psychometric exam which is a major requirement for joining higher educational institutions. The sample was taken from two academic institutions in Beer Sheva, Ben Gurion University and Kaye College. The choice of these two institutions in particular was due to the fact that they are mostly approached by students since they lie in the center of the biggest city in the south. The sample of the study consisted of 160 university and college students; one hundred from the Arab sector, and 60 others from the Israeli one. The choice of the sample was performed by advertising for the current study and for the need of volunteering participants. All of the Israeli participants (60) were students at Ben Gurion University while only 19 Arab participants came from the same university. Fifty three other Arab participants (53) were

students at Kaye Educational College and the rest of the participants were still looking for a place in one of the Israeli academic institutions. It is important to mention that all of the participants of the current study have taken the Psychometric exam once at least.

Table 1: Sample description according to gender

			Israelis	Arabs	Total
Gender	Male	Number	31	30	61
		Percentage	19.38%	18.75%	38.12%
	Female	Number	29	70	99
		Percentage	18.12%	43.75%	61.88%
Total			60	100	160
		%	37.5%	62.5%	100.0%

According to the above table (1), the Arab sample contains 30 males and 70 females and the Israeli one has 31 males and 29 females.

Table 2: Participants' distribution according to age and ethnicity

			Israelis	Arabs	Total
Age	16 – 20	Number	6	53	59
		Percentage	3.75%	33.12%	36.88%
	21 – 24	Number	30	35	65
		Percentage	18.75%	21.88%	40.62%
	Above 25	Number	24	12	36
		Percentage	15%	7.5%	22.5%

The examinees' socioeconomic status which includes the examinees' parental literacy and economic status is important to be described in this section as this aspect may form a fundamental issue which determines the gap between the two groups of participants in the study and in turn reflects the different background of both groups. Accordingly, tables (3), (4), (5), (6), and (7) below describe the participants' parental level of education as well as their economic status.

Table 3: Participants' distribution according to their fathers' level of education:

			Israelis	Arabs	Total
Father's Education	Illiterate	Number	2	31	33
		Percentage	1.25%	19.37%	20.62%
	Elementary	Number	0	24	24
		Percentage	0%	15%	15%
	Secondary	Number	20	31	51
		Percentage	12.5%	19.37%	31.87%
	High Education	Number	38	14	52
		Percentage	23.75%	8.75%	32.5%
Total		Number	60	100	160
		%	37.5%	62.5%	100.0%

Table 4: Participants distribution according to their mothers' level of education:

			Israelis	Arabs	Total
Mother's Education	Illiterate	Number	2	49	51
		Percentage	1.25%	30.62%	31.87%
	Elementary	Number	1	26	27
		Percentage	0.62%	16.26%	16.88%
	Secondary	Number	18	18	36
		Percentage	11.25%	11.25%	22.5%
	High Education	Number	39	7	46
		Percentage	24.38%	4.37%	28.75%
Total		Number	60	100	160
		%	37.5%	62.5%	100.0%

Table 5: Participants' distribution according to their fathers' employment.

			Israelis	Arabs	Total
Does Mother work?	Yes	Number	47	11	58
		Percentage	29.38%	6.87%	36.25%
	No	Number	13	89	102
		Percentage	8.12%	55.62%	63.75%
Total		Number	60	100	160
		%	37.5%	62.5%	100.0%

Table 6: Participants' distribution according to their mothers' employment:

			Israelis	Arabs	Total
Does Father Work?	Yes	Number	57	55	112
		Percentage	35.63%	34.37%	70%
	No	Number	3	45	48
		Percentage	1.87%	28.13%	30%
Total		Number	60	100	160
		%	37.5%	62.5%	100.0%

Table 7: Participants' distribution according to monthly family income:

			Israelis	Arabs	Total
Total Family Monthly Income	Less than NIS 5,000	Number	4	37	41
		Percentage	2.5%	23.13%	25.63%
	Between: NIS 5,000-10,000	Number	24	54	78
		Percentage	15%	33.75%	48.75%
	Higher than NIS 10,000	Number	32	9	41
		Percentage	20%	5.62%	25.62%
Total		Number	60	100	160
		Percentage	37.5%	62.5%	100.0%

The educational background is the other important independent variable that may have an effect on the examinees' performance. So, the tables below demonstrate the participants' average in the Bagrut exam besides the number of times they have sat for the exam in order to gain good marks that enable them to get a seat in the university.

Table 8: Participants' average in the Bagrut exam:

	Group	N	Average	STD	t-Test
Achievement in the English Section in the Bagrut Test	Israelis	60	88.8167	5.54027	10.24***
	Arabs	100	77.8100	8.02735	

Table 9: The number of times the participants took the exam for better results.

			Israelis	Arabs	Total	
How many times did you do the Psychometric Test?	Once	Number	42	39	81	
		Percentage	26.41%	24.53%	50.94%	
	Twice	Number	15	39	54	
		Percentage	9.4%	24.5%	33.9%	
	Three Times	Number	3	18	21	
		Percentage	1.9%	11.3%	13.2%	
	Four Times	Number	0	3	3	
		Percentage	.0%	1.9%	1.9%	
	Total		Number	60	99	159
			Percentage	37.7%	62.3%	100.0%

Moreover, participants' status of language acquisition which in turn affects the examinees' competence of the target language is shown in table (10) and it demonstrates that

Arab learners learn English as a third language at school while the Israelis learn it as a second one (according to the participants' responses in the questionnaires; besides, this is an official classification in the Israeli state).

Table 10: The status of learning English by participants.

			Israelis	Arabs	Total
Have been learning English as a...	Second Language	Number	60	0	60
		Percentage	37.5%	.0%	37.5%
	Third Language	Number	0	100	100
		Percentage	.0%	62.5%	62.5%
Total	Number	60	100	160	
	Percentage	37.5%	62.5%	100.0%	

3.3 Research Design:

A combination of quantitative-qualitative approach was adopted in order to investigate the different aspects that may affect the Arab examinees performance. This study has one dependent variable, namely, the Arab students' attitude toward the level of unfamiliarity and difficulty in handling the Psychometric English subtest exam items. These items were presented in the research questionnaire and were previously judged by a panel of teachers as unfamiliar items.

This dependent variable (the perception of the exam) is influenced by two independent variables, namely, the educational background of the participants and their socioeconomic status.

The reason behind the researcher's intention to focus on the mentioned dependent variable is to highlight the gap between the two groups of participants in all of these aspects and to show the extent of familiarity of the Psychometry exam items to them.

All of the above details will be investigated through two methods of data collection; first, questionnaires and second interviews.

3.4 Instruments:

The researcher developed two tools for collecting data; two questionnaires and interviews.

3.4.1. Questionnaires:

The first questionnaire includes the participants' responses on the table of biased items selected by the teachers, and the second questionnaire focuses on the participants' demographic aspects to recognize their socioeconomic status. It also includes the participants' responses toward their schooling experience and their attitudes toward the exam.

- i. The first questionnaire focused on the exam items: An extensive analysis of some samples from the Psychometric exams in the years 2009 and 2010 was performed to identify possible aspects of cultural bias. A panel of five English teachers from the Arab schools selected items that they considered to contain bias in these two versions of the psychometric exam. These items were compiled in a questionnaire and given to a sample of students from the Israeli and the Arab sectors to judge for possible cultural bias. (See Appendix 2)
- ii. The second questionnaire contained several items which investigated the participants' socioeconomic status and their educational background. (See Appendix 3)

3.4.1.1 Procedures of constructing the questionnaires:

The first questionnaire consisted of several items, which were agreed upon by five English teachers, to contain elements that are believed to be alien from the examinees' culture. Those items, which were assumed to be difficult for them to answer, were taken

from the last two Psychometric exams of the years 2009 and 2010. The researcher supplied the participants with frontal explanation of some of the questionnaire questions. Students were asked to go through these items and decide to what extent they were familiar to them using Likert's five level scaling method that ranged from 1-5; strongly agree = 1, agree = 2, I don't know = 3, disagree = 4, and strongly disagree = 5. The responses that were assigned to the fifth degree of the scale reflected that the items were strongly unfamiliar to the participants while the responses that were assigned to the first degree of the scale showed that the items were strongly familiar to them.

For deeper understanding of the examinees' background, the researcher found it necessary to construct a second questionnaire that included demographic information about the sample to find out what aspects could affect the participants' responses on the exam items and how that could affect their performance in the exam generally like their socioeconomic status and their educational background. Accordingly, the construction of the questionnaire classified the participants' ethnic group, parents' level of education and economic status (Jeynes, 2002).

3.4.2. Interviews:

Interviewing tutors: The researcher held interviews with some Arab tutors who teach preparation courses for the exam. Those tutors who were originally teachers in high schools answered the questions supplied to them by the researcher. The information that was supplied by them was supportive in discussing the results of the research. They assisted the researcher in explaining some issues that were demonstrated by the participants in the distributed questionnaires dealing with school support. Besides they provided the researcher with information about the structure of the exam and the required skills for success in the exam.

3.4.2.1 Procedures for conducting interviews:

These interviews were held individually and each tutor was given the questions in advance. The researcher found it important to consult some educators in the field like English tutors who had a close relationship with the Psychometric exam takers before sitting for the exam. Those tutors, who belonged to four coaching centers, used to hold coaching courses in order to help students have better knowledge about the exam sections as well as to gain several techniques that might help in dealing with the exam like using the time efficiently, avoiding errors, guessing, and deductive reasoning. The idea of interviewing those tutors was taken from other research studies which investigated the importance of the coaching courses in the preparation of students for the Psychometric exams (Allalouf & Ben Shakhar, 2004).

3.5 Validity and reliability of the tools:

For the validity of the research, more than one tool was used to investigate the reliability of this research that included two questionnaires: one that focused on the problematic items that relate to cultural bias in the last two versions of the English subtests at the Psychometric exam in the years 2009 and 2010, which were selected by the panel of teachers, to find out to what extent they were difficult to the participants taking into account their unfamiliarity to the examinees' culture, and another questionnaire which showed the educational, social, economic and psychological remarks of the examinees.

Those two questionnaires were revised by specialists from Hebron University. Any comments raised were taken into account and adopted, and modifications were performed accordingly. Besides, the researcher made great effort in distributing the questionnaires and giving frontal instructions to guarantee the students' response to them would be precise and appropriate.

For the efficiency of the current research and in order to achieve the highest level of reliability of the questionnaires items, the alpha Cronbach's internal consistency test was applied to all of the questionnaires sections and their components (Table 11). The Cronbach's alpha coefficient reflected appropriate internal consistency of all sections and components of the questionnaires that showed that the participants judged the selected items from the two versions of the Psychometric exams in the years 2009 and 2010 as bias. Since Cronbach's alpha rule of thumb ranges from $\alpha < 0.5$ (described as unacceptable) to $\alpha \geq 0.9$ (described as excellent), it can be stated that the current study has shown an excellent level of consistency as the judgments over those items have showed an excellent high level of consistency which was defined as 0.902.

Table 11: Testing Reliability of Tools

Variant	Variant Items	Scale	Alpha Cronbach
Items selected from the English subtest at the Psychometric exams in 2009/2010	A – L (2009/2010) , A – K (2009/2010) , A (2009/2010)	1-5	0.902

3.6 Data Collection:

This study was conducted in the southern part of Israel which, in the researcher's point of view, is a special context due to the gap between the two parts of the study sample: Arab and Israeli examinees in all aspects of their life social, economic, and even educational. This sample consisted of 100 Arab examinees and 60 Israeli ones. It was difficult to have two identical groups due to the challenges that met the researcher in collecting the data in the

Israeli context. One of these difficulties was the lack of cooperation of some educational institutions to distribute the questionnaires in some classes; another difficulty was sometimes referred to as the lack of students' cooperation. The participants were asked to respond on the two questionnaires items: one dealt with personal factors which provided information to identify the students' socioeconomic background and school support. Another one was established by a group of experienced teachers who were consulted to look at the 2009 and 2010 Psychometric exams selected items which aimed to highlight the extent to which the Psychometric exams items were judged as culturally biased by the Arab and Israeli participants.

The mentioned questionnaires were set up in a table that included the chosen items to be judged by the study sample according to Likert's scale. The first questionnaire was translated into Arabic for the Arab participants and into Hebrew for the Israeli ones for the sake of best understanding. At a later stage, the questionnaires were distributed to students who were given appropriate time, and were given clear instructions before answering them.

For further details about the examinees' educational background some interviews were conducted with some Arab and Israeli tutors who were given, in advance, the interview questions so that they could prepare answers. See appendix (1).

3.7 The Pilot Study:

As a conscious and a cautious teacher of English, the researcher noticed the poor performance of the Arab examinees in the psychometric exam and their tendency to pursue their higher education at universities abroad and far away from their home country, the researcher decided to investigate this serious problem and formed an initial questionnaire which focused on the potential reasons behind the students' bad performance. The results of the questionnaire revealed that the English section in the Psychometric exam, which includes

two more parts; Math and Analogy, was one of the causes of their inability to join the local Israeli universities due to its difficulty. So, the researcher met a number of those who filled the questionnaire for further details about the reasons behind that difficulty and included from their responses that some items of the given exams seemed strange to their environment and they misinterpret them, and that formed the first step in the current investigation.

3.8 Data Analysis:

After collecting the data, which were obtained from the distributed questionnaires and the interviews that were conducted with the Arab tutors, to investigate the main aspects of this study which tended to identify the main reasons behind the bad performance of the Arab participants in the Psychometric exam in comparison with the examinees from the Israeli sector, the researcher summarized and synthesized the given information and all of it was categorized and the similar remarks of the participants were put together. Besides, the information supplied by the tutors would be used to explain results in chapter five.

For more specific details, data were analyzed based on two stages; the first stage was based on the participants' responses on the selected two exams items to show whether they found these items familiar to their knowledge and culture, and these responses were stated in the first questionnaire. The other stage dealt with participants' social, and educational factors which were established in the second questionnaire. The data analysis was given in more than one type of analyses. Pearson's correlation, regression and means and deviations were used in order to describe the possible influence of the independent variables, i.e. participants' educational background, socioeconomic status, and their attitude toward the exams. All of these relations will be shown in the tables. It is worth to mentioning that the examinees' attitudes toward the exams items were measured by the remarks obtained from their views classified in the given questionnaire.

3.9 Summary:

This chapter demonstrated the study approach, the instruments used to obtain information that investigated the dependent variable of the study in relation to the independent variables. Also, it described the sample of the study and its context as well as the validity and reliability of the tools. Moreover, the chapter included and discussed the steps of statistical analysis that were performed.

CHAPTER FOUR

RESULTS

4.1 Introduction

This research study tries to investigate the reasons behind the poor performance of the Arab examinees in the English subtest of the psychometric exam, which forms an essential requirement for admission to the Israeli universities and plays a great role in the students' choice of their major course of study. The investigation has dealt with the English subtest, which constitutes the highest level of difficulty among the Psychometric exam sections according to the responses that were received in the pilot study and the official statistics. This subtest has always been the main concern for many Arab examinees. Therefore, this section is intended to come up with the findings of the study reported in chapter three and it discusses them in relation to the research questions. Most of the data were obtained from the participants' responses on the distributed questionnaires; the first investigated the participants' attitude the selected English subtest exam items which concentrated on the extent of their familiarity, while the second questionnaire investigated the participants' socioeconomic status and educational background. All of this was intended to shed light on the reasons of the poor performance of the Arab examinees in the Psychometric exam English subtest. All of the findings were analyzed by an SPSS package which included a regression method. There was a comprehensive analysis of averages, standard deviation, Cronbach Alpha and use of ANOVA test.

4.2 Question One:

To what extent do Arab teachers judge the English subtest items of the 2009 and 2010 Psychometry exams as culturally biased?

In the current study, two Psychometric exams were chosen; the 2009 and 2010 versions, to be taken as samples for investigation for which five Arab English teachers were asked to identify the exam items that can be potentially biased to the Arab learners (Appendixes 4 & 5). The teachers chose 22 items out of 40 which represented 55% of the 2009 Psychometric exam, and chose 24 items out of 40 which represented 60% of the total items of the 2010 Psychometric exam. The average percentage of the chosen items from both tests represented 57.5%.

For further details, the researcher identified the number of the biased items for each section of the exam separately. Dealing with the English subtest of the Psychometric exam in the year 2009, it was found that in the first section of the exam (Sentence Completion) 59.09% of the items were biased, 66.66% of the second section (Restatement) were biased and 50% of the third section (Reading Comprehension) were judged as biased toward the Arab minority. Concerning the exam which was held in the year 2010, it was found that the Sentence Completion section contained 54.54% biased items. As for the Restatement section, 91.66% of the items were biased, and 50% of the Reading Comprehension items were also considered to be biased.

4.3 Question Two:

To what extent do the participants of both groups (Arabs and Israelis) judge the English subtest items of the 2009 and 2010 Psychometry exams as culturally biased?

In order to answer this question, the researcher looked thoroughly at the participants' responses to the items of the two exams (as selected earlier by the teachers) and focused on two levels of their responses to the questionnaire items (disagree and strongly disagree), where the high percentage meant a high degree of unfamiliarity, and hence a high degree of

difficulty and bias of the English Psychometric test, particularly in the 2009 and 2010 test versions. The percentages for both groups of students (Israelis and Arabs), are shown in table (12).

Table 12: The percentages of the participants' responses (disagree, strongly disagree) toward the English sections in the Psychometric tests in the years 2009 and 2010.

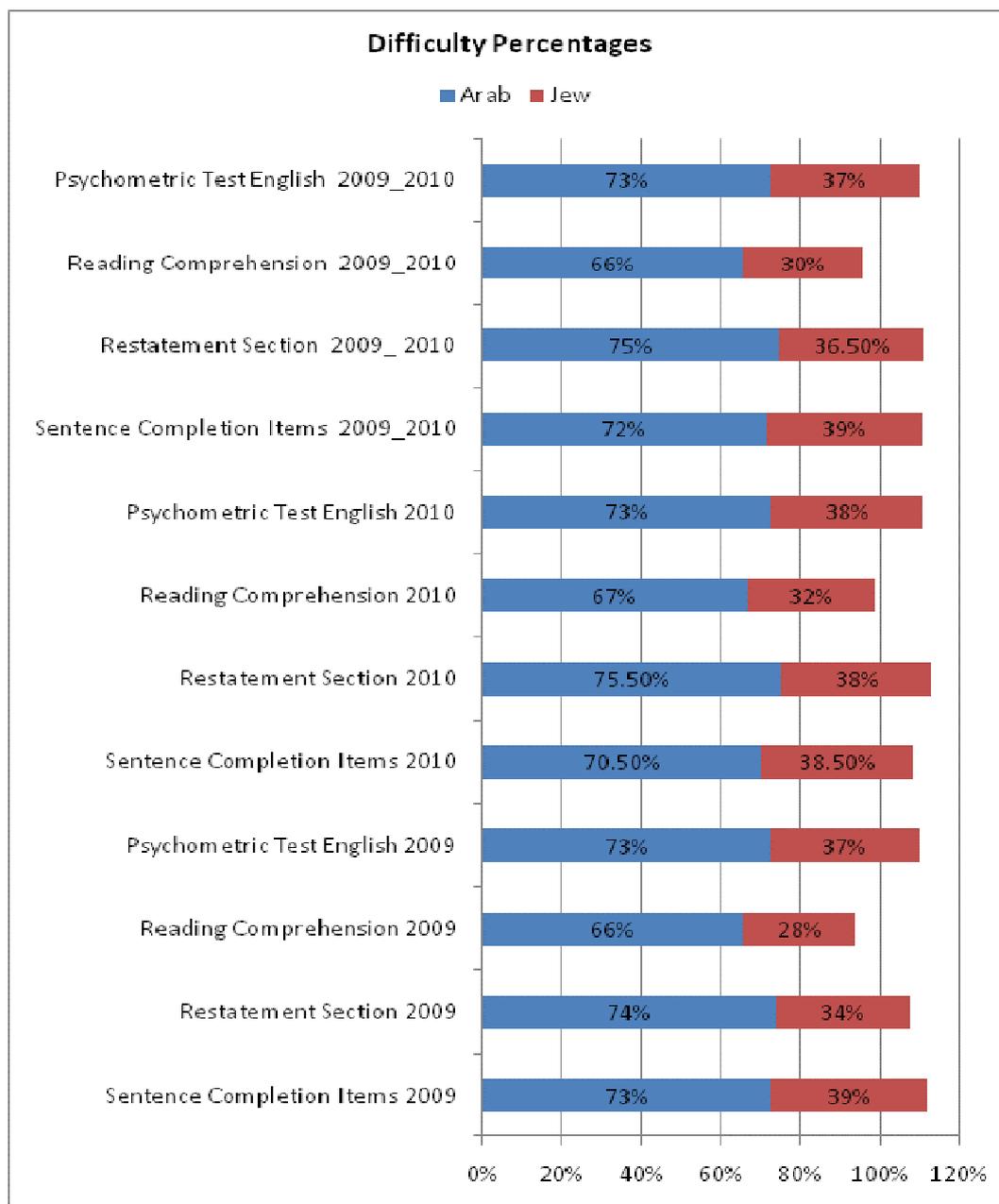
Section	Group	Percentages of unfamiliarity of test items	
Sentence Completion Items 2009	Israeli	%39	$\chi^2 = 284.84, P - \text{value} = 0.00 < 0.05$
	Arab	%73	
Restatement Section 2009	Israeli	%34	$\chi^2 = 222.1, P - \text{value} = 0.00 < 0.05$
	Arab	%74	
Reading Comprehension 2009	Israeli	%28	$\chi^2 = 30.9, P - \text{value} = 0.00 < 0.05$
	Arab	%66	
Psychometric Test English 2009	Israeli	%37	$\chi^2 = 417.51, P - \text{value} = 0.00 < 0.05$
	Arab	%73	
Sentence Completion Items 2010	Israeli	%38.5	$\chi^2 = 240.86, P - \text{value} = 0.00 < 0.05$
	Arab	%70.5	
Restatement Section 2010	Israeli	%38	$\chi^2 = 269.38, P - \text{value} = 0.00 < 0.05$
	Arab	%75.5	
Reading Comprehension 2010	Israeli	%32	$\chi^2 = 32.68, P - \text{value} = 0.00 < 0.05$
	Arab	%67	
Psychometric Test English 2010	Israeli	%38	$\chi^2 = 432.83, P - \text{value} = 0.00 < 0.05$
	Arab	%73	
Sentence Completion Items 2009_2010	Israeli	%39	$\chi^2 = 525.29, P - \text{value} = 0.00 < 0.05$
	Arab	%72	
Restatement Section 2009_2010	Israeli	%36.5	$\chi^2 = 492.37, P - \text{value} = 0.00 < 0.05$
	Arab	%75	
Reading Comprehension 2009_2010	Israeli	%30	$\chi^2 = 53.37, P - \text{value} = 0.00 < 0.05$
	Arab	%66	
Psychometric Test English 2009_2010	Israeli	%37	$\chi^2 = 849.95, P - \text{value} = 0.00 < 0.05$
	Arab	%73	

The table above (Table 12) presented the percentages of items which were disagreed upon as familiar by the two groups toward each section of the exam in order to show the gap in their attitudes. For Arab participants, the percentage that held unfamiliarity with the exam items was higher than the percentage of the Israeli ones. This meant that the English Psychometric subtest items of 2009 and 2010 versions were culturally biased toward the Arabs and that showed difficulty in handling these items correctly. For further clarification,

the researcher found it important to focus on the exam sections one by one and to demonstrate results in percentages. Dealing with the sentence completion section of the exam, the percentage of disagreement as indicated by the responses disagree and strongly disagree was 73% for Arab students, and 39% for Israeli students. The percentages of disagreement as indicated by the responses disagree and strongly disagree for the restatement section was 74% for Arab students, and 34% for Israeli students. The percentages of disagreement as indicated by the responses disagree and strongly disagree for the reading comprehension section was 66% for Arab students, and 28% for Israeli students. Accordingly, the percentage of disagreement as indicated by the responses disagree and strongly disagree in the Psychometric 2009 English test was 73% for Palestinian students, and 37% for Israeli students.

Dealing with the English subtest of the Psychometric exam in the year 2010, and according to the exam sections, the percentage of disagreement as indicated by the responses disagree and strongly disagree in sentence completion was 70.5% for Arab students, and 38.5% for Israeli students. The disagreement as indicated by the responses disagree and strongly disagree in the restatement section was 75.5% for Arab students, and 38% for Israeli students. In the reading comprehension section, the disagreement as indicated by the responses disagree and strongly disagree was 67% for Arab students, and 32% for Israeli students. In the exam as a whole, the disagreements as indicated by the responses disagree and strongly disagree were 73% for Arab students and 38% for Israeli students.

Applying the chi-square test, the results showed a big difference between the Arab and the Israeli students (.001) at the level of significance (0.05) which revealed a high level of significance. So, the Arab learners face more difficulty and unfamiliarity in dealing with the exam items which reflects an extent of difficulty in the official Psychometric exam.



Graph 1: Percentage of difficulty in the selected Psychometric exam items

For additional focus on the same issues toward the selected items from the English subtest of the Psychometric exams of 2009 and 2010, the results of the t-Test, which was performed to check the relevance between the Arab and Israeli participants' views whether they identified them as familiar items to their knowledge and culture, showed that there was a significant difference in their attitude towards the items. The mean value of the Israeli

participants was (3.02-3.43) while the mean value of the Arab ones was (2.05-2.56). The difference in attitudes toward the exam items determined difficulty in answering those items and that was performed again by T-test and the mean value of the Israeli participants was 2.74 while the mean value for the Arabs was 3.84 that proved a privilege to one group (the Israeli) over the other (Arabs) (Table 13).

Table 13: The participants' attitudes toward the English section in the Psychometric test, its degree of un/familiarity

	Group	N	Mean	Std. Deviation	t Test
Sentence Completion Items 2009	Jew	60	3.0154	.68697	9.87***
	Arab	99	2.0816	.32854	
Restatement Section 2009	Jew	60	3.1271	.64584	11.47***
	Arab	99	2.0480	.43438	
Reading Comprehension 2009	Jew	60	3.4333	1.29362	5.97***
	Arab	99	2.1616	1.30702	
Psychometric Test English 2009	Jew	60	3.0750	.61132	14.45***
	Arab	99	2.0730	.25097	
Sentence Completion Items 2010	Jew	60	3.0708	.68096	9.48***
	Arab	99	2.1540	.40219	
Restatement Section 2010	Jew	60	3.0396	.59549	10.21***
	Arab	99	2.0909	.55092	
Reading Comprehension 2010	Jew	60	3.1667	1.46330	4.71***
	Arab	99	2.1515	1.03375	
Psychometric Test English 2010	Jew	60	3.0635	.58312	11.41***
	Arab	99	2.1299	.31848	
Sentence Completion Items 2009_2010	Jew	60	3.0431	.64913	10.47***
	Arab	99	2.1178	.28002	
Restatement Section 2009_2010	Jew	60	3.0833	.53994	13.03***
	Arab	99	2.0694	.34440	
Reading Comprehension 2009_2010	Jew	60	3.3000	.96638	7.79***
	Arab	99	2.1566	.85310	
Psychometric Test English 2009_2010	Jew	60	3.0813	.56723	12.84***
	Arab	99	2.0998	.21786	
School Support	Jew	60	3.1167	.90161	3.44**
	Arab	100	2.5600	1.04219	
Difficulty	Jew	60	2.7400	.60596	-11.97***
	Arab	100	3.8390	.48051	

4.4 Question Three:

To what level do the differences in the educational background between Arab and Israeli participants influence their attitude toward the Psychometry test items?

To answer this question, the researcher will, first, spot the differences in the educational background of the participants in order to identify whether both groups relate to equal opportunities in education. Then to find out to what extent the deficiency in the participants educational background affect their attitude the selected exam items.

Percentages and averages of the items were used which measured schooling factors and educational background of the two groups of participants (Arabs and Israelis) in the tables (14, 15, 16 and 17) in order to highlight the differences. It is worth mentioning that the researcher believed that several aspects in the participants' responses reflected their educational background; such as, the number of times the participants sat for the exam to improve their test achievement result, the status of the English language teaching at school, either as a second language or as a third language, the participants' grades in the Bagrut exam, and finally, school support. These aspects in the researcher's point of view are stonecorners for good or bad performance in the exam.

Table 14: The number of times of attending the Psychometry exam by participants from both groups:

		Number of times of doing the Psychometry test				Total	
		1.00	2.00	3.00	4.00		
Group	Arab	Count	39	40	18	3	99
		Percentage within group	39.0%	40.0%	18.2%	3.0%	100%
	Israeli	Count	42	15	3	0	60
		Percentage within group	70.0%	25.0%	5.0%	.0%	100%
Total		Count	81	54	21	3	159
		Percentage within type	50.9%	34.0%	13.2%	1.9%	100%
$\chi^2 = 16.20, sig = 0.001 < 0.05$							

The table above shows that approximately 21% of Arab participants took the Psychometry test three or four times but only 5% of Israelis did it the same number of times. Also, approximately 79% of Arab participants did the Psychometry test once or twice while 95% of Israelis did it the same number of times. Besides it was clear that 39% of Arab students did the Psychometry test once but 70% of Israeli students did it one time. Additionally, when applying the chi-square test to check the significance of difference between the two groups, the result was 0.001 at the level of significance 0.05 which reveals that the difference between the two groups was highly significant.

Table 15: The status of English language at school

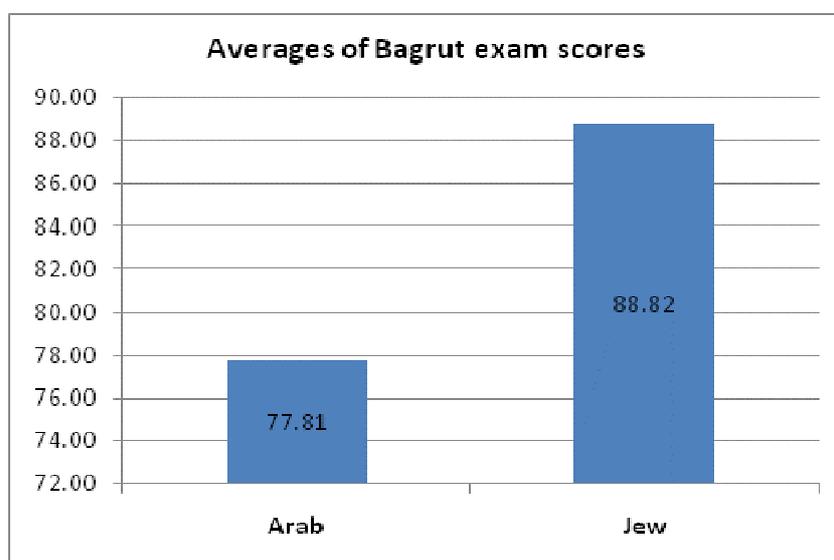
			Second language	Third language	Total
Group	Arab	Count	0	100	100
		Percentage within group	.0%	100.0%	100.0%
	Israeli	Count	60	0	60
		Percentage within group	100.0%	.0%	100.0%
Total		Count	60	100	160
		Percentage within type	37.5%	62.5%	100.0%
$\chi^2 = 16000, sig = 0.00 < 0.05$					

Table (15) above reveals that all Arab participants had learned the English language at schools as a third language, but all Israeli students had learned the English language at schools as a second language.

Table 16: Bagrut exam scores for both groups of participants

Group	Mean	Std. Deviation
Arab	77.8100	8.02735
Israeli	88.8167	5.54027
Total	81.9375	8.94897
$t = 9.36, sig = 0.00 < 0.05$		

The table above (Table 16) shows that the average score for the Arab participants in the Bagrut exam was approximately 78 with a standard deviation of 8 points of dispersion between the scores, but the average score for the Israeli participants in the Bagrut exam was approximately 89 with a standard deviation of 5.5 points of dispersion between their scores which means that the Arab participants were further away than the Israelis from the average point. The chi-square test showed a 0.00 level of significance at 0.05.



Graph 2: The participants' averages of Bagrut exam scores

Table 17: School Support

Items of Schooling Factors	Group	Percentage of disagreement
Q19, Q20, Q21	Israeli	%37
	Arab	%56
$\chi^2 = 17.76, \text{sig} = 0.001 < 0.05$		

Table (17) above presents the items which reflected that the participants received school support. For the purpose of retrieving the results from their responses to these items, a

comparison was made between the 'agreement' and 'disagreement' responses of the two groups. The differences between the two groups were then calculated and tested by Chi-square. The results show that 37% of the Arab examinees received support from school while 56% of the Israeli participants reported that they got support from their schools. Also, the chi-square test showed a result of 0.001 at the level of significance 0.05 which in turn reveals a significant level of difference between the two groups in their school support. Those results show that the Arab participants gained less support from their schools in comparison to the Israeli participants. All of the mentioned data spotted the inequality of the educational opportunities between both groups of participants, and show that the Arab participants belong to poor educational background which affected their skills negatively in handling the exam items and that they lacked the knowledge that in turn added to the unfamiliarity of the exam items (see Table 23).

4.5 Question Four:

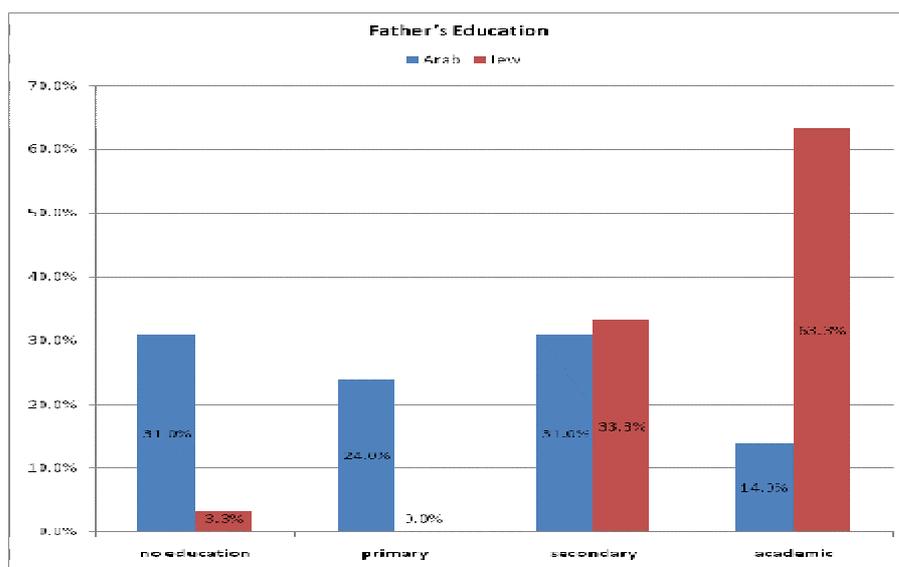
To what level do the differences in the socioeconomic status between Arab and Israeli participants influence their attitude toward the Psychometry test items?

To answer this question, the researcher concentrated, first, on the differences between the two groups in terms of their socioeconomic status and its effect on the extent of the unfamiliarity of the selected exam items. Percentages and averages were used to measure the socio-economic factors of the two groups of participants. The information below includes details about the participants' parents' literacy and economic status.

Table 18: Father's and Mother's level of education

Father's education		Non Educat.	Primary	Secondary	Academic	Total
Group	Arab Count	31	24	31	14	100
	% within group	31.0%	24.0%	31.0%	14.0%	100%
Israeli	Count	2	0	20	38	60
	% within group	3.3%	.0%	33.3%	63.3%	100%
Total	Count	33	24	51	52	160
	% within group	20.6%	15.0%	31.9%	32.5%	100%
Father's education : $\chi^2 = 56.46$, p-value = 0.00 < 0.05						

As shown in table (18) above, 31% of the Arab participants' fathers did not attend school, 31% of them had secondary education and only 14% of them had the ability to pursue their higher academic education, while those who got higher academic education from the Israeli sector were 63%. Those who got secondary education were 33% and those who got primary education were just 3%. The results of the chi-square test show that the difference between both of the participants (Arabs and Israelis) fathers' educations were at a significance level of 0.00 which is below the .05 level.

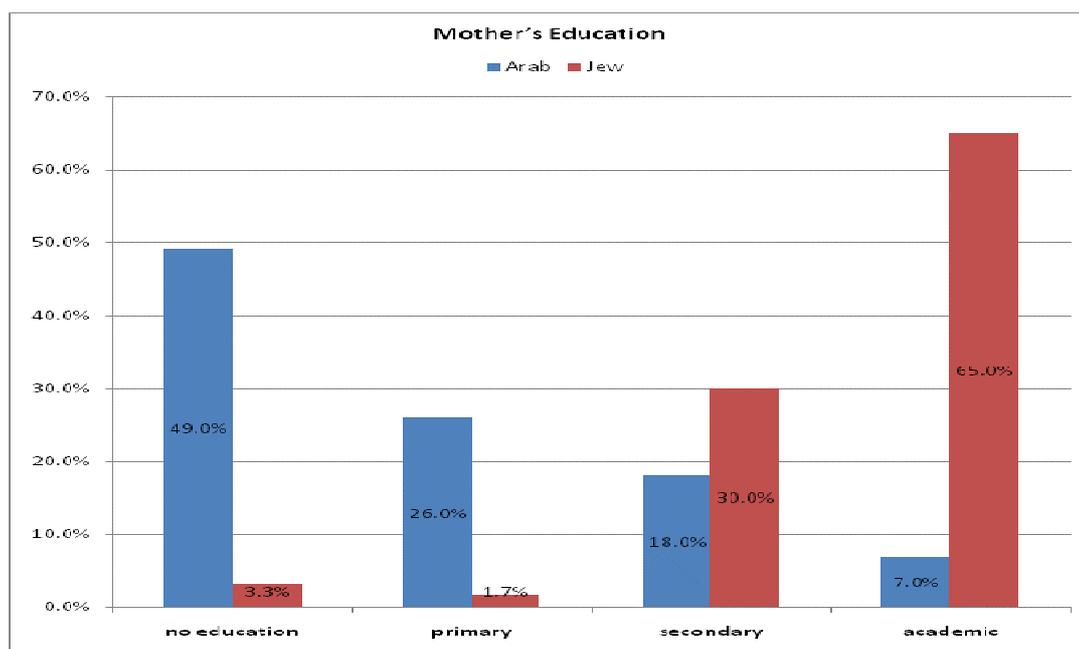


Graph 3: The participants' father level of education

Table 19: Mother's level of education

Mother's education		Non Educat.	Primary	Secondary	Academic	Total
Group	Arab	Count 49	26	18	7	100
		% within group 49.0%	26.0%	18.0%	7.0%	100%
	Israeli	Count 2	1	18	39	60
		% within group 3.3%	1.7%	30.0%	65.0%	100%
Total	Count	51	27	36	46	160
	% within group	31.9%	16.9%	22.5%	28.8%	100%
Mother's education $\chi^2 = 83.97, p - \text{value} = 0.00 < 0.05$						

Taking a deep look at table (19) above, it shows that 75% of the Arab participants' mothers did not attend school or had only primary education, 18% of them gained secondary education and only 7% received higher academic education. On the other hand, the Israeli participants' mothers gave different results where the percentage of the mothers who received higher academic education was 65%. Thirty percent of them obtained secondary education, and only 5% had primary education. Chi-square test statistic was applied and the p-value for the difference between the two groups was 0.00 at the level of significance of 0.05.



Graph 4: The participants' mother level of education

Dealing with the participants' economic status, the tables (20, 21, and 22) below show information about the parents' employment and the economic status of families.

Table 20: Percentages of fathers who work:

Does your father work?		Yes	No	Total
Group	Arab Count	55	45	100
	% within group	55.0%	45.0%	100.0%
	Israeli Count	57	3	60
	% within group	95.0%	5.0%	100.0%
Total	Count	112	48	160
	% within group	70.0%	30.0%	100.0%
Father working : $\chi^2 = 28.57, p\text{-value} = 0.00 < 0.05$				

Table 21: Percentages of mothers who work:

Does your mother work?		Yes	No	Total
Group	Arab Count	11	89	100
	% within group	11.0%	89.0%	100.0%
	Israeli Count	47	13	60
	% within group	78.3%	21.7%	100.0%
Total	Count	58	102	160
	% within group	36.3%	63.8%	100.0%
Mother working : $\chi^2 = 73.57, p\text{-value} = 0.00 < 0.05$				

In table (20) above show that approximately half of the fathers of Arab students do not have jobs (45%), but only 5% of the Israeli fathers do not have jobs. It also shows that approximately half of the Arab participants' fathers were unemployed while 5% of the Israeli participants' fathers were jobless. In addition, the results (Table 21) show that 89% of the Arab participants' mothers were unemployed in comparison with 22% of the Israeli participants' mothers who were unemployed too.

Table 22: Total family monthly income:

			Jews	Arabs
Total Family Monthly Income	Less than NIS 5000	Number	4	37
		Percentage	9.80%	90.20%
	Between: NIS 5000-10000	Number	24	54
		Percentage	30.80%	69.20%
	Higher than NIS 10000	Number	32	9
		Percentage	78.00%	22.00%

The table above, (Table 22), clarifies the differences in the total family income between the Arab participants and the Israeli ones. It shows that the majority of Israeli participants (32 families) fall in the category of the families whose income is above NIS 10,000 that equals 78% of the total number of the Israeli participants. On the other hand, only 9% of the Arab participants families fall in the same category. Looking at the other direction, where the families have less than NIS 5,000 monthly income, the results show that 9.8% of the Israeli families fell in this category compared to 90.2% of the Arab families. The rest of the participants' families from both groups receive a monthly income that ranges between NIS 5,000-10,000.

All the above data ascertained the gap between the two groups in the socioeconomic aspects discussed in the study. Accordingly, those who came from a disadvantageous background which suffer from poverty and ignorance, which was the case of the Arab participants in the current study, affected negatively the extent of familiarity of the selected exam items.

Table 23: Perception or view of cultural bias

Perception or view of cultural bias	Group	Predicted mean(*)	F	Sig.
Sentence Completion Items 2009	Israeli	39.20	4.23	0.03
	Arab	26.96		
Restatement Section 2009	Israeli	25.02	4.57	0.03
	Arab	16.38		
Reading Comprehension 2009	Israeli	2.57	3.79	0.04
	Arab	3.84		
Psychometric Test English 2009	Israeli	66.78	4.8	0.02
	Arab	47.18		
Sentence completion items 2010	Israeli	36.85	4.53	0.03
	Arab	25.55		
Restatement Section 2010	Israeli	33.52	3.85	0.04
	Arab	22.41		
Reading Comprehension 2010	Israeli	2.83	3.82	0.04
	Arab	3.85		
Psychometric Test English 2010	Israeli	73.20	4.35	0.03
	Arab	51.81		
Sentence completion items 2009_2010	Israeli	76.05	3.95	0.04
	Arab	52.51		
Restatement Section2009_2010	Israeli	58.53	4.76	0.02
	Arab	38.80		
Reading Comprehension2009_2010	Israeli	5.40	4.27	0.03
	Arab	7.69		
Psychometric Test English2009_2010	Israeli	139.98	4.35	0.03
	Arab	98.99		
(*) all differences between predicted means are significant at the 0.05 level.				

As shown in table (23) above, ANOVA test was applied to spot the differences in the educational background and socioeconomic status between Arab and Israeli participants, the results showed that there were significant differences between the backgrounds of both of the Arab and Israeli participants that influenced their perception or view of the cultural bias in the 2009 and 2010 Psychometry English subtest items, i.e. : Sentence Completion Items 2009, Restatement Section 2009, Reading Comprehension 2009, Psychometric Test English 2009, Sentence completion items 2010, Restatement Section 2010, Reading Comprehension 2010, Psychometric Test English 2010, Sentence completion items 2009_2010, Restatement

Section 2009_ 2010, Reading Comprehension 2009_2010 and Psychometric Test English 2009_2010. It is clear that the predicted means for Israeli participants in most sections were higher than the predicted means for Arab participants. Therefore, the higher the degree of educational background and socioeconomic status was, the easier and more familiar the test sections became for the participants.

4.6 Summary:

The previous chapter gave answers to the research questions which were obtained from the participants' responses on the distributed questionnaires that investigated their attitudes toward the exam items and whether they were strange to them or not. Besides, there was a kind of investigation to shed light on the participants' personal factors like their educational background and their socioeconomic status in order to find out the impact of the mentioned factors on the participants' perception of the exam familiarity. Tables provided statistics that reflected the gap between the Arab and the Israeli participants in recognizing the exam items and it seemed that the Israelis found these items familiar to them more than the Arab participants. As a result those findings reinforced the big gap between the Arab and the Israeli participants in relation to educational background and socioeconomic status and so emphasized the high quality of the Israeli participants in all of the mentioned aspects.

CHAPTER FIVE

DISCUSSION

5.1 Introduction:

This chapter presents a discussion of the results of the current study followed by a comparison with previous studies that focused on the same issues of the current research. It also compares results to other studies that contradict the current study findings especially in the Israeli context which is similar to that of the present study. Additionally, the researcher adopts some recommendations for better understanding of the importance of the issue which was and still is the cause of the Arab poor performance in the psychometric exam and to suggest implications for future research.

Agreeing with the theories and studies which state that the standardized tests; TOEFL, GRE, SAT...etc. are biased tests to the subgroups of a multicultural society, the results of this study showed that the Psychometric test faces similar accusations of being a biased test with regard to the Arabs as a subgroup minority in the multicultural Israeli society in which different cultural subgroups meet. This judgment stems from the cultural and socioeconomic differences in the Israeli setting which has been neglected by the Psychometric exam developers. This has resulted in confiscating the right of equality in terms of having the same educational opportunity.

5.2 Discussion:

5.2.1 Question 1:

To what extent do Arab teachers judge the English subtest items of the 2009 and 2010 Psychometry exams as culturally biased?

In response to the first research question, the researcher checked the responses of the teachers, who belonged to five different high schools in the area, to the selected items that were chosen from the 2009 and 2010 Psychometric exams. The analysis of the results indicated that 55% of the items from the two exams were judged alien to the Arab participants. This finding was significant and gave an initial idea about the degree of fairness of the psychometric exam. This contradicted what McGreal (2003) and the Israeli Testing Agency declared in every occasion that the Psychometric exam is for all the citizens in Israel and the exam developers were always alert not to include any item that is considered to be biased against the minority (Israeli Testing Agency). So what made those Arab teachers in the present study identify the unsuitability of several items from the exam to the minority? The answer was obvious as those teachers belonged to the minority and they were close to the minority needs more than anyone else. What was missing within the Israeli judgment was the exclusion by exam developers of the minority who could help in constructing an exam which would be to an extent a fair exam. So when those teachers asserted the presence of bias in the selected items for the Arab examinees' culture, this could lead to invalid results and that is similar to what researchers like Brescia & Fortune (1988) came up with in their research when they emphasized that the presence of bias caused invalid results. Also, Whiting & Ford, (2006) as well as Hamblen & Rodgers, 2011 emphasized that the exam developers should take the examinees' culture into account when they construct the exam. Rosenblum (2010) demonstrated that there was cultural deviation between the Arabs and Israelis and that determined the consistent gap between them. So when scrutinizing an exam, the most important thing was to involve judges from different ethnic backgrounds and so the researcher of the present study asked some Arab English teachers to be involved in selecting the biased items and that method was in line with detecting bias in the WISC-R exam that

ascertained bias in some of the given items when some judges from the other ethnic groups shared in that mission (Sandoval & Millie, 1980).

To sum up, the Psychometric exam held the possibility of including some items that are unfair to the minority as any standardized exam as was determined by some teachers from the minority who teach English. These teachers were aware of the students' needs and so it was clear for them to identify items in the exam which looked strange and out of the students' experience. So, it is time for the Testing Israeli agency to admit that the psychometric exam is not a fair one and it contains cultural bias toward the minority in Israel when teachers who were in the field found that more than 50% of the exam contained culturally biased items .

5.2.2 Question 2:

To what extent do the participants of both groups (Arabs and Israelis) judge the English subtest items of the 2009 and 2010 Psychometry exams as culturally biased?

Dealing with the participants' attitudes toward the selected items from the English subtest items of the Psychometric exams of 2009 and 2010, the results revealed that the Arabs' responses showed a big difficulty in recognizing the items and considered them unfamiliar to their knowledge and culture more than the Israelis. The percentage of biased items as asserted by the Arab participants in the two mentioned exams was 73% while the percentage of biased items shown by the Israeli participants was 37% (Table 12). These results were given with high consistency according to Cronbach alpha coefficient which was 0.902 (Table 11). Besides, the t-Test was performed to check the relevance between the Arab and Israeli participants' views about those items whether they identified them as familiar items to their knowledge and culture. What was concluded from those responses was that there was a significant difference in their attitude towards the items. The mean value of the

Israeli participants was (3.02-3.43) while the mean value of the Arab ones was (2.05-2.56). The difference in attitudes toward the exam items determined difficulty in answering those items and that was performed again by T-test and the mean value of the Israeli participants was 2.74 while the mean value for the Arabs was 3.84 that proved a privilege to one group 'the Israeli' over the other 'Arabs' (see Table 13). What was found in the results of the recent study was in line with other researchers' views like William & Samuda (1975) and Goldman (1980) toward considering the psychometric exam as being biased toward the minority in usage and content. These researchers stressed that this type of exam is responsible for the small number of Arabs who attended the Israeli universities yearly. Interestingly, a number of researchers such as Lewis (1979), Stabl (1977), Kleinberger (1969) and Berman (1985) had the same attitudes toward the exam as it is a burden on the Arab examinees and it reduces their chances to join the Israeli universities. So that explained the small number of Arabs who joined the Ben Gurion university from the recent sample compared to the larger number of the same group who joined Kaye college. The admission conditions of the Kaye college are easier in term of the psychometric exam scores; however, the candidates suffer from the limited number of faculties and specialties in this college in addition to the fact that this college is mainly a teachers' preparing college which limits again their possibilities of getting other chances for other jobs. Besides, these findings were similar to studies which were conducted on some standardized tests like TOEFL, SAT and PAT which were established as placement tests to obtain a seat in colleges or for jobs. The results of the current study go for proving the bias dimension of the standardized Psychometric exam toward the minority and this matches Thamzil's (2008) results that considered the TOEFL exam as being biased toward minorities as well as Freedle (2002), Young (2003), Chen & Henning (1985), Rammohan (2007), the Harvard University (2010) and Farhady (1979) results in the SAT

exam. Similar to the results of the current study, Beck & Ross (1983) considered the standardized exam PAT- RC & RV biased against the minority.

However, the results of the current research negate other studies about the psychometric exam which were conducted by Israeli researchers like Zeidner (1986) and Shakhar (1983) whose results claimed that the Psychometric exam does not hold any cultural bias toward the Arab minority. Both of them neglected that the Arabs' condition in the case of the Psychometric exam was similar to what minorities faced in handling the items in the other International standardized tests since all of these exams were directed to the examinees from the majority group neglecting the needs of the other minorities. The psychometric exam focused in its structure and content on the Israeli examinees who represent the majority, and whose style of living, education and other aspects of life relate to a Western culture. This point was asserted by the Israeli researcher Zeidner (1986) himself. Consequently, this culture is totally irrelevant to the Arab minority and so this exam excludes their needs and culture and causes difficulty in answering its items and that leads to poor performance on their side.

To sum up, the previous discussion proves that the Psychometric exam favors the examinees from the majority group over the minority, and deprives the minority group from having a fair exam which states their needs into account.

5.2.3 Question 3:

To what level do the differences in the educational background between Arab and Israeli participants influence their attitude toward the Psychometry test items?

After analyzing the data collected from the participants in the second questionnaire and the interviews which were held with some tutors who conduct coaching courses to

students to prepare them for the exam, the results showed that the Arab participants suffer from inconvenient educational surroundings and live within a poor educational environment. That was demonstrated by the gap that was found between the two groups of participants in the educational background in terms of several issues. First, the participants' results in the Bagrut exam (Table 8) showed that the average score of the Arab participants was 78% with a standard deviation of 8 points of dispersion between the scores while the Israeli participants showed a higher average in their scores which was 89% and a lower range of dispersion in the distribution of their grades that was 5.5 points. This gap between the two groups that resulted in the current study goes with Lithwick's (2000) study which reveals that the gap between the two groups in this case seems to be consistent.

On a different dimension, the researcher shed light on the status of learning English in schools in both sectors, the Arabs and the Israelis, to show the unequal teaching and learning opportunities that surround the Arab learners. Results showed that all the Israeli participants learned English as a second language while the Arab participants learned it as a third language. This shows some degree of unfairness as the Arab participants' burden of learning is bigger than their Israeli counterparts. So, was it fair that both learners are exposed to the same exam while the surrounding circumstances were different among them? This issue was discussed by the Israeli researcher (Shohamy, 2001) where she emphasized the same view of the current research.

One more issue that is taken into account is identifying the participants' competence of English at the Psychometric exam which is reflected by the number of times they took the exam for the sake of gaining better scores that enable them to attend the university (Table 13). Results showed that 39% of the Arab participants passed the Psychometric exam from the first time compared to 70% of the Israelis. From a different perspective, 3% of the Arab participants had to sit 4 times for the Psychometric exam until they managed to gain an

acceptable score that enabled them to apply for a college or a university. On the side, none of the Israeli participants needed to sit the same number of times for the same purpose.

Another issue that is important to demonstrate is the relationship between the mother tongue of the participant and target language (English) in terms of the availability of cognates between them. The Israeli learners' original mother tongue (Hebrew) contains a lot of words whose origin is English especially in the language of technology, science, social science and others (Rozental, 2005). This privilege allowed these participants to recognize the vocabulary which were used in the exam better while the Arab learners were deprived of this privilege. Many researchers showed this view in their studies that cognates were shared between English, the exam language, and the examinees' mother language and that contributed to better results (Chen & Henneng, 1985; Sasaki, 1991; Angoff, 1989). Kim (2001) also assured that acquisition of a second language is affected by the nature of L1.

The final issue that helped to reflect the level of the educational background of both groups of participants was school support and that was shown in the participants' attitudes toward learning English at school and the facilities that supplies from school to assist learners for better performance in the exam. Results in table (16) showed that 37% of the Arab participants reflected positive responses toward their schools while 56% of the Israeli participants reported the same attitude. Consequently, the Israeli participants got more attention and support from school more than the Arab participants and that spotted the deficiency in the education system in the Arab sector which should receive the same concern. According to Pearson correlation test (r) which was applied in this study, it revealed that there was a significant difference between the two groups' responses in terms of schooling experience which in turn showed that the higher the school support was, the lower the degree of the exam difficulty was expressed.

Upon the previous findings, the researcher found it important to give a deep explanation for the deficiency in the Arab learners' educational background with the help of some Arab tutors , who were English teachers in the area, and give coaching courses to prepare learners for the Psychometric exam. When they were interviewed for the current research, they reported that the learners' skills who attend those courses were insufficient and so they sit several times for the exam. When they were asked about the reasons behind that deficiency, they reported that the Arab schools were not equipped with items that supported students in the teaching and learning process such as: computers, language labs, dictionaries and others which in turn enrich their knowledge and that conclusion agreed in what researchers Kilbawi (2005), Shaalan (2011), and Lithwick (2000) came up with when dealing with the Arab context in Israel while the Israeli participants belong to an educational background which was rich with technology and that reinforced the examinees' knowledge and helped in recognizing the exam items in a better and easier way.

To assert the previous points, the Arab tutors talked about their experience in dealing with the learners when they finish school and intend to prepare for the exam like supplying them with skills and strategies in dealing with the exam like using the time available in an efficient way, avoiding errors, guessing and deductive reasoning besides familiarizing examinees with the exam structure (Allalouf & Ben Shakhar, 2004). They reported that the Arab learners suffer from the appropriate knowledge of the exam content due to their remoteness from technology and very weak access to modernized facilities (telecommunications and Internet).

The mentioned tutors commented on the big responsibility that schools hold in preparing students for the university and enable them to handle the entrance exam questions properly. All that forced the researcher to introduce more questions that shed light on the quality of education in the Arab sector and the students' background in learning English.

They declared that good quality of teaching and learning help students to pass exams; nothing of that could be achieved in the Arab schools where students were exposed to frontal teaching which reflects the poor quality of teachers who are not trained enough due to financial difficulties. All of the mentioned results were in line with Schmidt & Shohamy (2004) who argued that the good quality of instruction affected students positively. Such training courses could strengthen the teachers' performance because it could equip them with methodologies that contribute to good learning and this kind of training needs funding from the Ministry of Education which does not pay enough attention to the Arab students' needs. For more evidence, the Hebrew University conducted a study in 2005 and confirmed the same results of this study and found out that Israeli schools got three times more financial support than the Arab schools. All of that caused the Arab students to be involved in weak and old fashioned techniques which affect them negatively. Moreover, tutors ascertained that students' different educational and environmental background play an additional big role in the various strategies they adopt to deal with the exam and that, consequently, affects their performance. Some examinees who come from primitive areas do not understand certain items and face difficulty in dealing with these items because they seem to be irrelevant to their culture and belong to a different one. On the other hand, their peers who come from non-rural areas, who have many and varied facilities of life, can easily understand the items that are relevant to their surrounding world. Accordingly, ignorance and lack of exposure to modern life facilities and technology have a negative effect on the performance of the other groups in such test. That explanation came in agreement with several researchers like Anderson (1976), Spiro (1975) and Samuda (1975) who emphasized that the different backgrounds meant unequal opportunities of learning and teaching; thus caused examinees from different groups to score differently in the exam. That emphasis was in line with the results of Farhady (1979) in his case study that the different backgrounds of examinees affect their scores. As the participants

of the current study come from different educational, linguistic, cultural backgrounds and in their different aspects of life, the results of the current study came to match those of previous researchers mentioned above. This is proved also by what Lithwick (2000) reported that the Arab schools suffer from the ignorance of the Ministry of Education in helping the Arab students to be more proficient. The Israeli government is concerned with the higher education in the Israeli context by supplying high school students with programs and even jobs to prepare them for studying at universities. Such programs include volunteering, academic camps, academic clubs and all of this can connect the students to the academic atmosphere which may positively affect their performance.

In conclusion, reviewing the previous analysis and discussion around the participants' educational background proves that there was a big difference between the two groups which counts for the claim that the Psychometric exam does not correspond to all participants' needs; therefore judged as a biased test.

5.2.4 Question 4:

To what level do the differences in the socioeconomic status between Arab and Israeli participants influence their attitude toward the Psychometry test items?

In order to investigate the fourth question of the research, the current study included a number of questions in the distributed questionnaire that focused on the participants' socioeconomic status, which includes the examinees' parents' level of literacy and family economy. The participants' responses showed a big gap between the Arab participants' social and economic status in comparison with the Israeli ones. When looking precisely at the given responses it seemed that the Arab participants belonged to poor socioeconomic status. Their parents suffered from ignorance and unemployment. It was noticed that many Arab

participants' parents were unemployed and their standard of living was low (see Tables 20, 21 and 22) Results showed that approximately 50% of the Arab participants parents were unemployed. And when talking about the monthly income of the participants, results showed that 78% of the Israeli participants were in the scale of the families whose monthly income was over 10000 shekels while the percentage of the Arab participants who related to the same scale was 9%. On the other hand the percentage of the Arab participants who were in the scale of the families whose monthly income was less than 5000 shekels while it was just 9.8% from the Israeli parts. Accordingly, the Arab participants suffer from poverty when comparing them to their counterparts from the Israeli side. When applying F test, results showed that whenever the economic status of the participants was better, their performance would be better. These circumstances affected the Arab students' attitude toward the psychometric exam in general and they found it difficult as this exam includes questions that relate to subjects that deal with modern life which they are far away from due to their poor environment at home and at school. Many studies were in the same line of the current study (McDiarmid, 1972; Onzima, 2010; Lara-Cinisomo et al, 2004; Naralou et al, 2006). In addition, several other studies emphasized the importance of the socioeconomic status on good or bad performance of the examinees (Department of Education and Training, 2005; Blevins, 2009; Harding University, 2002). When dealing with the Israeli scene, an empirical study held by Yagov and Ayalon, (2000) also came up with the same conclusion.

Parents' level of education is another indication which identifies the learners' socioeconomic status and has a big influence on the students' performance. The current study showed that a small number of the Arab parents were educated while the majority of the Israeli parents had a university degree (see Tables 17 & 18). Parents who earned education contributed for good performance of their children as they will be able to help their children in homework and in providing them with computer skills. Unfortunately, Arab

parents in the south, the setting of the current study, belong to the illiterate group and all of that would have a negative effect on the students education which means that they would not get any help from their parents in school learning. Accordingly the above discussion proved a significant degree of surpass of the Israeli examinees over the Arab ones which consequently determined the impropriety of the Psychometric exam toward the weaker group, the Arabs in the current case, and that again proves a level of bias in the exam.

Upon discussing the socioeconomic and the educational backgrounds of the two groups, the researcher adopted the multiple coefficient test to analyze the regression between the different variables and to show the relation between all the participants' educational background and their socioeconomic status on one side and their attitudes toward the selected exam items on the other (Table 23). Results showed that there was a significant positive relationship between the educational background and socioeconomic status of the participants and their perception toward the exam items. Therefore, the higher the degree of educational or socioeconomic background was, the more familiar and easier the selected exam items became for the participants and that was the case of the Israeli participants. However, there was a negative influence of the educational background, socioeconomic status on the perception or view of cultural bias when relating to the Arab participants, the focus of the current study, and that caused their responses on the selected items in the distributed questionnaires to be negative. The findings of the current study came in line with the findings of Barry (2005), Saifi & Mehmood (2011), who proved a significant correlation between the students' socioeconomic status and educational background and performance. So, whenever learners belong to families in which the parents are well educated, their achievement in school becomes better which in turn affects their performance in exams. Thus, the researcher considered the two previously mentioned points (poor socioeconomic background and poor

educational background) as major factors beyond the Arab examinees' poor performance in the Psychometric exam.

In a comprehensive view, one can notice the less comfort the Arab learners experience in the exam due to the mentioned factors as well as their ignorance of the content of the items since they connect to the culture of the majority and not to theirs. All these factors have a bad impact on handling the exam items properly and so all of those factors lead to poor performance in the exam in general.

5.3 Recommendations:

With reference to the difficulty that Arab students face in school and in the psychometric exam, it is urgent to find appropriate ways to detect such difficulties and to offer solutions that help these students to perform better in the exam, and be able to join university accordingly. Besides, it is essential to motivate all those who are responsible for the admission of the examinees, especially the examinees from the minority, to take into account the personal, cultural, social and other factors that may affect the performance of the minority and may deprive its members of their right to be admitted to the universities in their country and not to be obliged to study abroad or to select colleges that lack their preferred specialties. Therefore, a great effort is made in the current study to supply readers and all concerned people with the following recommendations:

1. Textbooks in their form and content reflect the dominant group's own culture and ignore the subgroups. To solve this problem there should be coordination between the curriculum developers and the children's parents councils, so the system includes cultures of these minorities as psychologists consider the mismatch between the curriculum in school and the level of development for the child as a main cause of deficiency (Owens, 1995) and to include these issues in exams and so the minority

will feel more secure when the exam assures the equal representation of culture and does not depend only on the culture of the majority. Eels et al (1951) say that it is important for the educators to make a balance between what their students bring with them and what they take away.

2. Statistical procedures must be applied which take into account the required demographic data about test takers, their scores, and also their responses on each item. This can be done on a sample of examinees before the official test. The developers of the test should collect data about all the consequences including the test takers. Shohamy (2001) regarded it important "to ensure that a testing method is conducted legally, ethnically, and with due regard to the welfare of tested individuals as well as those affected by test results" (p. 121)
3. To establish a forum task which is professional in designing Psychometry examination, and to change the preparation methodology applied for the sake of gaining efficient support for the Arab learners.
4. To involve some Arab experts and professionals in writing the exam, so as to overcome any item that includes cultural bias and this requires pressure from all the educators and Arab media to raise this issue permanently.
5. To eliminate bias. Test developers can give open-ended tests that help students express their own knowledge and justify their answers. Furthermore, when any question or topic in standardized tests is noticed to be biased, it should be reported to school officials or even to the testing agency. Teachers are aware of these issues as they interact with students daily and that can make a difference (Scotton, 1983).
6. To provide schools in the Arab sector with qualified teachers who supply students with methods that cope with the demands of the exam and computers that can help the

learners in acquiring knowledge and modernization. All of that is the responsibility of the ministry of education and schools' principals.

7. Another fundamental point which is worth mentioning here is the required time which is given to examinees in order to answer the items in every section in the exam. Speed is considered a skill and it is affected by the style of living that the examinees relate to and so it is affected by the learners' culture (Doran, 1993). In the interviews which were held with some Arab tutors, they emphasized that the Arab students usually face difficulty in answering the items in the allocated time and that is influenced by their life style in terms of speed which is different from the Israeli students whose culture is influenced by the Western community culture (Zeidner, 1986), and this seemed similar when the minority didn't complete the SAT exam at the same rate like the majority in a study held by Doran (1993). Therefore, it is worthwhile to take into consideration, when constructing such an exam, the differences between the different groups in terms of speed by increasing the allotted time for the minority groups or by decreasing the number of questions in each section of the Psychometric exam to match the needs of minority groups.

5.4 Implications:

It is important to conduct intensive research which focuses on this aspect especially from the Arab point of view as ignorance of this topic will push the exam developers to exclude the demands of the minority and keep on ignoring them and all of this may continue to allow less opportunities for the Arab learners to obtain seats at Israeli universities. In addition, the media should concentrate on this fundamental case which should be the focus in every occasion so as to raise this issue for the sake of the Arab learners who seek education abroad and are deprived from their right to study near their homes and families.

5.5 Summary:

The previous chapter included the analysis and discussion related to the research questions and came up with recommendations that may help in overcoming the difficulty that the Arab examinees face in solving the Psychometric exam items as well as to construct it in a way that takes care of all the examinees from the sub groups. Besides, it included implications that can help extended research on this significant topic.

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APPENDICES

Appendix 1:

Tutors' Interview:

Q1. What skills do you usually teach in the coaching courses?

Q2. How much does the course cost?

Q3. What is the most difficult section in the Psychometry exam for students?

Q4. Do participants attend the course more than once?

Q5. How do students react when dealing with speed in answering the exam items?

Q6. To what extent do these courses guarantee the participants' success in the exam?

Q7. Do you believe that the English subtest in the Psychometric exam is difficult to learners?

Q8. What makes the English subtest in the Psychometric exam a difficult one?

Q9. Does the students' school experience affect their achievement in the Psychometry exam?

Appendix 2: The English version of the demographic questionnaire

Demographic Questionnaire

This questionnaire is designed to study the factors that affect students' achievements in the English section of the Psychometry test. The data obtained from this questionnaire will be only used for study purposes. Therefore, I hope that you provide me with clear and vivid answers with utmost transparency to the questions of the questionnaire.

Section I: Social Factors

Please answer the following questions about yourself:

1. Age: a. (16-20) b. (21-24) c. (25 and above)
2. Gender: Male Female
3. Social status:
 - a. single b. married c. divorced d. widow
4. Average of Bagrut English tests: _____
5. Number of family members: _____
6. Place of residence: _____
7. Father's education level :
 - a. illiterate b. Elementary/ Preparatory c. Secondary d. High education
8. Mother's education level:
 - a. illiterate b. Elementary/ Preparatory c. Secondary d. High education
9. Does your father work: a. Yes b. No
10. Father's job: _____
11. Does your mother work: a. Yes b. No
12. Mother's job: _____
13. Have you ever sat for a Psychometry test: a. Yes b. No

If your answer is "YES", go on with the following questions. If your answer is "NO" skip questions (14) and move to question (15).

14. How many times did you do the Psychometry test? _____

15. Which year(s) did you do the Psychometry test? _____

CIRCLE THE ANSWER THAT FITS YOU IN THE NEXT TWO QUESTIONS:

16. How do you evaluate your economic status?

- a. Good b. Moderate c. bad

17. Approximate total family income in NIS:

- a. Less than (5000) b. Between (5000-10000) c. More than (10000)

Section II: Schooling Factors

CIRCLE THE ANSWER THAT FITS YOU IN THE FOLLOWING QUESTION:

18. I learned English at school as a ...

- a. 1st language b. 2nd language c. 3rd language

FOR THE FOLLOWING QUESTIONS TICK (✓) THE ANSWER THAT FITS YOUR CHOICE:

The numbers from 1-5 are given in the table to express the following responses:

- 1. Strongly Agree 2. Agree 3. No comment 4. Disagree 5. Strongly Disagree*

	1	2	3	4	5
19. The methodology used in teaching English at school helps the student to succeed.					
20. Schools provide students with preparation courses for the Psychometry test.					
21. My success in the Bagrut English test helps me to succeed in the Psychometry test.					

Section III: Psychometry English-section-Related Factors

FOR THE FOLLOWING QUESTIONS TICK (✓) THE ANSWER THAT FITS YOUR

CHOICE:

The numbers from 1-5 are given in the table to express the following responses:

1. Strongly Agree 2. Agree 3. No comment 4. Disagree 5. Strongly Disagree

	1	2	3	4	5
22. The results of the English section of the Psychometry test determines the students' choice of their major at the universities.					
23. The English section of the Psychometry test is the most difficult.					
24. The English section of the Psychometry test is more difficult than the English Bagrut test.					
25. The English section of the Psychometry test deals with topics that are irrelevant to my own culture.					
26. To be able to succeed in the Psychometry test, one should have good mental abilities.					
27. The time given to the English section in the Psychometry test is sufficient.					
28. The instructions given in the English section of the Psychometry test are clear and easy to understand.					
29. The reading comprehension questions are scaled from the easiest to the most difficult.					

Thanks!

Appendix 3: The Arabic version of the demographic questionnaire

ما هو رأيك؟؟؟

بفرع اللغة الإنجليزية بامتحان البسيخومتري

تهدف هذه الاستمارة لدراسة العوامل المؤثرة إيجابياً أو سلبياً على تحصيل الطلاب في امتحان البسيخومتري في القسم الخاص باللغة الانجليزية من الامتحان. وستستخدم البيانات التي تتناولها هذه الاستمارة لغرض البحث فقط. لذا نرجو منكم التعاون معنا في الإجابة بوضوح وشفافية على الأسئلة المدونة أدناه.

القسم الأول:- أسئلة خاصة بالعوامل الاجتماعية:

1. العمر: أ - (20-16) ب - (24-21) ج - (25 - فما فوق)

2. - الجنس: ذكر انثى

3. الحالة الاجتماعية:
أ- أعزب ب- متزوج ج- مطلق د- أرمل

4. معدل اللغة الانجليزية في البجروت هو: _____

5. عدد الإخوة و الأخوات: _____

6. مكان السكن: _____

7. مستوى تعليم الأب:

أ- تعليم عالي ب - مرحلة ثانوية ج - مرحلة الزامية د - غير متعلم

8. مستوى تعليم الأم:

أ - تعليم عالي ب - مرحلة ثانوية ج - مرحلة الزامية د - غير متعلمة

9. هل يعمل الأب: أ- نعم ب- لا
10. ما هو عمل الأب: _____
11. هل تعمل الأم: أ- نعم ب- لا
12. ما هو عمل الأم: _____
13. تقدمت لامتحان بـسيخومتري مسبقاً: أ- نعم ب- لا
- إذا كانت إجابتك "نعم" أجب عن سؤال (14). أما إذا كانت إجابتك "لا" فانتقل إلى سؤال رقم (15).
14. كم مرة تقدمت لامتحان البسيخومتري: _____
15. في أي سنة/ سنوات تقدمت لامتحانات البسيخومتري: _____

أحط بدائرة حول الإجابة الملائمة:

16. الحالة الاقتصادية: أ- جيدة ب- متوسطة ج- سيئة
17. الدخل الكلي للعائلة بالشيكل:

أ. أقل من (5000) ب- (5000 - 10,000) ج- أكثر من (10,000)

القسم الثاني:- أسئلة خاصة بالعوامل التعليمية المدرسية:

أحط بدائرة رمز العبارة التي تعبر عن إجابتك:

18. تعلمت اللغة الإنجليزية في المدرسة كلغة: أ- أولى ب- ثانية ج- ثالثة

في الأسئلة (16-18) نرجو منكم وضع إشارة (✓) تحت رقم الإجابة التي تناسبكم والمتدرجة من

5-1 حسب التوزيع التالي:

1. موافق جداً 2. موافق 3. لا أدرى 4. لا أوافق 5. لا أوافق بشدة

5	4	3	2	1	
					19. طريقة تعليم مادة الإنجليزي بالمدرسة تساعد على نجاح الطالب
					20. المدرسة تقدم دورات تحضيرية للامتحان
					21. نجاحي في امتحان اللغة الانجليزية في البجروت يؤدي لنجاحي في امتحان البسيخومتري.

القسم الثالث:- أسئلة خاصة بقسم اللغة الانجليزية في امتحان البسيخومتري:

نرجو منكم وضع إشارة (✓) تحت رقم الإجابة التي تناسبكم والمرتجة من 1-5 حسب التوزيع

التالي:

1. موافق جداً 2. موافق 3. لا أدرى 4. لا أوافق 5. لا أوافق بشدة

5	4	3	2	1	
					22. تحدد نتيجة قسم الانجليزية في امتحان البسيخومتري مستقبل الطالب من ناحية اختيار التخصص الجامعي
					23. قسم اللغة الإنجليزية هو الأصعب في امتحان البسيخومتري
					24. قسم الإنجليزي في البسيخومتري أصعب من امتحان بجروت اللغة الإنجليزية

					25. يتناول قسم الإنجليزي في البسيخومتري مواضيع لا تتعلق بثقافتني
					26. حتى تنجح في البسيخومتري يجب أن يكون عندك قدرات عقلية جيدة
					27. الوقت المعطى لقسم الإنجليزي في البسيخومتري هو وقت كافٍ.
					28. التعليمات والتوجيهات الموجودة في القسم الإنجليزي من امتحان البسيخومتري واضحة ومفهومة للطالب
					29. تدرج أسئلة فهم المقروء في القسم الإنجليزي من امتحان البسيخومتري من الأسهل إلى الأصعب

شكراً لتعاونكم

Appendix 4: The Hebrew version of the demographic questionnaire

מה דעתך ??? ???בחלק האנגלי במבחן הפסיכומטרי

טופס זה נועד לבחון את הגורמים החיוביים ו/או השליליים המשפיעים על הישגי התלמידים בבחינה הפסיכומטרית בחלק האנגלית של הבחינה. יש לציין ששאלון זה הינו אנונימי ותוצאותיו ישמשו לצורך המחקר המדעי הזה בלבד. לכן בבקשה לשתף איתנו פעולה ולענות באופן ברור ושקוף על השאלות המפורטות להלן.

חלק ראשון: - שאלות ספציפיות על גורמים חברתיים:

1- גיל: א- (16-20) ב- (21-24) ג- (25 ולמעלה)

2- מין: א- זכר ב- נקבה.

3- מצב משפחתי:

א- רווק ב- נשוי ג- גרוש ד- אלמן.

4- ממוצע ציון אנגלית בבגרות הוא: _____.

5- מס' אחים ואחיות: _____.

6- מקום מגורים: _____.

7- השכלת האב:

א- אינו משכיל ב- יסודי ג- תיכון ד- אקדמאי.

8- השכלת האם:

א- אינה משכילה ב- יסודי ג- תיכון ד- אקדמאית.

9- האם האבא עובד: א- כן ב- לא.

10- מקצוע האב: _____.

11- האם האימא עובדת: א- כן ב- לא.

12- מקצוע האם: _____.

13- האם ניגשת לבחינת הפסיכומטרי בעבר: א- כן ב- לא.

אם תשובתך (כן) תמשיך לשאלה (14), אם תשובתך (לא) תעבור לשאלה (15)

14- כמה פעמים ניגשת לבחינת הפסיכומטרי: _____.

15- באיזו שנה \ שנים ניגשת לבחינת הפסיכומטרי: _____

ציין בעיגול את התשובה הכי מתאימה:-

16- המצב הכלכלי: א- טוב ב- ממוצע ג- לא טוב.

17- סך ההכנסות למשפחה בש"ח:

א- פחות מ- (5000) ב- (5000-10,000) ג- יותר מ- 10,000.

חלק שני:- שאלות ספציפיות על גורמים לימודיים:

ציין בעיגול את התשובה המשקפת את דעתך:

18- למדתי את השפה האנגלית בבית הספר כשפה: א) ראשונה ב) שנייה

ג) שלישית.

בשאלות (19-21) נבקש ממך לסמן (✓) מתחת לתשובה המתאימה בסקאלה מ-

5-1:

1. מסכים מאוד 2. מסכים 3. לא יוד 4. לא מסכים 5. לא מסכים

בכלל

5	4	3	2	1	
					19. השיטה שבה מלמדים את חומר האנגלית בבית הספר תורמת להצלחת התלמיד
					20. בית הספר מציע קורסי הכנה לבחינת הפסיכומטרי
					21. אם אני מצליח בבחינת הבגרות באנגלית גם אצליח בבחינת הפסיכומטרי

חלק שלישי:- שאלות ספציפיות בנושא בחינת האנגלית בפסיכומטרי.

סמן ב () מתחת לתשובה המתאימה לך בסקאלה מ-1-5:

5. לא מסכים 4. לא מסכים 3. לא יודע 2. מסכים 1. מסכים מאוד

בכלל

5	4	3	2	1	
					22. התוצאה של חלק האנגלית בפסיכומטרי קובעת את עתידו של התלמיד מבחינת מקצוע ההתמחות שלו באוניברסיטה.
					23. חלק השפה האנגלית בבחינת הפסיכומטרי הוא החלק הכי קשה בבחינה.
					24. חלק השפה האנגלית בבחינת הפסיכומטרי הוא יותר קשה מבחינת הבגרות באנגלית.
					25. בחלק האנגלית בבחינת הפסיכומטרי יש שאלות שאינם קשורות לתרבות שלי.
					26. כדי להצליח בבחינת הפסיכומטרי אני חייב/ת להיות בעל/ת יכולות שכליות טובות.
					27. הזמן הנתון לחלק האנגלית בבחינת הפסיכומטרי הוא זמן מספיק.
					28. ההנחיות וההוראות של חלק האנגלית בבחינת הפסיכומטרי הם ברורים ומובנים.
					29. שאלות הבנת הנקרא בחלק האנגלית בבחינת הפסיכומטרי מתחילים מהשאלות הקלות לשאלות היותר קשות.

-

תודה על שיתוף הפעולה והשתתפותך.

Appendix 5:

To What Extent Am I Familiar to the Psychometric Exam English Items

This questionnaire aims to investigate whether the participants find the items of English section of the Psychometry exams of the years 2009 2010 familiar to their knowledge and culture.

2009 Psychometry Test Items:

Please, read these items carefully and respond to them honestly for the purpose of obtaining scientific and objective results. Put a tick next the answer that fits your choice.

Answers which are given in the table range from 1-5 to express the following responses:

1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, 5 = strongly disagree

	Sentence completion items	1	2	3	4	5
A	The city of Delft is <u>famous</u> for the blue and white pottery that has been made there for hundreds of years.					
B	The wood of the granadilla tree, a <u>rare</u> species found only in a few areas of the rainforest, is used to make certain wind instruments such as clarinets and oboes.					
C	Edward Hoppers painting express the loneliness and <u>alienation</u> felt by many people living in large American cities.					
D	The Olmec is considered the mother culture of Mesoamerica; all <u>subsequent</u> cultures that developed in the region drew heavily upon Olmec religion architecture, and art.					
E	The dissection of cadavers at the universities of Padua and Bologna during the fifteenth century <u>led to</u> important discoveries in anatomy.					
F	Belarus was part of the Soviet Union an <u>independent</u> republic in 1999.					
G	Tachycardia is a medical <u>condition</u> which characterized by an unusually fast and often irregular heartbeat.					
H	In an <u>attempt</u> to reduce pollution, the Dutch government is encouraging public transport companies to use a new kind of fuel.					
I	Rembrandt is considered one of the greatest painters in the history of Western <u>art</u> .					

J	Some Octopuses have a remarkable ability to <u>mimic</u> other marine animals by assuming the shape, color and texture of the animal they are imitating.					
K	While most plants cannot grow in salty soil, halophytes, such as sea lavender, <u>thrive</u> in it.					
L	In the 19 th century, there were so many buffalo in the American West that no one could imagine that they would somebody <u>disappear</u> .					
M	Used dry-cell batteries should not be thrown into the garbage, but <u>deposited in</u> special containers.					

	Restatement Section	1	2	3	4	5
A	Although the economy of almost every other country involved in world war II was devastated during the war, America's grew by an average of %10 annually during that time.					
B	Mountains are shaped by the movement of the vast tectonic plates that constitute the earth's exterior, as well as by climatic conditions and erosion.					
C	The Gettysburg Address in Abraham Lincoln's most famous speech.					
D	The question of when people first reached the Americas has been vigorously debated among anthropologists for years, yet only now is significant attention being paid to what the lives of these early inhabitants were actually like.					
E	The derision and scorn that Indian writer Nirad Chaudhuri was subjected to in his native country embittered him surprisingly little.					
F	Educators claim that immersion in a second language not only provides children with fluency in another tongue, but also promotes memory and reasoning skills.					
G	A recent study has confirmed a relationship that had long been suspected: In the United States, cockroaches are the leading cause of Asthma in children living in inner cities.					
H	While the precise cause of the mental illness Schizophrenia is not known, the disorder has a biological basis.					

The following topics appeared in the English section of the Psychometry test of the year 2009. Read the topics below and tick the appropriate answer to show the level of familiarity of these items to you:

1 = strongly familiar, 2 = familiar, 3 = I don't know, 4 = unfamiliar, 5 = strongly unfamiliar

Reading Comprehension		1	2	3	4	5
A	The boycott of buses by Black Americans in 1955 led by a black woman called Rosa Parks.					

End of 2009 Section

2010 Psychometry Test Items:

Please, read these items carefully and respond to them honestly for the purpose of obtaining scientific and objective results. Put a tick next the answer that fits your choice.

Answers which are given in the table range from 1-5 to express the following responses:

1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, 5 = strongly disagree

Sentence completion items		1	2	3	4	5
A	Because photographer Henri Cartier Bresson wished to be unseen observer, he covered the bright chromium parts of his camera with black tape to render it less <u>conspicuous</u> .					
B	Soft metals are frequently <u>combined with</u> harder metals to make them stronger and more useful.					
C	By 1715, the Italian states had lost much of the political and economic power they had <u>enjoyed</u> during the renaissance.					
D	Drought and the resulting <u>decline</u> in crop yields have forced many families in Ethiopia to leave their villages in search of more fertile land.					
E	The grey wolf, which once lived in forest <u>throughout</u> the Northern hemisphere, is now found in relatively few places.					
F	Viewers accustomed to representational paintings are often <u>baffled</u> by abstract art.					
G	Although genetic mutations are usually harmful, they can sometimes be <u>advantageous</u> .					
H	Street vendors cooking over open coal fires are a common <u>sight</u> in India.					
I	In ancient Greece, women who wanted to attend academic institutions had to <u>disguise</u> themselves as men.					
J	The Akkadians believed that if a person became ill it was his or					

	her own <u>fault</u> for having sinned against the gods.					
K	Although gambling is very popular in China, the governments <u>policy</u> is to denounce it as a capitalist evil.					
L	New medical advances are <u>enabling</u> chronically ill children to receive treatment at home rather than in the hospital.					

	Restatement Section	1	2	3	4	5
A	The Koala must live in an area where eucalyptus trees grow, because their leaves are its only food.					
B	The initial rules of Babylonia were not the Semites but the Sumerians, whose origins are unknown.					
C	During the century and a half before the center of musical activities in Europe shifted to Vienna, the orchestras and choruses and Venice were the most highly esteemed in all of Europe.					
D	Sri Lanka's %90 literacy rate is among the highest in Southern Asia.					
E	With the help of hitherto undiscovered documents, Jean Strouse has written a new and comprehensive account of Shakespeare's life.					
F	With the exception of China, the world's most populous nations are all home to a wide variety of cultures and ethnic groups.					
G	Seventeenth century Dutch artist Johannes Vermeer worked as a painstakingly slow pace on his own paintings and supported his large family by buying and selling the painting of other artists.					
H	Henry IV, King of France, could hardly have reinstated law and order had the nation not been ready for this.					
I	Legends of American tycoon John Pierpont Morgan's ruthlessness far outnumber those of his benevolence.					
J	In the eighteenth century a visitor to Charleston commented that, in grandeur and splendor, its buildings surpassed all others he had seen in America.					
K	As the Dutch settlers who founded Cape Town in South Africa attempted to expand their domain, they frequently clashed with the indigenous people.					

The following topics appeared in the English parts of the Psychometry test of the year 2010. Read the topics below and tick the appropriate answer to show the level of familiarity of these items to you:

1 = strongly familiar, 2 = familiar, 3 = I don't know, 4 = unfamiliar, 5 = strongly unfamiliar

	Reading Comprehension	1	2	3	4	5
A	W. L. Mackenzie King the prime minister of Canada.					

Appendix 6: Psychometric Exam (2009): English Section

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SECTION 2: ENGLISH

This section contains 27 questions.
The time allotted is 25 minutes.

The following section contains three types of questions: Sentence Completion, Restatement and Reading Comprehension. Each question is followed by four possible responses. Choose the response **which best answers the question** and mark its number in the appropriate place on the answer sheet.

Sentence Completions (Questions 1-11)

This part consists of sentences with a word or words missing in each. For each question, choose the answer **which best completes the sentence**.

1. It is difficult to ____ a life without electricity, films and airplanes.
(1) order (2) imagine (3) commit (4) complete

2. The ____ of some animals to adjust quickly to new conditions has been a decisive factor in their survival.
(1) activity (2) adoption (3) ability (4) attempt

3. The drug was recently approved as a ____ for patients with high blood pressure.
(1) payment (2) condition (3) motivation (4) treatment

4. He led a life of ____ and luxury.
(1) ease (2) insult (3) welcome (4) anger

5. The word "controversy" suggests a widespread ____ on principles.
(1) disgust (2) disregard (3) discharge (4) disagreement

6. The speaker was so ____ by the audience's lack of attention that he began shouting at them.
(1) disliked (2) annoyed (3) unwanted (4) boring

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7. Law enforcement agencies are pleased that there has been a ____ decline in drug abuse during the past year.
- (1) sharp (2) wild (3) decreasing (4) discouraging
-
8. The Hittites figure in the Old Testament mainly as one of several tribes ____ Canaan when the Israelites entered it.
- (1) inhabiting (2) disputing (3) persuading (4) conforming
-
9. The finest recipes have been developed by the French, whose culinary expertise is ____ throughout the world.
- (1) acknowledged (2) distributed (3) supported (4) abused
-
10. Army counterintelligence agents uncovered a plot to ____ their government in another country's revolution.
- (1) confuse (2) implicate (3) disturb (4) frustrate
-
11. Wearing ____ disguise and showing a false passport, the escaped prisoner was able to evade detection at the border.
- (1) a suspicious (2) an inadequate (3) a transparent (4) an effective
-

Restatements (Questions 12-17)

This part consists of several sentences, each followed by four possible ways of restating the main idea of that sentence in different words. For each question, choose the one restatement **which best expresses the meaning of the original sentence**.

12. One day, the whole world will recognise the importance of human rights.
- (1) Human rights will eventually be considered important by the whole world.
 (2) One day, everyone will recognise that humans need more important rights.
 (3) Eventually, the problem of human rights will disappear.
 (4) One day, the importance of being right will be recognised by all humans.
-

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13. It is not at all unlikely that such superb craftsmanship should be found in the small unknown village.
- (1) It was unlikely that superb craftsmanship would be found in the small unknown village.
 - (2) The craftsmanship of the small unknown village was not liked.
 - (3) It is not surprising that good craftsmanship is found in the small unknown village.
 - (4) The small unknown village could not find superb craftsmen.
-
14. The calcium added to a number of foods may be beneficial to those without a balanced diet.
- (1) If you don't have a balanced diet, calcium added to foods may help.
 - (2) Adding calcium to a balanced diet is beneficial.
 - (3) Adding calcium to foods sometimes helps people diet.
 - (4) There are a number of foods that have a small amount of calcium.
-
15. Rarely do historians worry about their work becoming outdated within a matter of months or weeks.
- (1) Only rare historians worry about becoming outdated in months or weeks.
 - (2) It does not matter much if the work of a few historians becomes outdated quickly.
 - (3) A matter of months or weeks is rarely worrying to historians.
 - (4) Historians usually do not worry that their work will become outdated quickly.
-
16. Though polio has been more or less eliminated, there have been occasional scattered instances of the disease.
- (1) A few cases of polio occur from time to time despite the fact that the disease has practically been wiped out.
 - (2) There have been more than a few scattered cases of polio in recent outbreaks of the disease.
 - (3) The almost complete elimination of polio has scarcely affected occasional instances of other diseases.
 - (4) Scattered instances have more or less elevated polio to the status of an occasional disease.
-

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17. The child seemed completely at home the moment she came into the house.

- (1) From the minute the child arrived, she felt at home.
- (2) The house became a home when the child entered.
- (3) Only as the child entered the house did she feel at home.
- (4) For a time, the house seemed to her like a complete home.

Reading Comprehension

This part consists of two passages, each followed by several related questions. For each question, **choose the most appropriate answer based on the text.**

Text I (Questions 18-22)

- (1) Although Socrates (470-399 B.C.E.) was an influential philosopher and teacher, he actually wrote nothing. Therefore, we must rely on secondary accounts for information about his life and beliefs. Such accounts, particularly the writings of his most famous pupil and disciple, Plato, make it possible to reconstruct the broad outlines of his career.

Socrates was born in Athens, the son of a stone-cutter. Instead of learning his father's trade, he began early in life to visit the Athenian market-place, where he listened to the intellectuals of the city argue questions of politics, art, morality, and philosophy.

- (10) Before long, he had acquired a reputation as a man of wisdom and had gathered about himself a group of young followers, including Plato, who were attracted by the unusual manner in which he taught. Unlike the sophists – the professional teachers of the day – who were willing to teach anything to anyone for a suitable fee, Socrates claimed to be completely ignorant.
- (15) Instead of attempting to teach in a classroom, he wandered about Athens with his disciples, seeking wisdom by asking questions of everyone he met, including the city's leading politicians, military leaders, artists, and philosophers. As might be expected, under Socrates' questioning many of these experts of Athens proved to be without wisdom.
- (20) Although Socrates' constant search for wisdom and truth won him many loyal followers, it angered those whose ignorance he unmasked. Through their influence in Athens, his enemies succeeded in having him brought to trial and condemned to death. They were unable to silence him, however, for his words live on forever in the Dialogues of Plato.

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Questions

18. According to this text, we know about Socrates' life and beliefs mainly from -
- (1) the writings of one of his followers
 - (2) his own writings
 - (3) the writings of one of the sophists
 - (4) his teachers' writings
-
19. It can be understood that Socrates' method of teaching was based on -
- (1) what his father taught him about business
 - (2) all that he had learned from the sophists
 - (3) his studies in the classroom
 - (4) his experiences in the market-place
-
20. According to the third paragraph, the young disciples of Socrates were attracted by his -
- (1) background as the son of a craftsman
 - (2) similarity to the sophists
 - (3) unusual approach to teaching
 - (4) reputation as a citizen of Athens
-
21. Which of the following did not happen as a result of Socrates' questions?
- (1) He gained knowledge and wisdom.
 - (2) He was offered an important position.
 - (3) He gained many followers.
 - (4) He came to be hated by some people.
-
22. "They" (line 23) refers to -
- (1) loyal followers
 - (2) trial and death
 - (3) Socrates' enemies
 - (4) ignorance and influence

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Text II (Questions 23-27)

- (1) The Pacific Ocean, with an area of about 166 million square kilometers, is by far the largest of the oceans. This area is substantially more than the combined area of all the continents. The Pacific Ocean was named by the Portuguese explorer Ferdinand Magellan. But the ocean is less peaceful than its name suggests.
- (5) Tropical cyclones, called typhoons when they occur in the China Seas, can cause great destruction, as can tsunamis, which are fast-moving waves triggered by earthquakes, volcanic eruptions or landslides on the ocean floor. Tsunamis have caused great loss of life in coastal regions of such countries as Indonesia and Japan.
- (10) The currents of the North Pacific, including the warm Japanese current and the North Pacific Drift (the equivalent of the Gulf Stream in the Atlantic), circulate in a clockwise direction, while the waters of the South Pacific circulate in the opposite direction.
- The first European to approach the Pacific from the Atlantic was Balboa, who
- (15) saw the Pacific after crossing the Isthmus of Panama in 1513. Later, Magellan navigated what was later called the Strait of Magellan. Magellan was followed in 1588 by Sir Francis Drake. In the wake of these explorers came traders and colonizers. Although the Pacific never became as important an ocean highway as the North Atlantic, the opening of the Panama Canal in 1914 greatly increased the
- (20) ocean's commercial importance.

Questions

23. When the author notes that the Pacific is less peaceful than its name suggests (lines 4-5), he means that -
- (1) the conditions in the Pacific can be dangerous
 - (2) many wars have been fought in the Pacific area
 - (3) the Pacific is not as peaceful as the Atlantic
 - (4) the Pacific is more peaceful now than in the past
-
24. According to the first paragraph, tsunamis -
- (1) are strong winds in the China Seas
 - (2) are waves in the Pacific Ocean
 - (3) create movement on the ocean floor
 - (4) is the Japanese name for the Pacific Ocean
-

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25. The North Pacific Drift and the Gulf Stream -

- (1) circulate in opposite directions
- (2) are faster than the waters of the South Pacific
- (3) meet at certain points
- (4) are currents in different oceans

26. The author probably refers to the Atlantic and Pacific as "an ocean highway" (line 18) because -

- (1) there is a great deal of air traffic above the oceans
- (2) once, the only way to travel was by sea
- (3) vehicles travel at great speeds across the oceans
- (4) there is continual traffic across the oceans

27. The author concludes that -

- (1) the Pacific is more important today than it was in the past
- (2) the opening of the Panama Canal decreased the importance of the Pacific
- (3) in recent years, the Atlantic has been used less than the Pacific
- (4) the Pacific will never be as commercial as the Atlantic



אל תהפוך את הדף עד שתקבל הוראה לכך !
Do not turn the page until you are instructed to do so!

2

2

Appendix 7: Psychometric Exam (2010): English Section

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SECTION 5: ENGLISH

This section contains 27 questions.
The time allotted is 25 minutes.

The following section contains three types of questions: Sentence Completion, Restatement and Reading Comprehension. Each question is followed by four possible responses. Choose the response **which best answers the question** and mark its number in the appropriate place on the answer sheet.

Sentence Completions (Questions 1-11)
This part consists of sentences with a word or words missing in each. For each question, choose the answer **which best completes the sentence**.

1. By accident, he ____ the hot metal and burned his hand.
(1) touched (2) posted (3) shot (4) missed

2. Each generation of artists is at some point in revolt against the ____ of its predecessors.
(1) standards (2) exports (3) summaries (4) defenses

3. For more than one hundred years, Singapore was ____ the keystone of British power in the Far East.
(1) recorded (2) considered (3) discounted (4) expanded

4. At last, the moment came ____ the opera singer to go on stage.
(1) near (2) for (3) to (4) by

5. Although they are good friends, their political opinions are ____ different.
(1) radically (2) simultaneously (3) eventually (4) instantly

6. Industrial development in the town is carefully controlled so as to ____ its rural character.
(1) separate (2) alter (3) maintain (4) measure

▶ go on to the next page המשך לעמוד הבא ▶

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5

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(2E-7EN3083)

5

7. Experiments on problem solving have told us much about the tasks children can ____ and the conditions that help or hinder them.

(1) endure (2) perform (3) relate (4) occupy

5

8. It is possible that Leonardo da Vinci ____ his investigations and experiments simply to quench his insatiable curiosity.

(1) bypassed (2) undertook (3) upset (4) overcame

5

9. When a supertanker ran aground, spewing crude oil into one of Alaska's bays, environmentalists feared that the beautiful waters would never ____ .

(1) recruit (2) relapse (3) recover (4) rejoin

5

10. War and peace are mutually exclusive states, ____ "a war to preserve peace" is not a paradox, but a contradiction in terms.

(1) unless (2) while (3) even though (4) so that

11. Too inhibited to express his opinion openly, the legislator dissented ____ and voted with the majority.

(1) clearly (2) silently (3) joyfully (4) conventionally

5

Restatements (Questions 12-17)

This part consists of several sentences, each followed by four possible ways of restating the main idea of that sentence in different words. For each question, choose the one restatement **which best expresses the meaning of the original sentence**.

12. The trip is not without danger.

(1) The trip is probably safe.
 (2) The trip is very dangerous.
 (3) There is some danger involved in the trip.
 (4) Since it is not dangerous, the trip can be completed safely.

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(2E-7EN3083)

5

17. In a society changing at such a rapid pace, we no sooner arrive at a tentative characterization of a generation than we become aware that our generalization is no longer valid.

- (1) We cannot form even tentative generalizations soon after changes occur in society.
- (2) We become aware that our generalization is invalid a long time after we form our first conclusions.
- (3) A generalization can only be tentatively characterized because of rapid changes in society.
- (4) Rapid changes in society prevent us from forming generalizations of lasting validity.

5

Reading Comprehension

This part consists of two passages, each followed by several related questions. For each question, **choose the most appropriate answer based on the text.**

5

Text I (Questions 18-22)

- (1) One night, just over a hundred years ago, the French poet, novelist and playwright, Victor Hugo, went to the opera. He went to see the opera *Rigoletto*, adapted from one of his plays, with music composed by the Italian composer, Giuseppe Verdi. Hugo had not been involved in the process of turning the play into an opera and he was naturally curious to see what had happened to his play. So he went to see *Rigoletto* and what fascinated him most was the quartet that was performed in the last act. The quartet fascinates most people because it is a fine piece of music; but it caught Hugo's attention because it emphasized the difference in stagecraft technique between his play and Verdi's opera.
- (5)
- (10) In Hugo's play, the various speeches of the four characters are presented one after another. Thus, it takes a quarter of an hour for the characters to perform their roles in the most dramatic scene of the play. In contrast, Verdi's quartet managed to present the whole situation with all four characters expressing their widely different emotions at the same time. The music was able to condense the whole emotional scene from fifteen minutes to three.
- (15)

5

5

This is one of the chief features of opera: the composer can convey several states of mind in a way that is not possible in words alone. This is as it should be, for music takes over where words leave off.

5

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Questions

18. Hugo went to the opera to - **5**

(1) meet other poets, novelists and playwrights
 (2) hear a new style of music
 (3) see the opera that was based on his play
 (4) hear the famous quartet from Rigoletto

19. When he saw Rigoletto, Hugo was most interested in the - **5**

(1) singers
 (2) stagecraft and techniques of opera production
 (3) fine piece of music
 (4) quartet performed in the last act

20. The writer presents an idea in lines 7-9 that is ____ in the second and third paragraphs. **5**

(1) contradicted
 (2) dramatized
 (3) developed
 (4) ignored

21. According to the last paragraph, music - **5**

(1) can communicate emotions in a way that words cannot
 (2) replaces words in theatrical productions
 (3) is one of the chief features of opera
 (4) needs words in order to express emotions

22. The main idea of the text is that - **5**

(1) Rigoletto was a better opera than play
 (2) operas are usually shorter than dramatic plays
 (3) Victor Hugo was fascinated by Verdi's operas
 (4) the music in opera increases the dramatic effect

➡ go on to the next page המשך לעמוד הבא ➡ **5**

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Text II (Questions 23-27)

5

- (1) In the 1950's many Westerners and Japanese took it for granted that Japan's "traditional" business system was outmoded and would soon be replaced by the "more modern and efficient" American system. During these years, some small and medium-sized firms did adopt, to varying degrees, a number of the more conspicuous aspects of American management. A few of these firms went on to achieve extraordinary growth and even fame in less than a decade. The bigger and older Japanese companies, however, continued to conduct their business in the Japanese way, sure in their belief that they already had the best system in the world – at least as far as Japan was concerned.

5

- (10) In the early 1960's Japanese business further rejected American-style management by going back into its own history for ideas on how to deal with growing competition at home and abroad. Much of this effort involved the intense study of three books: an 18-volume biography of Ieyasu Tokugawa, founder of Japan's last great military dynasty; Sun Tzu, a Chinese classic on military strategy; and a new edition of the Operations Manual of the Imperial Japanese Army. In brief, from these books the businessman-reader learned to equate business management with the strategy and tactics of war and to labor diligently for the prosperity and glory of his company and his country.

5

- (20) Today, despite the many surface changes that have occurred in Japan, the Western and Japanese business systems still differ radically – in ways that provide the foreign businessman in Japan with an endless source of frustration, anxiety, and wonder.

5

Questions

23. It was assumed in the 1950's that -

- (1) the Americans and the Japanese would adopt each other's business methods
- (2) the American system would be adopted by Japanese businesses
- (3) Americans would replace their traditional system with a modern one
- (4) it would take several years for the Japanese to modernize their business system

5

24. In line 3, "these years" refers to -

- (1) the present
- (2) the 1950's
- (3) the 1950's and 1960's
- (4) the 1950's up to the present

5

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5**5****5****5**

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(2E-7EN3083)

25. Three books are mentioned in the second paragraph in order to -

- (1) illustrate that the Japanese treat business strategy like war strategy
- (2) emphasize the military nature of Japanese history
- (3) show that military production is the most successful Japanese business
- (4) give a few examples of typical Japanese textbooks on management

5

26. According to the text, Japanese businessmen -

- (1) have successfully educated foreign businessmen in their methods
- (2) continue to adopt Western methods of doing business
- (3) maintain their own methods of doing business
- (4) no longer use war tactics in business

5

27. According to the text, the foreign businessman is confused because -

- (1) the Japanese business system is so unlike his own
- (2) the Japanese constantly change their business methods
- (3) the American system and methods have failed
- (4) he has not succeeded in Japanese business

5**5****5****5**

אל תהפוך את הדף עד שתקבל הוראה לכך!
Do not turn the page until you are instructed to do so!

5**5****5****5**

APPENDIX 8: An example of Arab participants responses to the socioeconomic and educational status questionnaire:

ما هو رأيك؟؟؟
بفرع اللغة الإنجليزية بامتحان البسيخومتري

تهدف هذه الاستمارة لدراسة العوامل المؤثرة ايجابياً أو سلبياً على تحصيل الطلاب في امتحان البسيخومتري في القسم الخاص باللغة الانجليزية من الامتحان. وستستخدم البيانات التي تتناولها هذه الاستمارة لغرض البحث فقط. لذا نرجو منكم التعاون معنا في الإجابة بوضوح وشفافية على الأسئلة المدونة أدناه.

القسم الأول:- أسئلة خاصة بالعوامل الاجتماعية:

1. العمر: أ - (16-20) ب - (21-24) ج - (25 - فما فوق)
2. - الجنس: ذكر انثى
3. الحالة الاجتماعية:
- أ - أعزب ب - متزوج ج - مطلق د - أرمل
4. معدل اللغة الانجليزية في البجروت هو: 78
5. عدد الإخوة و الأخوات: 10
6. مكان السكن: رها
7. مستوى تعليم الأب:
- أ - غير متعلم ب - مرحلة الزامية ج - مرحلة ثانوية د - تعليم عالي
8. مستوى تعليم الأم:
- أ - غير متعلمة ب - مرحلة الزامية ج - مرحلة ثانوية د - تعليم عالي
9. هل يعمل الأب: أ - نعم ب - لا
10. ما هو عمل الأب: معلم
11. هل تعمل الأم: أ - نعم ب - لا
12. ما هو عمل الأم: _____

13. تقدمت لامتحان بـسيخومتري مسبقاً: (أ) نعم ب- لا

إذا كانت إجابتك "نعم" أجب عن سؤال (14). أما إذا كانت إجابتك "لا" فانتقل إلى سؤال رقم (51).

14. كم مرة تقدمت لامتحان البسيخومتري: 2

15. في أي سنة/ سنوات تقدمت لامتحانات البسيخومتري: 2011, 2010

أحظ بدائرة حول الإجابة الملائمة:

16. الحالة الاقتصادية: أ- جيدة (ب) متوسطة ج- سيئة

17. الدخل الكلي للعائلة بالشيكل:

(أ) أقل من (5000) ب- (5000 - 10,000) ج- أكثر من (10,000)

القسم الثاني:- أسئلة خاصة بالعوامل التعليمية المدرسية:

أحظ بدائرة رمز العبارة التي تعبر عن إجابتك:

18. تعلمت اللغة الإنجليزية في المدرسة كلفة:

أ- أولى ب- ثانية (ج) ثالثة

في الأسئلة (16-18) نرجو منكم وضع إشارة (✓) تحت رقم الإجابة التي تناسبكم والمتدرجة من

5-1 حسب التوزيع التالي:

1. موافق جداً 2. موافق 3. لا أندري 4. لا أوافق 5. لا أوافق بشدة

5	4	3	2	1	
	✓				19. طريقة تعليم مادة الإنجليزي بالمدرسة تساعد على نجاح الطالب
✓					20. المدرسة تقدم دورات تحضيرية للامتحان
✓					21. نجاحي في امتحان اللغة الانجليزية في البجروت يؤدي لنجاحي في امتحان البسيخومتري.

القسم الثالث:- أسئلة خاصة بقسم اللغة الانجليزية في امتحان البسيخومتري:

نرجو منكم وضع إشارة (✓) تحت رقم الإجابة التي تناسبكم والمدرجة من 1-5 حسب التوزيع التالي:

1. موافق جداً 2. موافق 3. لا أدري 4. لا أوافق 5. لا أوافق بشدة

5	4	3	2	1	
				✓	22.تحدد نتيجة قسم الانجليزية في امتحان البسيخومتري مستقبل الطالب من ناحية اختيار التخصص الجامعي
				✓	23.قسم اللغة الإنجليزية هو الأصعب في امتحان البسيخومتري
				✓	24.قسم الإنجليزي في البسيخومتري أصعب من امتحان بجروت اللغة الإنجليزية
				✓	25. يتناول قسم الإنجليزي في البسيخومتري مواضيع لا تتعلق بثقافتني
				✓	26.حتى تنجح في البسيخومتري يجب أن يكون عندك قدرات عقلية جيدة
✓					27.الوقت المعطى لقسم الإنجليزي في البسيخومتري هو وقت كافٍ.
	✓				28.التعليمات والتوجيهات الموجودة في القسم الإنجليزي من امتحان البسيخومتري واضحة ومفهومة للطالب
				✓	29.تتدرج أسئلة فهم المقروء في القسم الإنجليزي من امتحان البسيخومتري من الأسهل إلى الأصعب

شكراً لتعاونكم

APPENDIX 9: An example of Arab participant responses to the 2009 and 2010

Psychometric English subtest items questionnaire:

To What Extent Am I Familiar to the Psychometry Test English Items

This questionnaire aims to investigate whether the items of English section of the Psychometry exams of the years 2009 2010 are culturally alien to the examinees.

2009 Psychometry Test items:

Please, read these items carefully and respond to them honestly for the purpose of obtaining scientific and objective results. Put a tick next the answer that fits your choice.

Answers which are given in the table range from 1-5 to express the following responses:

1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, 5 = strongly disagree

Sentence completion items		1	2	3	4	5
A	The city of Delft is <u>famous</u> for the blue and white pottery that has been made there for hundreds of years.			✓		
B	The wood of the granadilla tree, a <u>rare</u> species found only in a few areas of the rainforest, is used to make certain wind instruments such as clarinets and oboes.			✓		
C	Edward Hoppers painting express the loneliness and <u>alienation</u> felt by many people living in large American cities.		✓			
D	The Olmec is considered the mother culture of Mesoamerica; all <u>subsequent</u> cultures that developed in the region drew heavily upon Olmec religion architecture, and art.			✓		
E	The dissection of cadavers at the universities of Padua and Bologna during the <u>fifteenth century</u> led to important discoveries in anatomy.		✓			
F	Belarus was part of the Soviet Union an <u>independent</u> republic in 1999.			✓		
G	Tachycardia is a medical <u>condition</u> which characterized by an unusually fast and often irregular heartbeat.		✓			
H	In an <u>attempt</u> to reduce pollution, the Dutch government is encouraging public transport companies to use a new kind of fuel.				✓	
I	Rembrandt is considered one of the greatest painters in the history of Western <u>art</u> .		✓			
J	Some Octopuses have a remarkable ability to <u>mimic</u> other marine animals by assuming the shape, color and texture of the animal they are imitating.		✓			
K	While most plants cannot grow in salty soil, halophytes, such as sea lavender, <u>thrive</u> in it.			✓		
L	In the 19 th century, there were so many buffalo in the American West that no one could imagine that they would <u>somebody disappear</u>			✓		
M	Used dry-cell batteries should not be thrown into the garbage, but <u>deposited in</u> special containers.			✓		

Restatement Section		1	2	3	4	5
A	Although the economy of almost every other country involved in world war II was devastated during the war, America's grew by an average of %10 annually during that time.		✓			
B	Mountains are shaped by the movement of the vast tectonic plates that constitute the earth's exterior, as well as by climatic conditions and erosion.			✓		
C	The Gettysburg Address in Abraham Lincoln's most famous speech.	✓				
D	The question of when people first reached the Americas has been vigorously debated among anthropologists for years, yet only now is significant attention being paid to what the lives of these early inhabitants were actually like.			✓		
E	The derision and scorn that Indian writer Nirad Chaudhuri was subjected to in his native country embittered him surprisingly little.			✓		
F	Educators claim that immersion in a second language not only provides children with fluency in another tongue, but also promotes memory and reasoning skills.		✓			
G	A recent study has confirmed a relationship that had long been suspected: In the United States, cockroaches are the leading cause of Asthma in children living in inner cities.		✓			
H	While the precise cause of the mental illness Schizophrenia is not known, the disorder has a biological basis.			✓		

The following topics appeared in the English parts of the Psychometry test of the year 2009. Read the topics below and tick the appropriate answer to show the level of familiarity of these items to you:

1 = strongly familiar, 2 = familiar, 3 = I don't know, 4 = unfamiliar, 5 = strongly unfamiliar

Reading Comprehension		1	2	3	4	5
A	The boycott of buses by Black Americans in 1955 led by a black woman called Rosa Parks.			✓		

2010 Psychometry Test Items:

Please, read these items carefully and respond to them honestly for the purpose of obtaining scientific and objective results. Put a tick next the answer that fits your choice.

Answers which are given in the table range from 1-5 to express the following responses:

1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, 5 = strongly disagree

Sentence completion items		1	2	3	4	5
A	Because photographer Henri Cartier Bresson wished to be unseen observer, he covered the bright chromium parts of his camera with black tape to render it less <u>conspicuous</u> .			✓		
B	Soft metals are frequently <u>combined with</u> harder metals to make them stronger and more useful.				✓	
C	By 1715, the Italian states had lost much of the political and economic power they had <u>enjoyed</u> during the renaissance.		✓			
D	Drought and the resulting <u>decline</u> in crop yields have forced many families in Ethiopia to leave their villages in search of more fertile land.			✓		
E	The grey wolf, which once lived in forest <u>throughout</u> the Northern hemisphere, is now found in relatively few places.			✓		
F	Viewers accustomed to representational paintings are often <u>baffled</u> by abstract art.		✓			
G	Although genetic mutations are usually harmful, they can sometimes be <u>advantageous</u> .		✓			
H	Street vendors cooking over open coal fires are a common <u>sight</u> in India.		✓			
I	In ancient Greece, women who wanted to attend academic institutions had to <u>disguise</u> themselves as men.				✓	
J	The Akkadians believed that if a person became ill it was his or her own <u>fault</u> for having sinned against the gods.			✓		
K	Although gambling is very popular in China, the governments <u>policy</u> is to denounce it as a capitalist evil.		✓			
L	New medical advances are <u>enabling</u> chronically ill children to receive treatment at home rather than in the hospital.		✓			

Restatement Section		1	2	3	4	5
A	The Koala must live in an area where eucalyptus trees grow, because their leaves are its only food.	✓				
B	The initial rules of Babylonia were not the Semites but the Sumerians, whose origins are unknown.			✓		
C	During the century and a half before the center of musical activities in Europe shifted to Vienna, the orchestras and choruses and Venice were the most highly esteemed in all of Europe.		✓			
D	Sri Lanka's %90 literacy rate is among the highest in Southern Asia.			✓		
E	With the help of hitherto undiscovered documents, Jean			✓		

	Strouse has written a new and comprehensive account of Shakespeare's life.				✓	
F	With the exception of China, the world's most populous nations are all home to a wide variety of cultures and ethnic groups.		✓			
G	Seventeenth century Dutch artist Johannes Vermeer worked as a painstakingly slow pace on his own paintings and supported his large family by buying and selling the painting of other artists.				✓	
H	Henry IV, King of France, could hardly have reinstated law and order had the nation not been ready for this.				✓	
I	Legends of American tycoon John Pierpont Morgan's ruthlessness far outnumber those of his benevolence.				✓	
J	In the eighteenth century a visitor to Charleston commented that, in grandeur and splendor, its buildings surpassed all others he had seen in America.				✓	
K	As the Dutch settlers who founded Cape Town in South Africa attempted to expand their domain, they frequently clashed with the indigenous people.				✓	

The following topics appeared in the English parts of the Psychometry test of the year 2009. Read the topics below and tick the appropriate answer to show the level of familiarity of these items to you:

1 = strongly familiar, 2 = familiar, 3 = I don't know, 4 = unfamiliar, 5 = strongly unfamiliar

Reading Comprehension		1	2	3	4	5
A	W. L. Mackenzie King the prime minister of Canada.			✓		

APPENDIX 10: An example of Israeli participants responses to the socioeconomic and educational status questionnaire:

מה דעתך ??? ???

בחלק האנגלי במבחן הפסיכומטרי

טופס זה נועד לבחון את הגורמים החיוביים ו/או השליליים המשפיעים על הישגי התלמידים בבחינה הפסיכומטרית בחלק האנגלית של הבחינה. יש לציין ששאלון זה הינו אנונימי ותוצאותיו יישמשו לצורך המחקר המדעי הזה בלבד. לכן בבקשה לשתף איתנו פעולה ולענות באופן ברור ושקוף על השאלות המפורטות להלן.

חלק ראשון: - שאלות ספציפיות על גורמים חברתיים:

- 1- גיל: א- (20-16) ב- (24-21) ג- (25 ולמעלה)
- 2- מין: א- זכר ב- נקבה.
- 3- מצב משפחתי:
א- רווק ב- נשוי ג- גרוש ד- אלמן.
- 4- ממוצע ציון אנגלית בבגרות הוא: 78.
- 5- מס' אחים ואחיות: 4.
- 6- מקום מגורים: שכונת ג' ב' 2.
- 7- השכלת האב:
א- אינו משכיל ב- יסודי ג- תיכון ד- אקדמאי.
- 8- השכלת האם:
א- אינה משכילה ב- יסודי ג- תיכון ד- אקדמאית.
- 9- האם האבא עובד: א- כן ב- לא.
- 10- מקצוע האב: 127.
- 11- האם האימא עובדת: א- כן ב- לא.
- 12- מקצוע האם: אלמ.
- 13- האם ניגשת לבחינת הפסיכומטרי בעבר: א- כן ב- לא.
- 14- כמה פעמים ניגשת לבחינת הפסיכומטרי: 2.
- 15- באיזו שנה \ שנים ניגשת לבחינת הפסיכומטרי: 2011, 2010.

ציין בעיגול את התשובה הכי מתאימה:-

16- המצב הכלכלי: (א) טוב ב- ממוצע ג- לא טוב.

17- סך ההכנסות למשפחה בש"ח:

א- פחות מ- (5000) (ב) (10,000-5000) ג- יותר מ- 10,000.

חלק שני:- שאלות ספציפיות על גורמים לימודיים:

ציין בעיגול את התשובה המשקפת את דעתך:

18- למדתי את השפה האנגלית בבית הספר כשפה: (א) ראשונה (ב) שנייה (ג) שלישית.

בשאלות (18-20) נבקש ממך לסמן (✓) מתחת לתשובה המתאימה בסקאלה מ- 1-5:

1. מסכים מאוד 2. מסכים 3. לא יודע 4. לא מסכים 5. לא מסכים בכלל

5	4	3	2	1	
				✓	19. השיטה שבה מלמדים את חומר האנגלית בבית הספר תורמת להצלחת התלמיד
✓					20. בית הספר מציע קורסי הכנה לבחינת הפסיכומטרי
		✓			21. אם אני מצליח בבחינת הבגרות באנגלית גם אצליח בבחינת הפסיכומטרי

חלק שלישי:- שאלות ספציפיות בנושא בחינת האנגלית בפסיכומטרי.

סמן ב () מתחת לתשובה המתאימה לך בסקאלה מ- 1-5:

1. מסכים מאוד 2. מסכים 3. לא יודע 4. לא מסכים 5. לא מסכים בכלל

5	4	3	2	1	
		✓			22. התוצאה של חלק האנגלית בפסיכומטרי קובעת את עתידו של התלמיד מבחינת מקצוע ההתמחות שלו באוניברסיטה.
	✓				23. חלק השפה האנגלית בבחינת הפסיכומטרי

					הוא החלק הכי קשה בבחינה.
	✓			✓	24. חלק השפה האנגלית בבחינת הפסיכומטרי הוא יותר קשה מבחינת הבגרות באנגלית.
	✓				25. בחלק האנגלית בבחינת הפסיכומטרי יש שאלות שאינם קשורות לתרבות שלי.
				✓	26. כדי להצליח בבחינת הפסיכומטרי אני חייב/ת להיות בעל/ת יכולות שכליות טובות.
				✓	27. הזמן הנתון לחלק האנגלית בבחינת הפסיכומטרי הוא זמן מספיק.
				✓	28. ההנחיות וההוראות של חלק האנגלית בבחינת הפסיכומטרי הם ברורים ומובנים.
				✓	29. שאלות הבנת הנקרא בחלק האנגלית בבחינת הפסיכומטרי מתחילים מהשאלות הקלות לשאלות היותר קשות.

תודה על שיתוף הפעולה והשתתפותך.

APPENDIX 11: An example of Israeli participant responses to the 2009 and 2010

Psychometric English subtest items questionnaire:

To What Extent Am I Familiar to the Psychometry Test English Items

This questionnaire aims to investigate whether the items of English section of the Psychometry exams of the years 2009 2010 are culturally alien to the examinees.

2009 Psychometry Test Items:

Please, read these items carefully and respond to them honestly for the purpose of obtaining scientific and objective results. Put a tick next the answer that fits your choice.

Answers which are given in the table range from 1-5 to express the following responses:

1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, 5 = strongly disagree

	Sentence completion items	1	2	3	4	5
A	The city of Delft is <u>famous</u> for the blue and white pottery that has been made there for hundreds of years.	✓				
B	The wood of the granadilla tree, a <u>rare</u> species found only in a few areas of the rainforest, is used to make certain wind instruments such as clarinets and oboes.			✓		
C	Edward Hoppers painting express the loneliness and <u>alienation</u> felt by many people living in large American cities.	✓				
D	The Olmec is considered the mother culture of Mesoamerica; all <u>subsequent</u> cultures that developed in the region drew heavily upon Olmec religion architecture, and art.				✓	
E	The dissection of cadavers at the universities of Padua and Bologna during the fifteenth century <u>led to</u> important discoveries in anatomy.	✓				
F	Belarus was part of the Soviet Union an <u>independent</u> republic in 1999.			✓		
G	Tachycardia is a medical <u>condition</u> which characterized by an unusually fast and often irregular heartbeat.	✓				
H	In an <u>attempt</u> to reduce pollution, the Dutch government is encouraging public transport companies to use a new kind of fuel.	✓				
I	Rembrandt is considered one of the greatest painters in the history of Western <u>art</u> .	✓				
J	Some Octopuses have a remarkable ability to <u>mimic</u> other marine animals by assuming the shape, color and texture of the animal they are imitating.			✓		
K	While most plants cannot grow in salty soil, halophytes, such as sea lavender, <u>thrive</u> in it.		✓			
L	In the 19 th century, there were so many buffalo in the American West that no one could imagine that they would somebody <u>disappear</u> .		✓			
M	Used dry-cell batteries should not be thrown into the garbage, but <u>deposited in</u> special containers.	✓				

2010 Psychometry Test Items:

Please, read these items carefully and respond to them honestly for the purpose of obtaining scientific and objective results. Put a tick next the answer that fits your choice.

Answers which are given in the table range from 1-5 to express the following responses:

1 = strongly agree, 2 = agree, 3 = I don't know, 4 = disagree, 5 = strongly disagree

Sentence completion items		1	2	3	4	5
A	Because photographer Henri Cartier Bresson wished to be unseen observer, he covered the bright chromium parts of his camera with black tape to render it less <u>conspicuous</u> .			✓		
B	Soft metals are frequently <u>combined with</u> harder metals to make them stronger and more useful.	✓				
C	By 1715, the Italian states had lost much of the political and economic power they had <u>enjoyed</u> during the renaissance.	✓				
D	Drought and the resulting <u>decline</u> in crop yields have forced many families in Ethiopia to leave their villages in search of more fertile land.	✓				
E	The grey wolf, which once lived in forest <u>throughout</u> the Northern hemisphere, is now found in relatively few places.			✓		
F	Viewers accustomed to representational paintings are often <u>baffled</u> by abstract art.				✓	
G	Although genetic mutations are usually harmful, they can sometimes be <u>advantageous</u> .	✓				
H	Street vendors cooking over open coal fires are a common <u>sight</u> in India.					✓
I	In ancient Greece, women who wanted to attend academic institutions had to <u>disguise</u> themselves as men.		✓			
J	The Akkadians believed that if a person became ill it was his or her own <u>fault</u> for having sinned against the gods.		✓			
K	Although gambling is very popular in China, the governments <u>policy</u> is to denounce it as a capitalist evil.		✓			
L	New medical advances are <u>enabling</u> chronically ill children to receive treatment at home rather than in the hospital.		✓			

Restatement Section		1	2	3	4	5
A	The Koala must live in an area where eucalyptus trees grow, because their leaves are its only food.		✓			
B	The initial rules of Babylonia were not the Semites but the Sumerians, whose origins are unknown.				✓	
C	During the century and a half before the center of musical activities in Europe shifted to Vienna, the orchestras and choruses and Venice were the most highly esteemed in all of Europe.		✓			
D	Sri Lanka's %90 literacy rate is among the highest in Southern Asia.			✓		
E	With the help of hitherto undiscovered documents, Jean					

	Strouse has written a new and comprehensive account of Shakespeare's life.		✓		
F	With the exception of China, the world's most populous nations are all home to a wide variety of cultures and ethnic groups.		✓		
G	Seventeenth century Dutch artist Johannes Vermeer worked as a painstakingly slow pace on his own paintings and supported his large family by buying and selling the painting of other artists.		✓		
H	Henry IV, King of France, could hardly have reinstated law and order had the nation not been ready for this.				✓
I	Legends of American tycoon John Pierpont Morgan's ruthlessness far outnumber those of his benevolence.			✓	
J	In the eighteenth century a visitor to Charleston commented that, in grandeur and splendor, its buildings surpassed all others he had seen in America.			✓	
K	As the Dutch settlers who founded Cape Town in South Africa attempted to expand their domain, they frequently clashed with the indigenous people.			✓	

The following topics appeared in the English parts of the Psychometry test of the year 2009. Read the topics below and tick the appropriate answer to show the level of familiarity of these items to you:

1 = strongly familiar, 2 = familiar, 3 = I don't know, 4 = unfamiliar, 5 = strongly unfamiliar

Reading Comprehension		1	2	3	4	5
A	W. L. Mackenzie King the prime minister of Canada.					✓

Causes of cultural bias:

These causes are many: first, the cultural bias in the exam items themselves, second the poor educational background of the Arab students at schools and third, the individual factors pertaining to the Arab students themselves such as their socioeconomic background which increases the social and economic gap between the Arab and Israeli citizens, and that determines the unsuitability of this exams to the minority.