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The Effect of Hebrew Language Proficiency on Academic and Social Self-Image, Motivation and Academic Success of Arab Students in the Israeli Academia

Eman Tarabia

Department of Multidisciplinary Studies, Kinneret College on the Sea of Galilee, Israel, eman.bd.25@gmail.com

Abstract

The goal of this study was to examine the effect of Hebrew language proficiency on the academic and social self-image, motivation and academic success of Arab students in Israeli academia. This quantitative research centered on seven hypotheses that were examined by means of three questionnaires: social and academic self-image, Hebrew proficiency, and motivation. The sample included 857 Arab students in Israel. Most hypotheses were corroborated. The findings show a significant positive correlation between self-reported Hebrew language proficiency and academic and social self-image, motivation and academic achievements (current year's grades). Also, Hebrew proficiency was found to be higher among university students than among college students. Furthermore, a significant positive relationship was found between academic and social self-image, and motivation and academic success; namely, the higher the students' self-image was, the higher their motivation and academic success were. We also found a significant positive relationship between high school grades and Hebrew language proficiency and academic achievements. Also, Arab students who had taken 5-unit matriculation exams in Hebrew language reported greater proficiency, and their current academic year grades were higher, than students who had taken 3-unit matriculation exams.

Keywords: language proficiency, academic and social self-image, motivation, Arab students in Israeli academia.

Introduction

Higher education is an important tool for minorities to escape unemployment and social marginality (Smooha, 2010). Higher education bridges the disparities between majority and minority, empowers

minorities economically and politically, and provides more opportunities to improve minority members' situation in many fields (Ali, 2013).

The Arabs in Israel consider education to be an important factor in their personal and social development. There is a constant increase in the education level, especially among women. Since the 1970s, the number of Israeli Arabs in higher education institutions has been growing steadily, and the numbers have doubled today (Arar & Haj Yahya, 2007; Miari et al., 2021).

Arabs' Hebrew language proficiency – reading, writing and communication – at the end of high school can significantly affect their integration in academia (Tehawkho et al., 2020). Following acceptance to college or university, Arab students face many challenges, the main one being the hurdle of the Hebrew language. They join higher education in which the teaching and reading language is their second language, whereas the Hebrew taught in Arab schools is literary rather than colloquial. They are, thus, required to adjust quickly to a dual challenge. Even students who speak Hebrew well are challenged by the expectation to adapt to an education system that operates solely in Hebrew (Tehawkho et al., 2020).

Consequently, Hebrew language proficiency affects future success, and influences the possibility of getting a good job or continuing to advanced academic degrees in Israeli higher education institutions. There are additional factors that promote academic success, including academic self-efficacy, social support, motivation and ambition, academic goals, social engagement, self-image, academic skills, and financial support. Research has found a positive relationship between these elements and academic success, especially among minorities (Alem, 2010).

Literature Review

Arab Students in Higher Education – Barriers and Challenges

The Arab population in Israel is considered an ethnic, religious, lingual, cultural and national minority (Smooha, 2010). Arabs are about 20% of Israel's population, numbering over one and a half million. This minority includes a majority of about 82% Muslims, alongside 9% Christians and 9% Druze; however, they are a homogenous group that speaks the same language (Tarabia & Abu Rabia, 2020).

Data published by the Central Bureau of Statistics (CBS; 2017) reported that 19.5% of the Arab population had an academic (or parallel) degree compared with 40.6% of the Jewish population. Research has shown that during the last decade and a half, the percentage of academic degrees has risen in the general population. However, it seems that the gaps between the Jewish and Arab populations have been reduced only marginally in that period (Hadad Haj-Yahya et al., 2021).

According to the Council of Higher Education (CHE), there has been a 100% increase in representation of Arab students in Israeli academia, exceeding 50,000. But, despite the qualitative and quantitative achievements among the Arab population, they are still underrepresented compared to the Jewish population – in the rate of both Arab students in advanced degrees, and academic and administrative staff members (Miari et al., 2021).

Arab students face many challenges when they enroll in Israeli academia (Miari et al., 2021; Ulman-Darom, 2021; Cook, 2016). First, the precursory disparities between the Jewish and Arab elementary and high school education systems, including inequitable budgets, and different education methods and learning skills. Also, Arab students are required to adjust to a foreign language and teaching methods that involve many reading and writing challenges and new learning skills, including independently structuring their schedule, performing academic tasks, reading and summarizing articles in English and Hebrew, etc. The Arab students' young age presents them with additional challenges. They are expected to adapt to new behavior patterns that characterize bureaucratic conduct in academic institutions (Mizel, 2021). The lack of cultural and bureaucratic coordination could create misunderstandings between the academic institution and its Arab students, as well as a sense of cultural estrangement and alienation rooted in cultural disparities between their home and community culture and academic culture. Many Arab students move out of home, and are forced – for the first time – to cope independently and responsibly with financial, social and academic issues such as finding a place to live, paying tuition, and time management. Poor access to transportation, accommodation and employment in the Jewish vicinity of the college or university add material difficulties. Finally, many Arab students, who are the first generation to acquire an academic education, lack a role model and cultural capital, and come from a low socioeconomic background (Shavit & Bar-Haim, 2018).

Second Language Proficiency and Academic Success Among Arab Students

There are two official languages in Israel – Hebrew and Arabic. Whereas Hebrew is the majority's language, and enjoys clear hegemony and preference (Mar'i, 2013), Arabic – the mother tongue of 20% of the population – is a minority language. Among the Arab citizens of Israel, Hebrew is a second language, which is learned formally from third to twelfth grade in all Arab schools since 1948. It is also acquired in informal everyday settings such as workplaces, and through the spoken and written media (Manor, 2019). Arab students come to higher education in which the teaching and reading language is not their first language (Ali, 2013). They are required to swiftly adjust to understanding lectures in Hebrew, to reading and understanding

academic articles in Hebrew and English, and to summarizing them. Academic writing is typically a difficult and demanding task for students, even more so for students that are making their first steps in academia, and Hebrew is their second language. Inadequate Hebrew language proficiency negatively affects their grades (Ulman-Darom, 2021).

As a result, Arab students refrain from participating directly in class compared to their Jewish counterparts, who speak freely (Halabi, 2016, 2018). Most students report that one of the main reasons is the language barrier that prevents them from organizing their thoughts and expressing themselves properly, because they mostly speak Arabic, which weakens the second language (Hebrew). Thus, Arab students have greater difficulties and barriers than Jewish students, especially during their freshman year. Arab students studying for their Master's degree are usually more proficient in Hebrew, after the time they had spent in Hebrew academic surroundings (Ali, 2013).

The Effect of Language Proficiency on Arab Students' Academic Success

The Israeli-Arab population's ambition to learn the Hebrew language is instrumental – to achieve goals such as employment and higher education. Poor proficiency in Hebrew makes it difficult for them to function effectively (Bakri, 2020; Shohamy, 2014), despite the fact that some take matriculation exams at the 5-units level. That is to say, although Hebrew is a mandatory subject in Arab schools from a young age, it takes Arabic speakers many years to become highly proficient in Hebrew (Manor, 2019).

Hebrew language proficiency affects future success, and the ability to find employment or acquire higher education in any institution in Israel where the teaching language is Hebrew, which reflects the Arab students' willingness to increase their Hebrew proficiency during their undergraduate studies (Geva et al., 2017). Nevertheless, one of the main reasons for their desire to become proficient in Hebrew is because it improves their grades. Language proficiency relates to the ability to master four language elements – reading, writing, listening and speaking – in daily life outside the college (Geva et al., 2017). Furthermore, these factors illuminate their high motivation to learn the Hebrew language. Most Arab students initially acquire their education in Hebrew, and feel more comfortable expressing themselves orally and in writing (Hendin, 2011).

Hebrew is the dominant language in Israel, and young Arab students ascribe it prestige and importance because it is a tool for social integration, and professional and academic advancement (Manor, 2019). One of the few data sources that provides a reliable picture of the Arab population's Hebrew language proficiency is the CBS annual social survey. According to the CBS (2020) survey, men reported better proficiency, especially in spoken Hebrew, after high school, whereas

women reported better proficiency in reading and writing. The disparities grow with age; the main reason being men's greater participation in the work force.

Data segmentation by religion (in the northern and central districts, and in mixed cities) reflects differences between various groups within the Arab population, even in the same geographic area. 94% of Christian and Druze men reported good to very good spoken Hebrew proficiency, as opposed to 80-84% of Muslim men. On the other hand, 94% of Christian women reported good to very good spoken Hebrew proficiency, as opposed to 77% of Druze women, and 58-66% Muslim women (Tehawkho et al., 2020). The poor proficiency of Bedouin women in the south of Israel can be explained by the weak education system in their sector, and the women's non-participation in the work force.

Findings show that Hebrew language proficiency increases with education, and the correlation between Hebrew level and years of study is stronger among women, so that the gender differences decrease with years of education, and are eliminated completely after 16 years of education (Manor, 2019). In this case, too, the explanation is exposure to the language; whereas the participation rate of Arab men is greater at all education levels, women's participation increases with education, and some of the language is acquired during academic studies (Manor, 2019; Tehawkho et al., 2020).

In view of the above, low Hebrew proficiency prevents students from understanding their teachers and content, learning new content, and actively engaging in classroom learning (Gray et al., 2014). Furthermore, it has been reported that since the assessment language is Hebrew, they sometimes do not understand exam questions, and cannot express what they know (Davis & Phyak, 2016). All these affect the Arab students' self-esteem and academic success. Also, students conveyed that learning Hebrew was a key goal, and that they understood its importance to succeeding in their life in Israel. However, they reported dissatisfaction with the options to learn Hebrew provided by schools (Shohamy et al., 2022).

Academic Self-image Among Students in Academia

There are three central approaches to defining the term self-image: The dynamic approach, which perceives the self as a progressive process of development; the humanistic approach, which emphasizes environmental impact on personal growth; and the social-cognitive approach which considers the self as an object of awareness (Saied, 2018). The individual's self-image grows and develops over the years (Akinci, 2011). Self-image can be defined as a group of relationships, some internal (such as one's self-image, satisfaction with one's self and behavior), and some external (such as body image, moral, family and social image) (Tarabia & Abu Rabia, 2020). Ayalon and Aharoni (2020)

defined self-image as people's perception of how the environment sees them. They expanded and developed the idea of low self-image, which is the contradiction between one's personal and social self-image.

Academic self-efficacy is one of the key factors that affect academic performance. It relates to students' beliefs and attitudes regarding their abilities to succeed, as well as belief in their ability to fulfil academic tasks and successfully learn new material (Hayat et al., 2020). Self-efficacy beliefs lead to excellent performance through increased commitment, effort, and perseverance. Learners with high self-efficacy attribute their failures to little effort invested rather than to low abilities, whereas people with low self-efficacy attribute their failures to low abilities. Therefore, self-efficacy can affect choice of tasks and perseverance when performing them. in other words, students with low self-efficacy are more apprehensive, and tend to avoid, postpone and give up (Hayat et al., 2020).

Positive academic self-image generates a positive sense of academic efficacy. That is to say, dominance of the academic self-image as an active self-image leads to academic activities that fulfill academic goals and achievements. Research (Ruvolo & Markus, 1992) has shown that the process of forming an academic self-image occurs when academic achievements have value for the student. Positive academic self-image predicts learning motivation and achievements more than other self-image measures. The circular relationship by which academic self-image affects initial achievements, is in turn affected by consequent successes beyond objective abilities and previous achievements, and is strengthened by cumulative good performance of academic tasks (Tarabia & Abu Alhaija, 2021).

One of the factors that affect the development of academic self-image and social competence is social support with elements of appreciation, support and protection of the emotional development function. Academic self-image affects learning motivation and willingness (Tarabia & Abu Rabia, 2020). Therefore, educated adolescents report negative attitudes to learning environments that are not supportive or enabling, and are perceived as having low self-image and low achievements, with gender certain differences described in the literature (Lana, 2010; Tarabia & Abu Alhaija, 2021; Throndsen, 2011).

Motivation

Motivation relates to investment of energy, direction, perseverance and insistence on attaining significant goals. People can be motivated by either internal interests (internal motivation) or external demands and pressure (external motivation). Internally motivated individuals typically have more interest and self-confidence than externally motivated people. The outcomes include better performance, perseverance, creativity, vitality, self-confidence, and general wellbeing (Elemi, 2013).

Motivation has also been described as relating to the desire to invest time and effort in a certain activity, even if it involves difficulties, high costs, and failure (Beshara, 2018; Denault & Guay, 2017; Elemi, 2013).

Internal and External Locus of Control

The term 'locus of control' refers to how a person perceives his or her ability to control situations (Kaplan & Beshara, 2015). Individuals differ in the intensity of this personality characteristic. People with high internal locus of control believe that they can control and affect circumstances, and that the results of their behavior depend on their abilities and talents. They, therefore, can ignore external factors such as difficulties or others' influence. In contrast, high external locus of control indicates the belief that external factors affect the situation, and that results of behavior depend on other people, luck, or external aspects. Consequently, external factors enter one's considerations, while personal attributes are overlooked. Perception includes three parallel continuums of locus of control measures – one internal continuum and two external continuums: luck and authority. In contrast to the original perception, one can simultaneously have internal and external loci of control, or one high and one low external locus of control. Accordingly, real external control – i.e., a permanent perception that external factors affect one's actions – should be differentiated from protective external control – i.e., belief in external factors as protection against expected failure, but actually having a strong need to succeed. Another distinction can be made within the internal locus of control group. Internal protectives are people who present themselves as having internal locus control because of social placation, and others' perception reflects a true belief in their behavior and responsibility for their actions (Beshara, 2018; Denault & Guay, 2017).

At the same time, the tendency to exhibit internal or external locus of control is related to a variety of personality and cognitive characteristics. It was found that in an academic environment, students with internal locus of control invest efforts to achieve goals more than those with external locus of control, probably because they believe they control the results of their actions (Perlman-Avnion & Harduf, 2018). Furthermore, students with internal locus of control are motivated to learn independently, and do not place the responsibility for failure on others. Research has shown that independent learners are able to choose appropriate strategies to achieve their goals, and to solve problems that come up on the way. Also, they are characterized by high learning motivation, and the ability to cope with learning tasks. The independent learner believes that learning is a controlled, systematic process, and this also applies to acquiring and learning a language (Beshara, 2018; Denault & Guay, 2017).

Learning Motivation

Learning motivation is a key element of learning at all ages and all levels. It is a process that arouses, directs and preserves people's behavior for the purpose of achieving a learning goal, and reflects the variety of reasons that make an individual behave in a certain way in a given situation (Beshara, 2018; Denault & Guay, 2017).

Learning motivation is affected by multiple factors, and is driven by personal motives such as the psychological need to succeed in competitive situations, and the individual's self-image. Zoabi (2012) found a positive correlation learning motivation and self-image and self-esteem. Carter et al. (2013) reported that the support of family and friends, as well as mentorship during studies, are the factors that contribute to success and increase motivation.

Motivation to learn is an important aspect of learning a second language, and in this context – it is more important than in learning one's mother tongue. High motivation to learn the second language, and a positive attitude to it and its speakers, affect one's willingness to communicate in the second language. Research of multiple ethno-linguistic situations found that the willingness to communicate in a foreign or second language predicts the frequency and quantity of using it, and motivation to learn a second or foreign language predicts the willingness to communicate in it, and its frequency (Alian & Abu Hasin, 2012).

The factor that affects the Arab students' motivation to learn Hebrew is instrumental. The main drive that guides them is the target; namely, they use the Hebrew language as a practical means to attain economic, educational and social advancement such as employment, daily communication, and more. The motivation to learn Hebrew also stems from the fact that no university in Israel teaches in Arabic, except in Arabic departments, or in teacher training colleges in which Arabic is the formal teaching language (Manor, 2019; Zoabi, 2012).

Success in Academic Studies

The period of academic studies is an important period for students everywhere, and they face many challenges as students (Alem, 2010; Mizel, 2021). Various elements contribute to academic success including academic and social self-efficacy, support, motivation to succeed, academic goals, social engagement, general self-image, academic skills, and financial support. Research has shown a positive relationship between these factors and academic success, also among minorities. For instance, social engagement, setting academic goals, and general self-image were identified as contributing factors among Afro-American students (Arar, 2012; Idan & Margalit, 2014), as well as a positive attitude towards their academic institution. Alem (2010) listed perseverance, determination, belief in ability, influence of family

members, academic friendships, spirituality and hope-as drivers of academic success.

In Israeli higher education institutions, Jewish students perceive themselves as capable to succeed and to achieve good academic results, and some aspire to continue to advanced degrees. Researchers (Najjar et al., 2020) argued that there is no relationship between ethnicity and academic success; that it is a personal matter, and depends on the learner's efforts and investment. On the other hand, Arab students and students of Ethiopian origin feel that due to their origins or the accompanying financial situation, they are required to devote greater efforts to succeed in higher education (Najjar et al., 2020).

The literature review and the theoretic model dictated the following research question: What is the effect of Hebrew language proficiency on academic and social self-image, motivation and academic success among Arab students in Israeli academia?

Hypotheses

H1: Students with Hebrew language proficiency will report high academic and social self-image, learning motivation and academic success.

H2: First-year students will report low proficiency in Hebrew, low self-image, low motivation, and low achievements; second-, third-, and fourth-year students will report higher levels of all variables.

H3: Differences will be found between Hebrew language proficiency, academic and social self-image, motivation and achievements between students in various higher education institutions, so that university students report higher levels of all measures than college students.

H4: A relationship will be found between social and academic self-image, and motivation and achievements, so that students with low self-image will have lower motivation and achievements.

H5: A relationship will be found between Hebrew language proficiency and academic achievements, and number of matriculation units.

H6: A relationship will be found between high school grade in Hebrew language and academic success.

H7: Gender differences will be found between students' Hebrew language (reading, writing and speaking) proficiency.

Methodology

The present study focuses on the effect of Hebrew language proficiency on academic and social self-image, motivation and academic success among Arab students in Israel. A quantitative method and statistical

analysis were chosen to investigate the research question and the seven hypotheses. Data analysis was performed with SPSS software.

Research Population

The study participants were 857 Arab students in higher education institutions in Israel during the 2021-2022 academic year. The sampling method was volunteer sampling, which allows free choice to volunteer and answer the questionnaires freely.

Tools

The following questionnaires were employed in this study:

1. Demographic questionnaire: The participants' background information including gender, family status, religious affiliation, education, and place of residence, as well as college or university, year of studies, and discipline.

2. Hebrew language proficiency was examined in two ways:

a. YAEL Hebrew knowledge exam (by the National Institute for Testing & Evaluation) for examinees whose mother tongue is not Hebrew. That is, students who had not studied Hebrew or had not taken the matriculation exam in Hebrew, or had taken the psychometric university entrance exam in a language other than Hebrew.

b. Hebrew proficiency questionnaire: A self-report questionnaire that examines Hebrew writing, reading and speaking, taken from the 2019 CBS social survey. The questionnaire included three questions (for example: What is your level of Hebrew language writing?") on a 5-point Likert scale of 1 (Very good) to 5 (None at all). Internal reliability of the present questionnaire was α=0.93.

3. Self-image was examined by two questionnaires:

a. Multidimensional Self Concept Scale (MSCS; Bracken, 1992) translated into Hebrew by Zeidner (1996), which includes 24 items. Educational self-concept includes 12 items that relate to the examinee's perception of his- or herself as a learner. Sample items are: "I often don't understand the material taught in class" or "I usually do very well in exams". Social self-concept includes 12 items that relate to the examinee's perception of his or her ability to make social contacts, and perception of what others think about him or her. Sample item: "I get along very well with others". The items are graded on a Likert scale of 1 (Completely false) to 4 (Completely true). An overall self-concept score is reported. The reported reliability of the original questionnaire was α=0.91 for educational self-concept and α=0.92 for social self-concept, and in the current study α=0.76 and 0.83, respectively.

b. Tennessee Self Concept Scale (TSCS; Warren & Fitts, 1996) was employed to represent additional areas of self-concept not included in

Bracken's (1992) questionnaire, and includes 25 self-description statements on a 5-point Likert scale of 1 (Completely false) to 5 (Completely true). The questionnaire includes two scales – personal self-concept and body self-concept (for example: "I have a healthy body"). The reported reliability of the original questionnaire was α=0.81 for body self-concept and α=0.82 for personal self-concept.

4. Motivated Strategies for Learning Questionnaire (MSLQ) was developed by Pintrich et al. (1991), and includes 31 items about motivation, presented on a 7-point Likert scale of 1 (Not true at all) to 7 (Very true). For example: "In my academic studies, I prefer challenging material, so I can learn new things". The questionnaire addresses five aspects: internal motivation, external motivation, mission value, beliefs about control of learning, and self-efficacy. The reported reliability of both the original questionnaire and the questionnaire used in this study was α=0.93.

Procedure

The data were gathered through an online questionnaire on the Google Forms platform that was translated into Arabic after it was approved by the Research Authority's ethics committee at the college. The data collection began in March 2022. The link to the questionnaire was sent through the various departments on social media (including WhatsApp student groups, Instagram, and Facebook). The students received a letter informing them that the aim was to gather information solely for research purposes, and that participation was voluntary. Also, that the questionnaire was anonymous, answers would be kept confidential as common in social studies, and subject to the ethical code of the Research Authority.

Findings

The first part of this section is devoted to demographic data and descriptive statistics. The second part presents the findings of the main analyses that were performed to examine the hypotheses.

Descriptive Statistics

Table 1 presents the demographic data of the study participants.

Table 1. Demographic data of participants (N=857)

		N	%
Gender	Male	200	23.3
	Female	657	76.7
Marital status	Single	673	78.5
	Married	174	20.3
	Divorced	9	1.1
	Widowed	1	0.1

Religion	Muslim	728	85.1
	Christian	80	9.4
	Druze	47	5.5
Geographic location	North	385	44.9
	South	387	45.2
	Jerusalem	63	7.4
	Center	22	2.6
Type of town	City	210	24.5
	Village	580	67.7
	Mixed city	67	7.8
Academic institution	University	249	29.1
	College	608	70.9
Year of studies	1st	204	23.8
	2nd	204	23.8
	3rd	302	35.2
	4th	147	17.2
Matriculation units in Hebrew language	3 units	441	51.5
	5 units	416	48.5
Psychometric exam	Yes	508	59.3
	No	349	40.7
Hebrew proficiency questionnaire (YAEL)	Yes	552	64.4
	No	305	35.6

Table 2 describes the learning achievements of the entire sample.

Table 2. Learning achievements among entire sample (N=857)

	M	SD	Min.	Max.
Average high school grade	91.21	9.22	46.00	127.00
Psychometric score	544.61	85.05	200.00	800.00
YAEL exam score	99.86	19.47	12.00	149.00
Average grade – current academic year	83.89	8.37	30.00	100.00

Table 3 displays the descriptive statistics of the research variables.

Table 3. Descriptive statistics of research variables

	α	M	SD	Min.	Max.
Academic self-image	0.76	3.14	.43	1.58	4.00
Social self-image	0.83	3.33	.49	1.42	4.00
Hebrew proficiency – self-report	0.93	3.86	1.22	1.00	5.00
Hebrew proficiency – YAEL exam		99.86	19.47	12.00	149.00
Motivation	0.93	5.46	0.87	1.74	7.00
Achievements		83.89	8.37	30.00	100.00

– current academic year					

Analyses of Research Hypotheses

H1: The first hypothesis maintained that students with Hebrew language proficiency would report high academic and social self-image, learning motivation and academic success. Pearson correlations were performed between Hebrew language proficiency and self-image, motivation, and academic achievements. The results are presented in Table 4.

Table 4. Pearson correlations between Hebrew language proficiency and self-image, motivation, and academic achievements

	Academic self-image	Social self-image	Motivation	Grades – current academic year
Hebrew proficiency self-report – male students	.169*	.306***	.157*	.157*
YAEL exam – male students	.337***	.305**	.190*	.183
Hebrew proficiency self-report – female students	.217***	.182***	.079*	.085*
YAEL exam – female students	.152**	.052	.050	.261***

*p<.05, **p<.01, ***p<.001

The results show that the hypothesis was partially corroborated. Significant positive relationships were found between self-reported Hebrew proficiency, and both academic and social self-image, learning motivation, and current academic year's grades; namely, the higher the reported Hebrew proficiency was, the higher academic and social self-image, motivation and grades were. Also, for male students, significant positive relationships were found between YAEL exam results, and academic and social self-image, and motivation. For female students, significant positive relationships were found between YAEL exam results, and academic self-image, and academic achievements.

H2: The second hypothesis assumed that first-year students would report low proficiency in Hebrew, low self-image, low motivation, and low achievements whereas second-, third-, and fourth-year students would report higher levels of all variables. One-way ANOVA tests were employed to examine this hypothesis; the results are presented in Table 5.

Table 5. Differences in Hebrew proficiency, self-image, motivation, and achievements by academic year

	1st year (N=204)		2nd year (N=204)		3rd year (N=302)		4th year (N=147)		
	M	SD	M	SD	M	SD	M	SD	*F*
Academic self-image	3.08	0.42	3.09	0.44	3.14	0.44	3.30	0.39	8.53***
Social self-image	3.30	0.48	3.30	0.51	3.35	0.48	3.35	0.50	0.68
Hebrew proficiency self-report	3.84	1.14	3.68	1.22	3.79	1.33	4.31	1.00	8.49***
Hebrew proficiency YAEL exam	102.46	19.57	98.54	18.29	97.62	19.54	103.94	20.42	2.84*
Motivation	5.45	0.89	5.33	0.92	5.49	0.84	5.59	0.82	2.77*
Achievements current year	83.53	8.43	84.56	7.68	83.54	8.01	84.15	9.86	0.73

*p<.05, **p<.01, ***p<.001

As can be seen, the hypothesis was not confirmed. Significant differences were found in academic self-image, self-reported proficiency, YAEL proficiency exam, and motivation. Further Scheffé analysis found that academic self-image and self-reported proficiency were higher among 4th year students that among others. But, the Scheffé analysis could not find the source of the significance level of YAEL proficiency exam and motivation. Also, no significant differences were found for social self-image and current year achievements.

H3: The third hypothesis maintained that differences would be found between Hebrew language proficiency, academic and social self-image, motivation and achievements between students in various higher education institutions, so that university students would report higher levels of all measures than college students. T-tests for independent samples produced the results described in Table 6.

Table 6. Differences between university and college students

	University (N=204)		College (N=204)		
	M	SD	M	SD	*t*
Academic self-image	3.18	0.43	3.13	0.43	1.53
Social self-	3.31	0.47	3.33	0.50	-0.49

image					
Hebrew proficiency self-report	3.96	1.17	3.82	1.25	1.48
Hebrew proficiency YAEL exam	109.68	18.13	95.62	18.49	7.93***
Motivation	5.49	0.84	5.45	0.88	0.55
Achievements current year	83.79	10.64	83.92	7.29	-0.20

*p<.05, **p<.01, ***p<.001

The hypothesis was only partially supported. Hebrew language proficiency-YAEL exam was significantly higher among university students than among college students. No significant differences were found for any of the other variables.

H4: The fourth hypothesis assumed that relationships would be found between social and academic self-image, and motivation and achievements. Pearson correlations were performed to examine this hypothesis, and the results are displayed in Table 7.

Table 7. Pearson correlations between self-image, and motivation and academic achievements

	Motivation	Academic achievements – current year
Academic self-image	.513***	.228***
Social self-image	.449***	.072*

*p<.05, **p<.01, ***p<.001

The hypothesis was confirmed. Significant positive relationships were found between academic and social self-image, and motivation and academic achievements; namely, the higher the self-image was, the higher the students' motivation and achievements were.

H5: The fifth hypothesis suggested that relationships would be found between Hebrew language proficiency and academic achievements, and the number of the students' Hebrew matriculation units. T-tests for independent samples were employed to examine the hypothesis. The results are described in Table 8.

Table 8. Differences between students by number of Hebrew matriculation units

	3 units (N=441)		5 units (N=416)		
	M	SD	M	SD	*t*
Hebrew proficiency self-report	3.69	1.18	4.04	1.25	-4.17***
Hebrew	92.77	19.39	105.31	17.72	-7.60***

proficiency YAEL exam					
Achievements – current year	82.45	8.98	85.45	7.372	-5.15***

*p<.05, **p<.01, ***p<.001

The fifth hypothesis was corroborated. Significant differences were found in Hebrew language proficiency and the current year's achievements between examinees in 3-unit and 5-unit matriculation exams in Hebrew in high school. The results were higher for those who had done 5 units.

H6: the sixth hypothesis assumed that a relationship would be found between the participant's high school grade in Hebrew language and current academic success. Pearson correlations were performed to test this hypothesis. Table 9 depicts the results.

Table 9. Pearson correlations between high school grade, and proficiency and achievements

	Hebrew proficiency self-report	Hebrew proficiency YAEL exam	Achievements – current year
High school grade	0.88**	.406***	.217***

*p<.05, **p<.01, ***p<.001

The hypothesis was corroborated. Significant positive relationships were found between high school grades, and Hebrew language proficiency and academic achievements. That is to say, the higher the high school grades were, the higher the proficiency (both self-report and YAEL exam) and current year's achievements were.

H7: The seventh and last hypothesis assumed that differences would be found in three aspects of Hebrew language proficiency by gender. T-tests for independent samples were employed to examine the hypothesis. The results are displayed in Table 10.

Table 10. Hebrew proficiency differences by gender

Hebrew language proficiency	Males (N=200)		Females (N=657)		
	M	SD	M	SD	*t*
Speaking	2.18	1.28	2.25	1.14	-0.71
Reading	2.04	1.39	2.07	1.39	-0.33
Writing	2.10	1.32	2.08	1.34	0.21

As can be seen, this hypothesis was refuted. No differences were found between male and female participants in Hebrew (speaking, reading and writing) proficiency.

Discussion

The present research examined the effect of Hebrew language proficiency on the academic and social self-image, motivation and academic success of Arab students in Israeli academia. Seven hypotheses were formed following the literature review, in a qualitative study that included 857 participants.

The findings indicate that Arab students who are proficient in Hebrew also have high learning motivation, social and academic self-image, and good achievements in their current academic year. Students with high self-image have high motivation to learn and are academically successful. Furthermore, Arab students who had finished high school with 5 matriculation units in Hebrew, reported higher proficiency, and their current year results were higher than those with 3 units in Hebrew. Most students who reported good high school grades have better academic achievements than those who reported lower grades.

The literature (Geva et al., 2017; Mizel, 2021; Tehawkho et al., 2020) reinforces these findings, and shows that Hebrew language proficiency affects future success, and supports the possibility to get a good job or continue to advanced academic degrees in Israeli institutions that teach in Hebrew. Additionally, one of the main reasons for their desire to learn Hebrew is because it would be more effective in their grade. But, Hebrew proficiency outside the college relates to Arab students' ability to use the language – reading, writing, hearing, and speaking – in their everyday life. also, the literature (Orth, Robins & Widaman, 2012) has indicated a positive relationship between academic self-image and motivation to learn; so that positive academic self-image motivates individuals to cope with tasks presented to them, as opposed to negative self-image, which triggers avoidance of tasks that require effort.

The number of matriculation units and high school grades, and their effect on Hebrew language proficiency, can be explained by the literature, which reported a positive correlation between hours of exposure to Hebrew at school and proficiency (Tehawkho et al., 2020; Mizel,2021). In other words, an Arab student who took the matriculation exam in Hebrew was exposed more to the language than a student who had not, and a 5-unit student was exposed more than a 3-unit student. The Hebrew reading and writing proficiency level of Arabs, and their ability to communicate in Hebrew at the end of high school, can have a significant effect on integration into academia. The college acceptance prerequisite for graduates of the Arab education system includes at least 3 units matriculation in Hebrew and a threshold score in the YAEL exam (Tehawkho et al., 2020).

On the other hand, concerning the relationship between Hebrew proficiency and the variables self-image, motivation and achievements

by type of higher education institution (university or college) or by academic year, it was found that university students had higher YAEL scores than college students did. The literature emphasizes that Arab students in both colleges and universities are expected to be proficient in Hebrew, similar to native Hebrew-speakers - understand lectures, take exams, write academic papers, or present academic work (Manor, 2019). Also, no differences were found in Hebrew proficiency – speaking, reading and writing – between men and women, which contradicts Ali (2013), who found that most Arab students reported many challenges during their first years in academia, particularly citing the language barrier. Students studying for higher degrees, on the other hand, have had more years of experience, and thus are more proficient in Hebrew (Mizel, 2021(. Furthermore, Zoabi (2012) reported that Arab students often found it hard to adapt to academic studies. Their first year was traumatic: they found it hard to adjust to the teaching methods and to cope with academic assignments. Positive self-image could serve as a crutch for success in many areas, and could help students to cope with the academic challenges, and motivate them to succeed in their studies (Eccles, 2011; Sowislo & Orth, 2012).

Contradictory findings show that there are differences by religion of the proficiency between various groups in Arab society. Among men, 94% of the Druze and Christians report good to very good command of Hebrew, as opposed to 80-84% of Muslims. Among women, 94% of Christians report good to very good command of spoken Hebrew, as opposed to 77% Druze and 58-66% Muslim women (Cook, 2016; Toma, 2016). Concerning gender, segmentation by districts reveals two populations within Arab society where Hebrew proficiency is considerably lower – the population of East Jerusalem, and the Bedouin women in the south. Only 8% of the women in East Jerusalem and 34% of Bedouin women reported good to very good proficiency in spoken Hebrew, as opposed to 62-64% women in other districts. Among men, 40% in East Jerusalem, as opposed to 76-88% in other districts, reported the same (Tehawkho et al., 2020). Manor (2019) further emphasized that Arab students in higher education institutions are expected to be proficient in Hebrew similarly to those whose mother tongue it is – to understand lectures, to take exams, to present and speak about presentations, and submit written papers in Hebrew.

Limitations

Many of this study's limitations are related to the choice of the research population, sample, and tools. First, it could have been helpful to examine the perceptions of lecturers and professors about the Arab student's Hebrew language proficiency, and its effect on his/her motivation to learn, self-image, participation in class, and academic success. Second, this study relied on data collection through closed

questionnaires. For better understanding of the effects and implications to Arab students, open-ended questions and interviews with various stakeholders could have provided more insights and perceptions.

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