

# **Transcultural Comparison of the Professional Identity and Role Perceptions of Special Education Pre-Service Teachers in Israel**

**Janette Saied, Alina S. Rusu**

# Transcultural Comparison of the Professional Identity and Role Perceptions of Special Education Pre-Service Teachers in Israel

Janette Saied <sup>a\*</sup>, Alina S. Rusu <sup>a, b</sup>

<sup>a</sup> Doctoral School "Education, Reflection, Development", Babes-Bolyai University, 7 Sindicatelor Street, 400029, Cluj-Napoca, Romania

<sup>b</sup> Faculty of Animal Sciences and Biotechnologies, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Calea Mănăştur 4-5, Cluj-Napoca, Romania

\*Corresponding author: [Janetsa@gordon.ac.il](mailto:Janetsa@gordon.ac.il)

## Abstract

### Keywords:

role perception; teaching self-efficacy; cultural diversity; special education; pre-service teachers.

This study examines the differences and similarities between Arab and Jewish pre-service teachers (PSTs) in Israel, in terms of their professional identity development, their perceptions of the teacher's role and their self-efficacy in teaching. The sample consisted of 168 PSTs from a College for education in Israel, 103 Jewish and 65 Arab. All the participants study for B.A. in Special Education. The research instruments were: Teacher Professional Identity Scale, Teacher's Self Efficacy Scale, Professional identity Scale for SE teachers. A significant main effect of year of study was found in the PSTs' professional identity development, indicating that the second-year PSTs scored higher than the first-year PSTs. Additional paired samples t-test examining the differences between the two time points in each cultural sector and each year of study indicated that both Jewish and Arab second year PSTs scored higher on the teaching self-efficacy at the end of the second academic year compared to the beginning of the same year.

## Zusammenfassung

### Schlüsselworte:

Rollenwahrnehmung; Selbstwirksamkeitswahrnehmung beim Unterrichten; kulturelle Diversität; Sonderpädagogik; Lehrer im Referendariat.

Diese Studie untersucht die Unterschiede und Gemeinsamkeiten zwischen arabischen und jüdischen Lehrern im Referendariat in Israel, hinsichtlich der Entwicklung ihrer beruflichen Identität, ihrer Auffassung der Lehrerrolle und ihrer Selbstwirksamkeitswahrnehmung beim Unterrichten. Die Auswahl bestand aus 168 Referendar/innen an einem pädagogischen College in Israel, 103 jüdische und 65 arabische Teilnehmer/innen. Alle Teilnehmer/innen absolvieren ein B.A. Studium der Sonderpädagogik. Die Forschungsinstrumente waren: Umfang der beruflichen Identität der Referendar/innen, Umfang der Selbstwirksamkeitswahrnehmung der Referendar/innen, Umfang der beruflichen Identität von Sonderpädagogen. Die Ergebnisse zeigten bei den untersuchten Variablen einen signifikanten Unterschied zwischen den jüdischen und arabischen im Referendariat befindlichen Teilnehmern. Zusätzliche t-Tests bei gepaarten Stichproben, die die Unterschiede zwischen den beiden Messzeiten in jedem kulturellen Sektor und jedem Studienjahr untersuchten, zeigten, dass sowohl jüdische als auch arabische im zweiten Studienjahr befindliche Referendar/innen am Ende des zweiten akademischen Jahres höhere Werte hinsichtlich ihrer Selbstwirksamkeitswahrnehmung beim Unterrichten erreichten als zu Beginn desselben Jahres.

## 1. Introduction

The formation of professional identity (PI) in pre-service teachers (PSTs) was addressed in numerous studies dating back to the mid 2000's. Schepens et al. (2009) examined the formation of PI in two aspects: (1) the demographic and personality traits contributing to the propensity for becoming a teacher; and, (2) the contribution of experience and education to becoming a teacher. While one of the key predictors for teachers' future degree of self-efficacy, their commitment to the teaching profession and their level of professional orientation, is the education they earned, the most important predictor for these factors in pre-service teachers appears to be their preparation process towards becoming a teacher. Along this process, their

professional identity represents the result of a series of individual and collective interacting factors.

Tickle (1999) defines professional teaching identity (PTI) as a teacher's feeling of belonging to the profession and identifying with it. The PTI concept includes two components that are interconnected: (1) The teachers' prior experience and personal attributes as contributing to their self-perception as teachers, in their professional life; (2) The perception of teachers by their surrounding environment, including students, peers, students' parents, or the general public. Professional teaching identity can impact in various ways the teacher's behavior, work method, ways of thinking, beliefs, and statements (Altman & Katz,

2001), as well as work satisfaction (Kelchtermans, 2009), the sense of burnout and the failure to remain in the education system (Fisherman, 2016).

Živković (2018) examined the self-reported attitudes towards the main professional identity aspects in PSTs, indicating that the PSTs perceive the role of teaching more as a specific job rather than as a profession. They are rather goal-oriented towards their job as teachers, and perceive their practice as a part of their studies and not necessarily as a result of their PI development as teachers. One potential explanation offered by Živković (2018) is that beginner teachers might experience PI-related tensions, especially during the transition period from the status of PST to the one of being a teacher.

## 2. Theoretical foundation

The primary perception of the PSTs of their role during the first year of their studies at various education colleges in Israel was found to change during the various stages of their training process. The role perception (RP) is defined as the conscious part of the mind of the individual performing the role (Poper & Ronen, 1992). According to Manor-Binyamini (2001), RP includes two components: *seeing the role as a part of reality* and *seeing the role as an ideal* that needs to be achieved.

During their initial training stage, the PSTs who were undergoing training placed a larger emphasis on the emotional factor and as a result perceived the teaching profession as very dynamic. As their training progressed, the PSTs focused on other professional traits, somewhat disregarding the originally focused-on emotional factor (Caspi et al., 2019). This shift was interpreted to be in line with the theoretical and practical learning processes, and with the fact that the PST's perceptions vary depending on the stage of their professional and learning development.

Laron and Shkedi (2006) examined the professional-pedagogical development of PSTs in regard to their RP during the training program in one of Israel's education colleges, focusing on the first and second year practicums. During the course of the study, changes in RP were identified as part of the PSTs' professional development process. The participants were able to preserve their ideological passion and translate it into actions throughout their first year of practicum in informal education. The change in their perceptions occurred in the beginning of the second year, when they began teaching regular

(formal) lessons in schools. According to the researchers, the PSTs were unable to preserve their ideological vision in the formal school framework due to the difficulties they faced while teaching and steering the classroom and in light of the demanding standards by the school systems. A proposed way to preserve the sense of vision and mission of the PSTs lies in finding a new practicum approach that allows the PSTs to face the reality in schools, while simultaneously encouraging them to maintain their early on-set ideological motivation and vision throughout their professional development (Laron & Shkedi, 2006).

Cultural background is crucial for the formation of pre-service teachers' professional identity. This aspect is often investigated in multicultural societies, such as Israel. Israel is considered a heterogeneous, multi-ethnic and multi-cultural society. The different groups that comprise the society differ from each other in terms of their nationalities, religious affiliations, ethnicity, class, and political orientation (Aden et al., 2001; Al-Haj, 2012). A majority (~74%) of the citizens in Israel are Jewish. There are also minorities, the largest of which is the Arab minority (~21.1%), which includes Muslims and Christians (Central Bureau of Statistics, 2022). Israel was established as the Nation-State of the Jewish people (Boimel, Ze'evi, & Totry, 2009; Haider, 2005). From the date of its establishment, the citizens of Israel were divided into two main populations: "Jewish" and "non-Jewish". The latter category is mostly comprised of the Israeli Arab population (Haider, 2005). Due to the Jewish-Hebrew-Zionistic nature of Israel and in light of the country's economic and political structure, Arab and Jewish persons differ in several aspects of their daily life. As such, there are differences in culture, language, religion, nationality, geographic location, ideology, customs, education and employment systems (Abu-Baker, 2012; Boimel et al., 2009).

The state of Israel acknowledges the Arab-Israelis as a religious, cultural and lingual minority, but not as a national minority. As a result, Arabs receive the status of an ethnic minority without receiving national rights. Nevertheless, Arabs function successfully as a cultural minority, inter alia, due to the following factors: they may operate a separate education system funded by the government and are free to cultivate their culture due to their geographic-cultural concentration (Ali & Daas, 2018).

The Israeli education system includes universities, research institutions and a wide range of colleges that award an academic degree, located throughout the country (Ayalon & Yogev, 2005; Shochat & Zilkha, 2007). Higher education is perceived as an important and exclusive means that can promote the Arab social mobility (Haj-Yahya & Arar, 2009) and improve their status and financial standing (Ali & Daas, 2018). Over the years, an increase in the attendance rate of Arabs in higher education institutions has been observed, in addition to an improvement in the status of Arab women and an overall increase in the quality of life (Hadad Haj-Yahya, 2016). According to data of the Council for Higher Education in Israel (2020), over the last decade, the number of Arab students into higher education systems has significantly increased and even doubled in size. Despite the aforementioned growth rate in the integration of Arab students in institutions for higher education, the attendance rate of Arab males in higher education institutions has barely increased over the last decade (Haj-Yahya et al., 2021). To date, very few studies have been conducted on the integration of Arabs in Jewish colleges and the difficulties they encounter during their years of education.

Another important variable that is associated with the formation of professional identity in students interested in becoming teachers is teaching self-efficacy (TSE). As per to Bandura (1997), self-efficacy is a person's belief in one's ability and willingness to experiment with various tasks. Teachers' self-efficacy can affect their behavior and the way that they cope with various tasks, the effort they will put in them, their feeling in relation to the, and their thoughts regarding their performance. Kass and Friedman (2005) explored the sources that structure the TSE from their standpoint and in a holistic view. The study found that the cognitive and emotional aspects of the teachers' early personal life, originating back to their parents' and their immediate family, has a stronger impact on their professional sense of self-efficacy, compared to the impact of their actual professional experiences, including verbal encouragement by their professional surrounding, their observation of the behaviors of colleagues and their personal interpretation of situations.

Mahajna (2014) examined the relationship between the PSTs' environmental factors and their self-efficacy in teaching, through motivational and behavioral factors. In the study participated young students from the Arab sector, who attended various

internship programs in a teacher training college in Israel. The findings indicated that the environmental factors (the perceptions of society towards the teaching profession and the quality of the relationship with colleagues), the motivational factors (personal feelings towards the profession and reflective thinking) and the expressive teaching skills factor, contributed to predicting TSE. According to Mahajna (2014), training programs for teachers are meant to explicitly emphasize contents with the goal of cultivating the professional commitment to the profession and strengthening the professional identity, while cultivating the teacher's reflective thinking ability, which likely has a positive effect on self-efficacy. Since TSE can be affected by various factors and is primarily evolving during the training years, such programs are meant to provide opportunities and experiences that may promote the development of self-efficacy among PSTs.

Various studies have examined the contribution of the practicum program to pre-service teachers and compared between different available programs. There are only few studies examining students from the Arab society among the special education students in Israel (Anderson & Stillman, 2013; Maskit & Dorfberger, 2018; McElwee, Regan, Baker, & Weiss, 2018). Furthermore, there is a lack of current comparative studies between Jewish and Arab pre-service teachers in the special education undergraduate program regarding the impact of the practicum program.

This study aims to examine the differences and similarities between Arab and Jewish pre-service teachers in Israel, in terms of their professional identity, their perceptions of the role of a Special Education teacher and their teaching self-efficacy. The pre-service teachers participating in the study come from the two main cultures and ethnicities in the Israeli society: Jewish and Arab. The participants were included in the following two categories of groups: PSTs who participated in the practicum training program in the special education course (second year in program, also called the experimental group), and PSTs who have not yet undergone the practicum program (first year in program, also called the control group).

The research questions that guided the study are the following:

1. Are there differences between the two time points (beginning of semester A, end of semester B),

the two study groups (first year, second year) and the two sectors (Jewish, Arab) in the following variables: pre-service teachers' professional identity development, their perceptions of the role of special education teachers and their teaching self-efficacy (TSE)?

2. Are there differences among PSTs who will be assigned to the experimental group between the two time points (beginning of semester A, end of semester B), and the two sectors (Jewish, Arab) in the target variables?

3. Will the pre-service teachers' demographic characteristics contribute significantly to the explained variance (EPV) of the target variables in each time point?

### Research Hypotheses

The hypotheses related to research questions are:

1. At the end of the practicum program, improvements will be found in both cultural sectors in the pre-service teachers' professional identity development, their perceptions of the role of a special education teacher and their TSE.

2. In light of the lack of current comparative studies between Jewish and Arab pre-service teachers

in the special education undergraduate program regarding the impact of the practicum program on the perceptions and TSE, no hypothesis has been formulated as to the differences between the sectors, this aspect having an exploratory nature.

A contribution will be found of the PSTs' demographic characteristics to the explained variance (EPV) of their PI development, their perceptions of the role of special education teachers

## 3. Research methodology

### 3.1. Research participants

A number of 168 students (7 males and 161 females) who are studying for B.A. in Special Education at a College of Education in the Northern part of Israel had participated in this research. The students' ages ranged between 20 and 53 ( $M = 27.80$ ,  $SD = 7.83$ ). 103 Jewish PSTs (6 males and 97 females) and 65 Arab students (1 male and 64 females) were samples from the first and the second study years at the college (67 first year PSTs, 101 second year PSTs). Chi-square analysis indicated that the participants from the two sectors did not differ in study year. Table 1 presents the background characteristics of the PSTs who participated in the current study by cultural sector.

Table 1. Frequency (%) of the demographic characteristics of the participants in the two groups.

Background characteristics	Values	Jewish ( $n = 103$ )	Arab ( $n = 65$ )	$\chi^2$	$p$																																																																																				
Gender	Male	6 (5.8%)	1 (1.5%)	1.83	.176																																																																																				
	Female	97 (94.2%)	64 (98.5%)			Year of study	First year	45 (43.7%)	22 (33.8%)	1.61	.204	Second year	58 (56.3%)	43 (66.2%)	Study model	Concurrent	88 (85.4%)	36 (55.4%)	18.62***	.001	Consecutive	15 (14.6%)	29 (44.6%)	Marital status	Single	68 (66.0%)	46 (70.8%)	.41	.521	Married	35 (34.0%)	19 (29.2%)	Religious <sup>1</sup>	Orthodox	3 (2.9%)	0 (0.0%)	2768.50*	.039	Religious	7 (6.8%)	11 (16.9%)	Traditional	42 (40.8%)	32 (49.2%)	Secular	51 (49.5%)	22 (33.8%)	Living	In the center of Israel	8 (7.8%)	1 (1.5%)	3.05	.081	In the north of Israel	95 (92.2%)	64 (98.5%)	Residential area	Mixed city or locality	56 (54.4%)	49 (75.4%)	7.51**	.006	A city or settlement only of Jews or Arabs	47 (45.6%)	16 (24.6%)	Additional specialization	No	45 (43.7%)	38 (58.5%)	3.48	.062	Yes	58 (56.3%)	27 (41.5%)	Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010	Yes	7 (6.8%)	13 (20.0%)	Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826
Year of study	First year	45 (43.7%)	22 (33.8%)	1.61	.204																																																																																				
	Second year	58 (56.3%)	43 (66.2%)			Study model	Concurrent	88 (85.4%)	36 (55.4%)	18.62***	.001	Consecutive	15 (14.6%)	29 (44.6%)	Marital status	Single	68 (66.0%)	46 (70.8%)	.41	.521	Married	35 (34.0%)	19 (29.2%)	Religious <sup>1</sup>	Orthodox	3 (2.9%)	0 (0.0%)	2768.50*	.039	Religious	7 (6.8%)	11 (16.9%)		Traditional	42 (40.8%)	32 (49.2%)			Secular	51 (49.5%)	22 (33.8%)	Living	In the center of Israel	8 (7.8%)	1 (1.5%)	3.05	.081	In the north of Israel	95 (92.2%)	64 (98.5%)	Residential area	Mixed city or locality	56 (54.4%)	49 (75.4%)	7.51**	.006	A city or settlement only of Jews or Arabs	47 (45.6%)	16 (24.6%)	Additional specialization	No	45 (43.7%)	38 (58.5%)	3.48	.062	Yes	58 (56.3%)	27 (41.5%)	Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010	Yes	7 (6.8%)	13 (20.0%)	Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826	Yes	42 (40.8%)	25 (39.1%)			
Study model	Concurrent	88 (85.4%)	36 (55.4%)	18.62***	.001																																																																																				
	Consecutive	15 (14.6%)	29 (44.6%)			Marital status	Single	68 (66.0%)	46 (70.8%)	.41	.521	Married	35 (34.0%)	19 (29.2%)	Religious <sup>1</sup>	Orthodox	3 (2.9%)	0 (0.0%)	2768.50*	.039	Religious	7 (6.8%)	11 (16.9%)		Traditional	42 (40.8%)	32 (49.2%)			Secular	51 (49.5%)	22 (33.8%)	Living	In the center of Israel	8 (7.8%)	1 (1.5%)	3.05	.081	In the north of Israel	95 (92.2%)	64 (98.5%)	Residential area	Mixed city or locality	56 (54.4%)	49 (75.4%)	7.51**	.006	A city or settlement only of Jews or Arabs	47 (45.6%)	16 (24.6%)	Additional specialization	No	45 (43.7%)	38 (58.5%)	3.48	.062	Yes	58 (56.3%)	27 (41.5%)	Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010	Yes	7 (6.8%)	13 (20.0%)	Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826	Yes	42 (40.8%)	25 (39.1%)												
Marital status	Single	68 (66.0%)	46 (70.8%)	.41	.521																																																																																				
	Married	35 (34.0%)	19 (29.2%)			Religious <sup>1</sup>	Orthodox	3 (2.9%)	0 (0.0%)	2768.50*	.039	Religious	7 (6.8%)	11 (16.9%)		Traditional	42 (40.8%)	32 (49.2%)			Secular	51 (49.5%)	22 (33.8%)	Living	In the center of Israel	8 (7.8%)	1 (1.5%)	3.05	.081	In the north of Israel	95 (92.2%)	64 (98.5%)	Residential area	Mixed city or locality	56 (54.4%)	49 (75.4%)	7.51**	.006	A city or settlement only of Jews or Arabs	47 (45.6%)	16 (24.6%)	Additional specialization	No	45 (43.7%)	38 (58.5%)	3.48	.062	Yes	58 (56.3%)	27 (41.5%)	Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010	Yes	7 (6.8%)	13 (20.0%)	Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826	Yes	42 (40.8%)	25 (39.1%)																					
Religious <sup>1</sup>	Orthodox	3 (2.9%)	0 (0.0%)	2768.50*	.039																																																																																				
	Religious	7 (6.8%)	11 (16.9%)																																																																																						
	Traditional	42 (40.8%)	32 (49.2%)																																																																																						
	Secular	51 (49.5%)	22 (33.8%)																																																																																						
Living	In the center of Israel	8 (7.8%)	1 (1.5%)	3.05	.081																																																																																				
	In the north of Israel	95 (92.2%)	64 (98.5%)			Residential area	Mixed city or locality	56 (54.4%)	49 (75.4%)	7.51**	.006	A city or settlement only of Jews or Arabs	47 (45.6%)	16 (24.6%)	Additional specialization	No	45 (43.7%)	38 (58.5%)	3.48	.062	Yes	58 (56.3%)	27 (41.5%)	Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010	Yes	7 (6.8%)	13 (20.0%)	Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826	Yes	42 (40.8%)	25 (39.1%)																																																
Residential area	Mixed city or locality	56 (54.4%)	49 (75.4%)	7.51**	.006																																																																																				
	A city or settlement only of Jews or Arabs	47 (45.6%)	16 (24.6%)			Additional specialization	No	45 (43.7%)	38 (58.5%)	3.48	.062	Yes	58 (56.3%)	27 (41.5%)	Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010	Yes	7 (6.8%)	13 (20.0%)	Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826	Yes	42 (40.8%)	25 (39.1%)																																																									
Additional specialization	No	45 (43.7%)	38 (58.5%)	3.48	.062																																																																																				
	Yes	58 (56.3%)	27 (41.5%)			Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010	Yes	7 (6.8%)	13 (20.0%)	Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826	Yes	42 (40.8%)	25 (39.1%)																																																																		
Previous course in special education	No	96 (93.2%)	52 (80.0%)	6.62**	.010																																																																																				
	Yes	7 (6.8%)	13 (20.0%)			Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826	Yes	42 (40.8%)	25 (39.1%)																																																																											
Previous experience with special education PSTs	No	61 (59.2%)	39 (60.9%)	.05	.826																																																																																				
	Yes	42 (40.8%)	25 (39.1%)																																																																																						



As indicated in Table 1, the two cultural sectors differed significantly in their study model<sup>1</sup>. Although the percentage of PSTs of both sectors in the concurrent study model is higher than the percentage of PSTs in the consecutive study model, the percentage of Arabs in the consecutive study model is higher than the percentage of Jews. The two sectors also differ significantly in the residential area. The percentage of Arabs who reside in a mixed city<sup>2</sup> or locality is higher than the percentage of Jews who reside in the same areas. While a higher percentage of Jews reported of having an additional specialization except for special education (almost reaching a significance level  $p = .062$ ), a higher percentage of Arabs reported of having previously taken courses in SE aside from their college studies. Finally, the results of the Mann-Whitney analysis indicated that the religiosity level was significantly higher among the Arab students compared to the Jewish ones (less percentage of Arabs reported of being secular).

### 3.2. Data collection

The research was conducted in a college of education in the northern region of Israel at 2022/2023 academic year. The questionnaires were administered at two time points- beginning of semester A (Nov. 2022) and end of semester B (June 2023). The researcher administered the questionnaires to all the PSTs who participated in the study during classes at the college. In order to conduct this study according to the required procedures, the proposal was approved by the research ethics board in the college where the study was conducted. Additionally, the researcher gained consent from each of the PSTs, to collect data and to analyse their questionnaires. All participants voluntarily took part in the research by consciously signing the form of consent. Answering the questionnaire was anonymous. They were assured that the researcher is committed to absolute confidentiality, and the entire material will remain confidential, by using it for research goals only. The researcher administered the questionnaires to all the PSTs included in the study. In order to reduce the potential biases in data interpretation, an expert who is

unfamiliar with the participants conducted the statistical analyses of the questionnaires.

### 3.3. Instruments

In this study, three tools were used, which are valid and reliable questionnaires that exist in the literature and some of them were already available in Hebrew language, being previously used in other research studies. The questionnaires were administered at two time points: at the beginning of semester A and at the end of semester B.

#### 3.3.1. The Scale of Teachers' Professional Identity (Fisherman & Weiss, 2011)

This scale is based on previous scales developed by several researchers, including: Kramer and Hoffman (1981), Galante (1985), Fisherman (2004). The Teacher's Professional Identity scale is comprised of 27 items that are divided into 4 factors. All of the 27 items in the Teacher Professional Identity Scale were translated into Hebrew by Luzzato and Rusu (2019). The first factor measures the level of *career choice confidence* ("I am sure that my choice in the teaching profession was right"). Cronbach's alpha formula in the current study indicated a reliability of  $\alpha = .92$  for the first factor. The second factor measures the level of *professional efficacy*. This measure evaluates the teachers' self-perception regarding their degree of knowledge possession of skills and tools for succeeding as a teacher. Cronbach's alpha formula in the current study indicated a reliability of  $\alpha = .78$  for the second factor. The third factor measures the level of *sense of mission*. This measure examines the teacher's degree of perception of the teaching profession as a mission. Cronbach's alpha formula in the current study indicated a reliability of  $\alpha = .70$  for the current study. The fourth factor measures the level of *reputation*. This measure expresses the teachers' perception towards the profession ("I feel respect for teachers"). Cronbach's alpha formula in the current study indicated a reliability of  $\alpha = .43$  for this factor. Due to low reliability level of this factor, we did not conduct any statistical analysis regarding it. In the current study, the internal consistency level of all

<sup>1</sup> There are two main models that coexist for teacher training programs in Israel: (1) the **concurrent** model, designed for those who turn to teaching as their first career; (2) the **consecutive** model, designed for graduates who have completed the disciplinary stage during early academic studies towards a bachelor's degree and sometimes a master's degree (Zuzovsky, & Donitsa-Schmidt, 2017).

<sup>2</sup> The Arab society is comprised of an urban population that resides both in Arab cities and in mixed Arab-Jewish cities as well as of population that lives in rural Arab villages (Shaviv, Binstein, Stone, & Fudem, 2013).

items in the questionnaires was extremely high,  $\alpha = .93$ .

### 3.3.2. Professional Identity Scale for Special Education Teachers (Hao, Niu, Li, Yue & Liu 2014)

The original version of the scale measured how nurses perceive their profession. This scale was adapted for being used among special education teachers to measure how they perceive the teaching profession. The scale contains 17 items that were divided into 5 factors. The first factor measures the level of *professional self-image* (“*I like being a special education teacher*” instead of “*I like being a nurse*”). According to Chronbach’s alpha formula, the reliability of this factor was  $\alpha = .87$ . The second factor measures the level of *benefit of stability and fear of change* (“*Change may inflict emotional damage*”). According to Chronbach’s alpha formula, the reliability of this factor was  $\alpha = .54$ . The third factor measures the level of *comparisons and self-reflection* (“*I think it is important to be aware of conditions in other careers, in order to strengthen my professional belief in the teaching profession*”). According to Chronbach’s alpha formula, the reliability of this factor was  $\alpha = .59$ . The fourth factor measures the level of *independence of career choice* and contained 2 items. The reliability of that factor, according to Pearson correlation, was  $r = .14$ . The fifth factor measures the level of *social modelling* (“*I like to knowing of more development stories of some successful people in the field of special education*”) and contained 2 items. The reliability of that factor, according to Pearson correlation, was  $r = .66$ . Since the reliability levels of three out of five factors were less than 0.60, statistical analyses were conducted only on the total measure of this questionnaire. In the current study, the internal consistency level of all items in the questionnaires was high,  $\alpha = .87$ .

### 3.3.3. Teacher’s Self Efficacy Scale (Tschannen-Moran et al., 2001)

This scale measures the level of ability and competence in teaching. The scale contains 24 items that are divided into 3 factors. The first factor measures the level of *efficacy for student engagement* (“*I can get students to believe they can do well in their schoolwork*”). The reliability of that factor, according to Cronbach’s alpha formula in the current study, was  $\alpha = .88$ . The second factor measures the level of *efficacy for classroom management*. The reliability of that factor (Cronbach’s alpha) was  $\alpha = .88$ . The third

factor measures the level of *efficacy for instructional strategies* (“*I can use a variety of assessment strategies*”). The reliability of that factor (Cronbach’s alpha) was  $\alpha = .92$ . In the current study, the internal consistency level of all items in the questionnaires was extremely high,  $\alpha = .96$ .

## 4. Findings

Prior to examining the study questions and hypotheses, we conducted Shapiro-Wilk tests in order to evaluate the degree of normal distribution of the dependent variables for each sector (Jewish, Arab) and for each year of study (First and Second year). It was found that the distribution of the dependent variables deviated significantly from normal distribution, indicating the need to conduct both non-parametric and parametric analyses. Wilcoxon tests were conducted for purpose of evaluating the differences between the two time points (beginning of an academic year, end of an academic year) in each sector and in each year of study. Mann-Whitney tests were conducted to examine the differences between the two years of study in the dependent variables within and between the cultural in each year of study. This section presents the findings of the parametric analysis as the findings of the non-parametric analyses indicated the same level of significance as the parametric analyses.

For the purpose of examining the differences in the total score on each of the three questionnaires by sector and year of study at the beginning or the academic year (T1), three analyses of two-way ANOVA were conducted. For the purpose of examining the differences in the sub scales of the questionnaires by sector and year of study at T1, two-way MANOVA analyses were conducted (Table 2).

Significant differences were found between Jewish and Arab PSTs in the subscale “profession efficacy” in the PSTs’ professional identity development questionnaire, in the total score of the PSTs’ perceptions of the role of SE teachers’ questionnaire, as well as in the three subscales of the self-efficacy in teaching questionnaire (Table 2). In all these measures, the Arab PSTs scored higher than the Jewish PSTs. In addition, significant differences were found between the first-year and the second-year PSTs in the subscale “career choice confidence” regarding the PSTs’ professional identity development questionnaire and in the total scale as well as the three subscales of the self-efficacy in teaching questionnaire. In all these measures, the second-year PSTs scored higher than the first-year PSTs (Table 2).

Table 2. Mean, SD and F-values of the scores on the three questionnaires at T1 by cultural sector and by year of study.

Scales	Year of study	Jewish			Arab			Total			F-values ( $\eta^2$ )		
		N	M	SD	n	M	SD	n	M	SD	Sector	Year of study	Interaction
Career choice confidence	First	45	3.37	0.47	22	3.37	0.44	67	3.37	0.46	3.60 (.02)	4.52* (.03)	3.69 (.02)
	Second	58	3.04	0.52	43	3.35	0.47	101	3.18	0.52			
	Total	103	3.19	0.52	65	3.36	0.46	168	3.26	0.50			
Profession efficacy	First	45	3.43	0.33	22	3.49	0.42	67	3.45	0.36	5.08* (.03)	1.31 (.01)	1.78 (.01)
	Second	58	3.28	0.35	43	3.50	0.39	101	3.37	0.38			
	Total	103	3.35	0.35	65	3.49	0.40	168	3.40	0.37			
Sense of mission	First	45	3.33	0.49	22	3.31	0.57	67	3.32	0.51	.37 (.00)	1.54 (.01)	.73 (.00)
	Second	58	3.15	0.52	43	3.27	0.55	101	3.20	0.54			
	Total	103	3.23	0.51	65	3.28	0.55	168	3.25	0.53			
Perceptions regarding personal and professional identity development (Total)	First	45	3.37	0.36	22	3.39	0.44	67	3.38	0.39	3.76 (.02)	3.40 (.02)	2.37 (.01)
	Second	58	3.14	0.41	43	3.37	0.43	101	3.24	0.43			
	Total	103	3.24	0.40	65	3.38	0.43	168	3.29	0.42			
Students' perceptions regarding the role of special education teachers (Total)	First	45	4.01	0.52	22	4.26	0.56	67	4.09	0.54	13.12*** (.07)	1.20 (.01)	.29 (.00)
	Second	58	3.87	0.47	43	4.22	0.49	101	4.02	0.51			
	Total	103	3.93	0.50	65	4.23	0.51	168	4.05	0.52			
Efficacy for student engagement	First	45	4.28	0.44	22	4.49	0.53	67	4.35	0.48	9.69*** (.06)	7.91** (.05)	.33 (.00)
	Second	58	4.00	0.49	43	4.31	0.54	101	4.13	0.53			
	Total	103	4.12	0.49	65	4.37	0.54	168	4.22	0.52			
Efficacy for classroom management	First	45	4.18	0.45	22	4.53	0.44	67	4.29	0.47	11.41*** (.07)	9.40** (.05)	.91 (.01)
	Second	58	4.00	0.47	43	4.20	0.61	101	4.09	0.54			
	Total	103	4.08	0.47	65	4.32	0.57	168	4.17	0.52			
Efficacy for instructional strategies	First	45	4.10	0.60	22	4.53	0.45	67	4.24	0.59	16.99*** (.09)	4.24* (.03)	.46 (.00)
	Second	58	3.97	0.52	43	4.28	0.58	101	4.11	0.57			
	Total	103	4.03	0.56	65	4.37	0.55	168	4.16	0.58			
Self-efficacy in teaching (Total)	First	45	4.19	0.56	22	4.52	0.47	67	4.29	0.48	14.43*** (.08)	7.86** (.05)	.15 (.00)
	Second	58	3.99	0.45	43	4.26	0.56	101	4.11	0.51			
	Total	103	4.08	0.46	65	4.35	0.54	168	4.18	0.51			

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

Due to the significant differences according to sector and year of study at T1, in order to examine the first research question, two-way ANCOVA analyses were further conducted. The independent variables were the cultural sector and the year of study. The dependent variables were the PSTs' scores on the three questionnaires at T2 (at the end of the academic year). The covariate variables were the PSTs' scores on the three questionnaires at T1 (at the beginning of the

academic year). Table 3 presents the mean, SD and F-values of ANCOVA analyses of the scores of the PSTs' professional identity development questionnaire and their perceptions regarding the role of special education teachers at T2 by sector and year of study and Table 4 presents the means, SD and F-values of ANCOVA analyses of the scores of the PSTs' self-efficacy in teaching questionnaire at T2 by sector and year of study.

Table 3. Mean, SD and F-values of ANCOVA analyses of the variables professional identity and the perceptions of the role of SE teachers at T2 by cultural sector and by year of study.

Scales	Year of study	T1			T2			F-values			Paired comparison			
		Sector	n	M	SD	M	SD	M.E	Sector	Year of study	Interaction	t	p	Cohens' d
Career choice confidence	First	Jewish	45	3.37	0.47	3.16	0.55	3.08	6.07* (.04)	.55 (.00)	1.35 (.01)	3.03** .33	.004 .743	0.45 0.07
		Arab	22	3.37	0.44	3.40	0.50	3.32						
	Second	Jewish	58	3.05	0.52	3.06	0.53	3.20				.13 .13	.898 .897	0.02 0.02
		Arab	43	3.35	0.47	3.36	0.50	3.29						
Profession efficacy	First	Jewish	45	3.43	0.33	3.29	0.42	3.27	4.37* (.03)	11.35*** (.07)	1.33 (.01)	2.75** .00	.009 1.00	0.41 0.00
		Arab	22	3.49	0.42	3.49	0.43	3.43						
	Second	Jewish	58	3.28	0.35	3.40	0.37	3.49				2.78** 2.53*	.007 .015	0.36 0.39
		Arab	43	3.50	0.39	3.60	0.39	3.54						
Sense of mission	First	Jewish	45	3.33	0.49	3.31	0.48	3.26	.51 (.00)	.07 (.00)	.20 (.00)	.24 .83	.814 .418	0.04 0.18
		Arab	22	3.31	0.57	3.37	0.53	3.34						
	Second	Jewish	58	3.15	0.52	3.22	0.49	3.28				1.27 .45	.209 .658	0.17 0.07
		Arab	43	3.27	0.55	3.31	0.54	3.29						
Professional identity development (Total)	First	Jewish	45	3.37	0.36	3.22	0.42	3.17	5.24* (.03)	2.38 (.01)	1.89 (.01)	2.86** .46	.006 .651	0.43 0.10
		Arab	22	3.39	0.44	3.42	0.45	3.45						
	Second	Jewish	58	3.14	0.41	3.19	0.42	3.31				1.21 1.17	.232 .249	0.16 0.18
		Arab	43	3.37	0.43	3.42	0.43	3.35						
Students' perceptions regarding the role of SE teachers (Total)	First	Jewish	45	4.01	0.52	4.05	0.61	4.07	.89 (.01)	.02 (.00)	.02 (.00)	.44 .04	.662 .969	0.07 0.01
		Arab	22	4.26	0.56	4.26	0.45	4.13						
	Second	Jewish	58	3.87	0.47	3.97	0.53	4.07				1.49 .65	.143 .521	0.20 0.10
		Arab	43	4.22	0.49	4.25	0.50	4.16						

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ; M.E = Mean Estimated, controlling over the T1 measure.



Table 4. Mean, SD and F-values of ANCOVA analyses of the scores of the students' self-efficacy in teaching at T2 by sector and year of study.

Scales	Year of study	Sector	T1			T2			F-values			Paired comparison		
			n	M	SD	M	SD	M.E	Sector	Year of study	Interaction	t	p	Cohens' d
Efficacy for student engagement	First	Jewish	45	4.28	0.44	4.16	0.52	4.12	5.10* (.03)	5.42* (.03)	1.52 (.01)	1.53 .00	.132 1.00	0.23 0.00
		Arab	22	4.49	0.53	4.49	0.53	4.34						
	Second	Jewish	58	4.00	0.49	4.23	0.40	4.34				4.12*** 2.78**	.001 .008	0.54 0.42
		Arab	43	4.31	0.54	4.46	0.44	4.41						
Efficacy for classroom management	First	Jewish	45	4.18	0.45	4.07	0.58	4.07	4.42* (.03)	4.53* (.03)	1.15 (.01)	1.49 .20	.143 .842	0.22 0.04
		Arab	22	4.53	0.44	4.52	0.49	4.28						
	Second	Jewish	58	4.00	0.47	4.17	0.47	4.28				2.83** 2.64*	.006 .012	0.37 0.40
		Arab	43	4.20	0.61	4.37	0.53	4.35						
Efficacy for instructional strategies	First	Jewish	45	4.10	0.60	4.12	0.59	4.15	6.33* (.04)	4.02* (.02)	.62 (.00)	.27 .30	.789 .765	0.04 0.06
		Arab	22	4.53	0.45	4.55	0.46	4.38						
	Second	Jewish	58	3.97	0.52	4.25	0.40	4.34				4.69*** 2.80**	.001 .008	0.62 0.43
		Arab	43	4.28	0.58	4.52	0.43	4.46						
Self-efficacy in teaching (Total)	First	Jewish	45	4.19	0.46	4.12	0.54	4.11	4.97* (.03)	6.01* (.04)	1.23 (.01)	.91 .00	.368 1.00	0.14 0.00
		Arab	22	4.52	0.47	4.52	0.48	4.32						
	Second	Jewish	58	3.99	0.45	4.22	0.39	4.33				4.59*** 2.99**	.001 .005	0.60 0.46
		Arab	43	4.26	0.56	4.45	0.45	4.40						

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ; M.E = Mean Estimated, controlling over the T1 measure.

As it can be seen in Table 3, significant main effects of the cultural sector were found for the total score as well as for the subscales "career choice confidence" and "profession efficacy" in the PSTs' PI development questionnaire, indicating that the Arab PSTs scored higher than the Jewish PSTs. In addition, significant main effect of the year of study was found for the subscale "profession efficacy", indicating that the second-year PSTs scored higher than the first-year PSTs. The paired samples t-test examining the differences between the two time points in each cultural sector and each year of study indicated that both Jewish and Arab second year PSTs scored higher on the "profession efficacy" subscale at the end of the second academic year, compared to the beginning of the year. The Jewish first year PSTs scored lower on the total score, as well as on the subscales "career choice confidence" and "profession efficacy" at the end of the first academic year compared to the beginning of the same year. It should be noted that no main effects, nor interaction, were found for the PSTs' perceptions of the role of SE teachers.

As presented in Table 4, the main effects of sector and year of study were significant on the total scale as well as on the three subscales of TSE questionnaire, indicating that the Arab PSTs scored higher than the Jewish PSTs and that the second-year PSTs scored higher than the first-year PSTs. Additional paired samples t-test examining the differences between the two time points in each sector and each year of study

indicated that both Jewish and Arab second year PSTs scored higher on the total scale and on each subscale of TSE at the end of the second academic year compared to the beginning of the same year.

In order to examine the contribution of the students' background characteristics to the explained variance (EPV) of their improvement rate on their PI development, professional self-identity in SE and self-efficacy, multiple regression analyses were conducted. The students' background characteristics were entered into the regression model in a stepwise manner. In this manner, only the variables that contribute significantly to the EPV were entered into the regression model. Table 5 presents the results of the multiple regression analyses.

As Table 5 shows, the year of study contributed significantly to the EPV of the PSTs' PI development, professional self-identity in SE and self-efficacy, respectively. Furthermore, the PSTs' year of study contributed significantly to the EPV of the subscale "career choice confidence" and "professional efficacy", as well as for the three subscales of the teaching self-efficacy questionnaire. The positive  $\beta$  coefficients indicated that the improvement rate in these measures was significantly higher among second year PSTs compared to first year PSTs. The PSTs' sector and the study model contributed significantly to the EPV of the total scale of the PI development questionnaire as well as to the subscale of career choice confidence.

Table 5. Results of multiple regression analyses of the improvement rate on the target variables by their demographic characteristics.

	Step	Explanatory variables	B	SE.B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Professional identity development (Total)	1	Year of study <sup>1</sup>	.21	.05	.33***	.042**	---
	2	Study model <sup>2</sup>	-.21	.06	-.29***	.084***	.041**
	3	Sector <sup>3</sup>	.11	.05	.17*	.109***	.025*
Career choice confidence	1	Year of study <sup>1</sup>	.23	.07	.26**	.026*	---
	2	Study model <sup>2</sup>	-.23	.09	-.24**	.050*	.024*
	3	Sector <sup>3</sup>	.15	.07	.17*	.076**	.026*
Professional efficacy	1	Year of study <sup>1</sup>	.22	.05	.33***	.069***	---
	2	Previous experience with SE students <sup>4</sup>	-.11	.05	-.17*	.125***	.028*
Sense of mission	1	Study model <sup>2</sup>	-.28	.09	-.27**	.036*	---
	2	Previous course in SE <sup>5</sup>	.25	.12	.18*	.061**	.025*
Students' perceptions regarding the role of SE teachers (Total)	1	Gender <sup>6</sup>	.44	.19	.18*	.035*	---
	2	Age	-.01	.01	-.15*	.058**	.023*
Self-efficacy in teaching (Total)	1	Year of study <sup>1</sup>	.25	.06	.29***	.086***	---
Efficacy for student engagement	1	Year of study <sup>1</sup>	.28	.07	.30***	.090***	---
Efficacy for classroom management	1	Year of study <sup>1</sup>	.24	.07	.27***	.072***	---
Efficacy for instructional strategies	1	Year of study <sup>1</sup>	.24	.08	.23***	.053**	---

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ; <sup>1</sup>Year of study: 0 = First, 1 = Second; <sup>2</sup>Study model: 0 = Concurrent, 1 = Consecutive; <sup>3</sup>Sector: 0 = Jewish, 1 = Arab; <sup>4</sup>Previous experience with special education students: 0 = No, 1 = Yes; <sup>5</sup>Previous course in special education: 0 = No, 1 = Yes; <sup>6</sup>Gender: 0 = Male, 1 = Female.

The positive  $\beta$  coefficients regarding the PSTs' sector indicated that the improvement rate in these measures was significantly higher among Arab PSTs compared to Jewish PSTs. The negative  $\beta$  coefficients regarding the study model indicated that the improvement rate in these measures was significantly higher among PSTs who learned in the concurrent model. Whether the PSTs had previous experience with special education contributed significantly to the improvement rate of their professional efficacy and whether they had previously taken a course in special education contributed significantly to the improvement rate of their sense of mission. Finally, the PSTs' gender and age contributed significantly to the EPV of their perceptions of the role of special education teachers. Female PSTs improved their perceptions of the role of special education more than males. The negative  $\beta$  coefficients regarding the PSTs' age indicated that PSTs of a lower age tended to better improve their perceptions of the role of special education.

## 5. Discussions and conclusions

The current study investigated the differences and similarities between Arab and Jewish pre-service teachers in Israel, with regard to their professional identity, their perceptions of the Special Education teacher's role and their self-efficacy in teaching, as a

result of their participation in a practicum program. In line with our hypotheses, Jewish and Arab second year PSTs scored higher on the total scale of their self-efficacy in teaching at the end of the second academic year compared to the beginning of that year.

Similar to previous studies (Caspi et al., 2019; Laron & Shkedi, 2006), the findings of this study indicate significant differences between the first-year and the second-year PSTs in their professional identity development and self-efficacy in teaching. The second-year PSTs, i.e. those who participated in the practicum program, exhibited greater improvement in their professional identity development, their perceptions of the role of special education teachers and in their self-efficacy in teaching, compared to the first-year PSTs, i.e. those who have not yet undergone the practicum program, in the two cultural sectors. In addition, according to our hypotheses, both Jewish and Arab second year PSTs scored higher on the "profession efficacy" at the end of the second academic year, compared to the beginning of the year. The first year Jewish PSTs scored lower on the total score of PI, as well as on the subscales "career choice confidence" and "profession efficacy" and on their TSE at the end of the first academic year compared to the beginning of that year.

Regarding differences between Jewish and Arab PSTs, in light of the lack of previous comparative studies between Jewish and Arab pre-service teachers, no direct hypothesis was formulated. According to our findings, there are major differences between Jewish and Arab PSTs in their professional identity development, their perceptions of the role of SE teachers', as well as in their teaching self-efficacy. In all these measures, the Arab PSTs exhibited greater improvement than the Jewish PSTs. Significant main effects of the cultural sector were found for the total score as well as for the "career choice confidence" and "profession efficacy" in the PSTs' professional identity development, indicating that the Arab PSTs exhibited greater improvement than the Jewish PSTs. Similar transcultural differences were found in previous studies (Aden et al., 2001; Al-Haj, 2012).

The main effects of sector and year of study were significant on the total scale as well as on the self-efficacy in teaching, indicating that the Arab PSTs scored higher than the Jewish PSTs and that the second-year PSTs scored higher than the first-year PSTs. In addition, and similar to our hypotheses, Jewish and Arab second year PSTs scored higher on PI and on their self-efficacy in teaching at the end of the second academic year compared to the beginning of that year.

In examining the contribution of the PSTs' background characteristics to the explained variance of their improvement rate on the PST's professional identity development, professional self-identity in SE and self-efficacy in teaching, it was found that the year of study contributed significantly to the EPV of the PSTs' professional identity development, professional self-identity in SE and self-efficacy, respectively. Furthermore, the PSTs' year of study contributed significantly to the EPV of the "career choice confidence" and "professional efficacy". The improvement rate in these measures was significantly higher among second year PSTs compared to first year PSTs. In addition, The PSTs' sector and the study model contributed significantly to the EPV of the total scale of the professional identity development as well as to the "career choice confidence". The analysis in relation to the cultural sector indicated that the improvement rate in these measures was significantly higher among Arab PSTs compared to Jewish PSTs. Also, the study model indicated that the improvement rate in these measures was significantly higher among PSTs who learned in the concurrent model.

In conclusion, the findings show that the main effects of sector and year of study were significant in the improvement of the development of the PST's in the two sectors. Thus, it can be seen that:

(1) Following the practicum program, there was an increase among all the PSTs, both Jewish and Arabs, in their professional identity, their perceptions of the role of a Special Education teacher and their self-efficacy in teaching. This increase was significant for profession efficacy (one subscale of PI), for Self-Efficacy in teaching and for its all subscales: efficacy relating to the level of the student's engagement; efficacy relating to the level of the student's ability to manage a classroom, and efficacy relating to the student's level of possession of instructional strategies.

(2) During the first year and at the end of the second year, the Jewish PSTs had lower scores than the Arabs PSTs in PI, in their perceptions of the role of SE teachers and in their TSE. Social desirability could be a possible explanation for this, i.e. the Arab PSTs tried to present themselves in a more positive way in accordance to what they considered appropriate and desirable.

(3) The PSTs who learned in the concurrent model received higher scores than the PSTs who learned in the consecutive model. Further studies are needed to explore the differences between the two models.

To our knowledge, this is the first study that perform comparison between the two cultural sectors, Arab and Jewish in relation to the participation of Israeli pre-service teachers in a practicum program, in terms of their professional identity, their perceptions of the role of a Special Education teacher and their self-efficacy in teaching.

#### Authors note:

**Janette Saied** is currently a PhD student of the Doctoral School "Education, Reflection, Development", Babes -Bolyai University, Romania. She is also a lecturer and pedagogical counselor for special education at Gordon College, Israel, and a coordinator of the Regional Center for support for special education in the Arab sector in Haifa – Israel. Her professional and research interests are: special education, understanding cultural diversity, and training of pre-service teachers.



**Alina S. Rusu** (biologist and psychologist) is currently a Professor at the Faculty of Animal Science and Biotechnologies, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania. She is also PhD coordinator affiliated to the Doctoral School "Education, Reflection, Development" (domain: Sciences of Education). Her professional and research interests are: humane education, interdisciplinary curriculum development, applied values of human-animal interactions and the multidimensional study of community-oriented volunteering.

## References

- Abu-Baker, K. (2012). The Palestinian family. In I. Kaufman, K. Abu-Baker, & A. Sa'ar (Eds.), *The Arab Society in Israel* (Volume B Unit 5). The Open University.
- Aden, H., Ashkenazi, V., & Alperson, B. (2001). *Being Citizens in Israel: A Jewish Democratic State*. Ministry of Education. [Hebrew].
- Al-Haj, M. (2012). *Education, Empowerment, and Control: The Case of the Arabs in Israel*. Suny Press.
- Ali, N., & Daas, R. (2018). *Higher Education among the Arab Minority in Israel: Representation, Mapping, Barriers and Challenges*. Resling Publishing [Hebrew].
- Altman, A., & Katz, T. (2001). *Leadership and Developing Leadership – Practice*.
- Ayalon, H., & Yogev, A. (2005). Field of study and students' stratification in an expanded system of higher education: The case of Israel. *European Sociological Review*, 21(3), 227-241. <https://doi.org/10.1093/esr/jci014>
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. Freeman.
- Boimal, Y., Ze'evi, I., & Totry, M. (2009). *What do Jewish and Arab Students learn from one another?* Oranim Academic College, Research and Evaluation Authority.
- Caspi, R., Hod-Shemer, O., & Or, E. (2019). "Kindergarten teacher is not what I thought": The perception of the kindergarten teacher's role among female students in kindergarten teachers training course. *Dapim, Journal for Studies, Research and Teaching in Teaching Education*, 70, 251-270. [Hebrew].
- Central Bureau of Statistics. (2022). *Higher Education in Israel*. Central Bureau of Statistics.
- Fisherman, S. (2016). *Professional Identity and Burnout Amongst Education Workers*. Shaanan College. [Hebrew].
- Hadad Haj-Yahya, N. (2016). *Arab Society in Israel: Socio-Economic Situation and a View to The Future*. Israel Institute for Democracy: Office of Social Equality, Authority for Economic Development of Minorities.
- Haider, A. (2005). *Arab Society in Israel: Populations, Society, Economy*. Van Leer Institute Press and Hakibbutz Hameuchad.
- Haj-Yahya, N., & Arar, K. (2009). *Accessibility for Higher Education among Arab Students in Israel*. Research report submitted to the research unit. Beit Berl College.
- Haj-Yahya, N., Saif, A. Kasir, A., & Fargeon, B. (2021). *Education in Arab Society and Buds of Change*. Israel Democracy Institute.
- Hao, Y. F, Niu, H. J., Li, L. P., Yue, S. J., & Liu, X. H. (2014). Measurement of professional identity in Chinese nursing students. *International Journal of Nursing Sciences*, 1(2), 137-144. <https://doi.org/10.1016/j.ijnss.2014.05.002>
- Kass, E., & Friedman, I. A. (2005). Between private family and professional family: The construction of female teachers' self-efficacy. *Megamot*, 43(4), 699-728. [Hebrew].
- Kelchtermans, G. (2009). Who I am in how I teach is the message: Self-understanding, vulnerability, and reflection? *Teachers and Teaching: Theory and Practice*, 15, 257-272.
- Kozminsky, L. (2008). Professional identity in teaching. *Research Trail*, 15, 13-16.
- Laron, D., & Shkedi, A. (2006). Development and withdrawal in the perception in the teacher's role: A case study in teacher training. *Dapim, Journal for Studies, Research and Teaching in Teaching Education*, 41, 109-139. [Hebrew].
- Luzzato, E., & Rusu, A. S. (2019). Pre-service teachers' self-efficacy and attitudes regarding using motifs from neuroeducation in education and teaching. *Educatia*, 21(17), 40-48. <https://doi.org/10.24193/ed21.2019.17.04>
- Mahajna, S. (2014). "On the way to school" – A structural analysis of the relation between environmental variables and self-efficacy among Arab preservice teachers. *Issues in Education*, 9-10, 309-333. [Hebrew].
- Manor-Binyamini, I. (2001). *Patterns of Verbal Interaction in an Interdisciplinary Team in a Special Education School in Israel: An Ethnographic Case Study*. University of Liverpool.
- Poper, M., & Ronen, A. (1992). *On Leadership. Leadership in Research, Leadership in the IDF and Leadership Development*. Ministry of Defense, Head of Chief Education Officer.
- Schepens, A., Aelterman A., & Vlerick, P. (2009). Student teachers' professional identity formation: Between being born as a teacher and becoming one. *Educational Studies*, 35(4), 361-378.
- Shaviv, M., Binstein, N., Stone, A., & Fudem, O. (2013). *Pluralism and Equal Opportunity in Higher Education. Expanding Access for Arabs, Druze and Circassians in Israel*. Professional Report by the Israeli Council for Higher Education and Planning and Budgeting Committee (VATAT).



- Shochat, A., & Zilkha, G. (2007). *Report by the Committee for Examining the Israeli Higher Education System*. Committee for Investigating the Israeli Higher Education System.
- The Council for Higher Education. (2020). *Specialist Committee Report on Examination of Teacher Training in Higher Education Institutions*. The Council for Higher Education.
- Tickle, L. (1999). Teacher self-appraisal of self. In R. P. Lipka, & T. M. Brinthaupt, (Eds.), *The Role of Self-Teacher Development* (pp. 121-141). State University of New York Press.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783-805.
- Weiss, I., & Fisherman, S. (2011). Cognitive and personality factors in teachers training: Comparison of college to university students. *Curriculum and Teaching, 26*(1), 33-55.
- Živković, P. (2018). The dimensionality of student teacher professional identity. *International Journal of Education Teacher, 8*, 17-27.
- Zuzovsky, R., & Donitsa-Schmidt, S. (2017). Attracting, developing and retaining effective teachers and their academic development: Comparison between various models of teacher training programs. *Dapim, Journal for Studies, Research and Teaching in Teaching Education, 66*, 13-40.