

Review Article

A critical overview at Israel's PISA 2018 results¹

Hanna David²

Tel Aviv University (Emerita), Israel

Article Info

Received: 01 January 2021
Revised: 10 September 2021
Accepted: 28 October 2021
Available online: 30 Dec 2021

Keywords:

Arab students
Haredi students
Israel
Mathematics
PISA

2149-360X/ © 2021 the JEGYS.
Published by Young Wise Pub. Ltd.
This is an open access article under
the CC BY-NC-ND license

Abstract

This article will present the results of the 2018 PISA International Tests of Israeli students. These tests have been administrated every three years since 2000 in mathematics, science and verbal literacy. The results of Israeli students have been compared to those of the OECD members as well as to those of all 79 participants of the PISA 2018. The first part of the article deals with the consensual harsh critique published in Israel as soon as the law achievements of Israeli students were revealed. It will show that the educational gaps among students from various socio-economic backgrounds, religions, and level of religiosity, as reflected by the school system they belong to. This has happened in spite of the substantial increase of resources Israel has adopted in the last decade, the very generous amount of money allocated to closing the educational gaps between the under-achieving sub-populations and non-minority, Jewish students, and the repeating declarations of all ministers of education and other official authorities about their personal commitment to strive for both closing the educational gaps and increasing its level. The second part of this article will deal with the fact that students who were expected to achieve poorly, have not been included in the PISA sample. These students were mainly Arab, as well as practically all Ultra-Orthodox boys. The Ultra-Orthodox girls included have not been a representative sample but rather a minority of girls belonging to this sector who do take the matriculation examinations. As a result, the very disappointing results of Israeli student in the PISA 2018 tests have actually been much more inferior than published.



To cite this article:

David, H. (2021). A critical overview at Israel's PISA 2018 results *Journal for the Education of Gifted Young Scientists*, 9(Special Issue), 1-9. DOI: <http://dx.doi.org/10.17478/jegys.760533>

Introduction

The Israeli "love-hate affair" with mathematics and science international tests have long passed its fiftieth anniversary. The results of the first TIMSS [*Trends in International Mathematics and Science Study*] were published in 1964; Israel scored the highest among the 12 participants: 8 European countries, the US, Australia and Japan (David, 2015).

In the last 50 years many more countries participated in both the TIMSS and the PISA tests. The TIMSS results of Israeli students varied from excellent to mediocre; those of the PISA – from mediocre to bad. Without getting into a comparison between these two tests (see, for example, Grønmo, 2010; Hole, Grønmo, & Onstad, 2018), it should just be noted, that while TIMSS tests only math and science achievements, and the PIRLS [The Progress in International Reading Literacy Study] are administrated only in some of the countries that participate in the TIMSS, PISA has always examined also verbal literacy and since 2018 – global competence.

Thus, the main difference between these two tests is that while TIMSS examines the learnt and assimilated knowledge, PISA is both about knowledge and the ability to use it as citizens of the global world.

What Happened in Israel When the Results of PISA 2018 were Released?

The results of the PISA 2018 tests were released on December 3, 2019. On the same day a wave of accusations, excuses, explanations, apologizes, and declarations flooded the Israeli media: news webs, declarations and statements of politicians and educators, official and non-official radio and television channels. Most of them referred to the low

¹ This paper was partially presented at 1st International Congress on Gifted Young Scientists Education (ICGYSE), 20-22 November 2020, Istanbul, Turkey.

² Dr., Tel Aviv University (Emerita), Israel. E-mail: hannadav@tauex.tau.ac.il Orcid No: 0000-0002-7917-3152D

achievements, blaming the government, or the lack of government – in December 2019 Israel had just gone through its second elections cycle without any visible prospects to reach a majority in the Israeli Parliament. The office considered "most responsible" for the "failure" was the Israeli Ministry of Education, but the Ministry of Finance and the Ministry of Social Equality were also considered guilty. The teachers were described as suffering from lack of competence, lack of education or lack of motivation; the class size was to blame, being defined as "too large"; Israeli culture was titled as "anti-educational". However, the most frequently-heard explanation for the poor achievements that had been cited time and again were the inclusion of Arabs and Ultra-Orthodox students in the sample.

Blaming these two minorities – Arabs living in Israel and having an Israeli citizenship, consisting of about 20% of the Israeli population ([The Jewish Agency for Israel, 2020](#)) and Ultra-Orthodox Jews, consisting of about 25% of Israeli Jews – for the low achievements of Israeli students, seemed like the statement: "WE are ok, it is just them, who made US look so badly". But this statement is but a lie, worse than a fig leaf that does not cover the blank true unflattering facts.

Indeed, in countries where the percentage of school-age children consists of a substantial group of immigrants, the OECD has been taking into consideration the educational gaps among various populations. But this is not the case in Israel. In fact, neither Arabs nor Ultra-Orthodox Jews suit the OECD definition for "immigrants". On the contrary: Israeli Arabs have been the descendants of families who lived in Mandatory Palestine a long time before 1948, when the State of Israel was founded. Furthermore: in 1948 only 35.4% of Israeli Jews were natives of Palestine, and this rate had not substantially changed in 1962, when due to the massive waves of immigration to the new-born country only a similar rate – 37.8% – were Israeli-born ([The Jewish Agency of Israel, 2020](#)). The vast majority of Arabs in Israel, on the other hand, were born here, as well as their parents, grandparents and grand-grandparents. The second "guilty" sub-population, Ultra-Orthodox Jews, is divided to mainly two non-equal groups: the children and grandchildren of Jews living in Mandatory Palestine as well as Ashkenazim who immigrated to Israel after the holocaust, and Haredi Sephardim. A smaller part consists of American or European immigrants whose children had, in general, more human capital than the children of the other groups.

More than a dozen articles were published in all Israeli daily papers and webs discussing the PISA 2018 in the three days following the publication of the PISA results. Here is a concise summary of the issues they discussed:

1. The deterioration of achievements in comparison to those of the previous PISA results ([\[Dabul\] Dvir, 2019; Dattel, 3/12/2019a, 6/12/2019; Tversky, 3/12/2019; Yanko, 2019; Yarkazi, 3/12/2019; Kogahinof, 3/12/2019; Livnat, 3/12/2019;](#)
2. The substantial decrease in the achievements of Arab students ([Tversky, 3/12/2019; Yanko, 2019; Yarkazi, 3/12/2019; Kogahinof, 3/12/2019; Livnat, 3/12/2019;](#)
3. The low Israeli achievements in comparison to the other OECD countries and even non-OECD PISA 2018 participants ([Ilan, 3/12.2019; Dabul\] Dvir, 2019; Dattel, 3/12/2019a; Yanko, 2019; Yarkazi, 3/12/2019; Kogahinof, 3/12/2019; Livnat, 3/12/2019;](#)
4. The enormous gaps among Jewish sub-populations ([Ilan, 2018; Dabul\] Dvir, 2019; Dattel, 3/12/2019a, Yarkazi, 3/12/2019; Kogahinof, 3/12/2019; Kashti, 4/12/2019;](#)
5. The gaps between Bedouin and non-Bedouin populations ([Yanko, 2019;](#)
6. The increasing gaps between the achievements of Jewish and Arab students ([Dabul\] Dvir, 2019; Dattel, 3/12/2019a, 6/12/2019; Tversky, 3/12/2019; Yanko, 2019; Yarkazi, 3/12/2019; Kogahinof, 3/12/2019; Livnat, 3/12/2019; Kashti, 4/12/2019;](#)
7. The fact that Jewish Ultra-Orthodox student were no tested, which increased the achievements ([Dattel, 3/12/2019a, 9/12/2019; Yanko, 2019;](#)
8. Israel made a record by the lowest score ever achieved in any international science test;
9. had the lowest score in science ([Dattel, 3/12/2019a, 6/12/2019;](#)
10. The very low rate of students excelling in the PISA 2018 test ([Dattel, 6/12/2019; Ilan, 3/12/2019;](#)
11. The very high rate of struggling and failing Israeli students in all three testes areas ([Ilan, 3.12.2019; Dvir, 2019; Dattel, 3/12/2019a; Yanko, 2019; Yarkazi, 3/12/2019\).](#)

What's New? Or: How are the PISA 2018 Results Different from Those of PISA 2015 or 2018?

The low achievements of Israeli students in the PISA 2018 should not have been a surprise, had we not been exposed, time and again, to the declarations of the official authorities about the improvement of mathematics learning in Israel ([Harari, 2016; A record of all times in students taking the 5-point \[highest level\] math matriculation examinations, 2017;](#) in teachers' salaries (e.g.: A new agreement for [salaries of] high school teachers, [2018; Chai, 2017](#)) and in a very

substantial increase of the budget of the [Israeli] Ministry of Education (by 63%, Tzipori, 2017). This increase did not result in any increase of the students' achievement (Dattel, 2016). As Tzipori (2017) summarizes, Israel's score was not even "reasonable" taking into consideration its financial investment in education. A comparison of the cost/improvement index shows that Singapore scored "very good"; Slovenia and England scored "good"; Cyprus, Greece, Malta, Bahrain, Bulgaria, Malaysia, Romania, Turkey, and Chile scored much better than Israel.

After the PISA 2012 results were released a comparison was made between the PISA achievements of Israel and Turkey (David, 2015). Israel started participating in the Pisa tests in 1963/4; Turkey, on the other hand, started only in 2000. While in Israel a steady deterioration has been observed, in Turkey there has been a constant improvement both in math and science during the last two decades. Thus, it was not such a surprise that the Israeli PISA 2018 results were so poor.

Israel did quite poorly both in the PISA 2012 and the PISA 2015 tests; nothing has substantially changed in the PISA 2018 one. In all these tests the Israeli samples were unreliable; large sub-populations, those whose achievements were lower than the average was either partially or completely excluded. Thus actual achievements had been poorer than those published. Here are the main faults of the PISA 2018 test.

Firstly: The 2018 sample did not cover the whole population

- The 2018 "sample" did not include sufficient Ultra-Orthodox male students; Ultra-Orthodox female students that were included were highly selective (PISA 2018, 2019).
- Arab students living in East Jerusalem were not included at all. Not only the children of Arabs living permanently in Jerusalem were excluded, but also those of the 90,000 Israeli citizens.

According to the Israeli Social security Office, while the 2015 poverty rate in Israel had been 27.1% among adults and 30% among children, it reached 76% among adults and 83.4% among children in East Jerusalem (Poverty rates and social gaps in Israel, 2016).³

After excluding from the PISA 2018 test such a substantial number of under-privileged children living in Israel, its coverage reached 90%, the 78th place out the 79 countries participating in PISA 2018. The last place belonged to Sweden – the country where the immigrant rate is one of the highest in the world. It should be noted, that while Arabs in Israel had a low participation rate in the PISA 2018 test, the participation rate in all Arab countries surrounding Israel was high: in Jordan it was 99.5%; in the United Arab Emirates [UAE], Morocco, and Lebanon – about 98% and in Qatar – over 96% (OECD, 2019). It should be noted that excluding the two traditionally-underachieving populations, Ultra-Orthodox and Arab children from samples of international tests, has been done in Israel on a regular basis. Arlozorov (2012), Chai (2012), Meniv (2012) and Kashti (2012) have written about it after the PISA 2011 results had been released; the lack of the Ultra-Orthodox boys had been mentioned in the PISA 2015 report (PISA 2015, 2016) as well as by many others (e.g. Kregenbild, 2018).

Secondly: The weak Israeli students are the worst in the western world

The average grade in PISA 2018 of percentile-5 Israeli students, the 5% receiving the lowest grades, was 295, the worst average in the western world. The average grade of percentile 5 OECD students was 336: 41 points higher (Dattel, 6/12/2019). The picture in each of the three areas tests is similar: 0.7% of the Israeli students did not reach the first among the 8-level reading PISA 2018 classification, in comparison to the OECD mean 0.1% (PISA 2018, Annex B1, Table I.B1.1); 17.7% did not reach the first among the 6-level mathematics PISA 2018 classification, in comparison to the OECD mean 9.1% (PISA 2018, Annex B1, Table I.B1.2), and 3.2% did not reach the first among the 6-level science PISA 2018 classification, in comparison to the OECD mean 0.7% (PISA 2018, Annex B1, Table I.B1.3).

Thirdly: Israel had the world record in gaps between the best and the worst students

According to Kashti (4/12/2019), in PISA 2018 Israel had the highest gaps between Jews and Arabs and among the various Jewish sub-populations.

- I. As can be observed from the results, the standard deviation [sd] for reading was 124 points in Israel (OECD, 2019, Table I.B1.4) while in the three following countries – neither of whom has been an OECD member, Lebanon, Malta and the UAE – it was 113. Israel had also the world record in math gaps: its sd had been

³ One of the reasons that explain this situation – but by no means the main one – is the fact that most of the East Jerusalem families who had lost their Jordanian citizenship face difficulties in acquiring an Israeli one, and thus have no citizenship. As a result, they suffer from major difficulties when trying to improve their educational or financial situation (Ramon, 2018).

108, the OECD mean was only 91 and the next countries with the highest record were, again, non-OECD members, Lebanon and the UAE (106 points) and Malta - 106 points (ibid, Table I.B1.5). The picture is quite similar in science: Israel's sd was 111 points, before Malta – 107 points, and Germany, Qatar and the UAE – 103 points (ibid, Table I.B1.6).

- II. Another criterion of measuring inequality is offered by using the indicator of gender and socio-economic inequalities in minimum proficiency (OECD 2019, Table I.10.2). This "parity index":

compares the share of 15-year-old students who reached at least Level 2 performance across two groups of students that differ in some background characteristics. The parity index varies between 0 and 2. It is equal to 1 if the share of 15-year-old students scoring above minimum levels is the same for both groups (no disparity). (ibid, p. 155).

Israel has been at the "top" of the OECD countries, measuring 0.57 in reading; only Slovakia, Mexico and Colombia, measuring 0.56, 0.47 and 0.44 subsequently, had smaller inequity indices (OECD, 2019, Table I.10.2). In mathematics Israel measured 0.53 in inequity, right above Mexico (0.44), Colombia (0.39) and Chile (0.34) (ibid).

As these indices have a high positive correlation with socio-economic status, it means that Israel has failed in closing educational gaps between the wealthy and the poor. Thus, unlike in many European countries, social and financial mobility in Israel can be defined as very limited.

There is Under-presentation of Arab Ultra-Orthodox Jews Students and Thus the "sample" is Faulty

According to the Hebrew expanded summary of the PISA 2018 results (PISA 2018, 2019, pp. 50-51), only 3.89% of Israeli students were not sampled. 1.8% of them were special education students, hospitalized children, and students in schools tutoring neither in Hebrew nor in Arabic. Another 2.12% were not examined because of physical limitations, cognitive problems, and lingual issues typical to immigrants who have not yet acquired proficiency in Hebrew or Arabic.

However, the real rate of students who did not participate in the PISA 2018 test was much higher than 3.92%:⁴ two sub-populations were substantially under-represented – Arabs and Ultra-Orthodox Jews. As the public Arabic education system fails to close the gaps with the Jewish one and Ultra-Orthodox boys do not lean the core studies, math, science and English (see Dattel, 13/5/2019; Krakowski, 2019), had these populations been fully represented the Israeli achievements had been much lower than the actual published ones.

Partial Participation of Arabs

According to the Central Bureau of Statistics (Statistical Abstracts of Israel – No. 70, 2019), 919,438 Arabs lived in Jerusalem in 2018; 38% or them – 349,386 were Arabs. The number of all Arabs in the state of Israel was about 1,878,00 at that time (Press release, 31/12/2018). As the children of East Jerusalem did not participate in the PISA test (OECD, 2019), the meaning is that about 19% of the Arab children were excluded. In fact, the rate of children that did not participate was even higher, due to the higher birth-rate in East Jerusalem than among Arabs who live in other parts of Israel (Korach & Choshen, 2019).

In 2017 about 14% of East Jerusalem children are not registered in any school; 32% did not graduate from high school and the dropout rate among them was substantially higher in comparison to that of the general Arab population in Israel (Report of The Association for Civil Rights in Israel, 2017). Had they been included in the PISA 2018 test, they would probably have much lower achievements than the poor ones of Arabs in Israel living elsewhere.

Partial Participation of Ultra-Orthodox Children

There is an agreed-upon lie, according to which the PISA 2018 consisted of "all 15-year-olds, including Yeshiva- and [other] Ultra-Orthodox students" (PISA 2018 [2019], p. 50). However, the same document (ibid) states that the number of Ultra-Orthodox boys that took the PISA 2018 test was only a fifth of the number that should have taken it. Furthermore: the boys that actually took the test were chosen from just 6 schools. According to Malach, Choshen & Cahaner (2016), in 2012 only about 2% of Ultra-Orthodox boys were entitled to the matriculation certificate. That means that the actual number of 15-year-old Ultra-Orthodox boys was similar to the number of those taking the matriculation examinations, but they were by no means any "sample", as required by the PISA regulations.

In addition, according to table 4.14 in the Statistical Abstracts of Israel – No. 70 (2019), there were 90,374 Ultra-Orthodox students in grade 10 in the year 2018. The yearly dropout rate among Ultra-Orthodox boys was about 3%

⁴ There is a slight mathematical inaccuracy in the given calculation: the sum of 1.8%+12% is 3.92% rather than 3.89%.

(Malach et al. 2016); thus it can be assumed that in 2018 there were about 33,000 students in the Ultra-Orthodox education system. If we add the sampling frame *given* numbers of the boys and the girls – 10,486 and 10,948 – they add up to 21,434 – less than two-thirds of the expected number. The "disappearance" of more than a third of the sampling frame questions the whole sampling process and thus the results.

Not only the boys' schools could have been defined as a "sample": the 15 girls' Ultra-Orthodox schools participating in the PISA 2018 test (PISA 2018, table 7) were the *only* schools for Ultra-Orthodox girls in Israel whose students were entitled to the matriculation certification.⁵ All these institutes were very small in comparison to the girls' seminars where the vast majority of Ultra-Orthodox girls studies. For example: some of the seminars⁶ consisted of thousands of students; the others – many hundreds; "Darchei Sarah", for example, which was included in the PISA 2018 sample, consisted in 2012 but 60 students; only 14 took the matriculation exams on that year (Aharon, 2012).

Participation of Ultra-Orthodox boys had been even poorer. As already stated, only three boys' institutes participated in the so-called Haredi sample. According to Ettinger (2011), until the second decade of the 21st century there were in Israel but 4 Ultra-Orthodox Yeshiva high schools.⁷ Even when counting the "Me'orot" school in Beit Shemesh (a total of 92 students), the total number of all students in these institutes was less than the number of students in one average-size "regular" Yeshiva, that did not participate in the PISA 2018 test as its students did not learn any mathematics, English or science.

In summa: The given achievements of Ultra-Orthodox Yeshiva-high-school students are not reliable as

- The students examined studied in just 3 or 4 schools;
- The students studied in highly selective institutes (Spiegel, 2011), and the results were biased upwards.
- Ultra-Orthodox students had a different version of the test, a version that did not include the "global competencies acquisition" part (PISA 2018, 2019).

Are There Any Bright Spots in the PISA 2018 Test?

There have been two main justifications when desperately trying to find bright spots in the poor PISA 2018 results of Israeli students. The first argued that "not taking into consideration the educational achievements of Arabs – the Israeli results were not really; they are quite reasonable"; the second claimed that the interpretation of the result had been biased; had the analysis been done in a different way the results would have been different. Let us refute these claims.

The Arabs are "to blame" (Dabul [Dvir], 2019; Kogahinof, 2019); Their Very Low Achievements Decreased the Average Grade of Israel

This is but an unsuccessful attempt to explain the right for good, equal education to all Israeli citizens and those living permanently in Israel. Without getting into politics and racial discrimination issues, here are the actual facts:

- Arab children in Israel's neighboring countries – e.g. Jordan and Lebanon – where the economic situation is much worse than in Israel, have done much better in the PISA 2018 than Arab students living in Israel (Dattel, 3/12/209b). This is a solid proof that being an Arab is not a reason for school failure; the Israeli education system is.
- In no country among the 79 participants in the PISA 2018 were students' achievements were divided by religion, race, or nationality. In some countries students could have been examined in their mother-tongue rather than in the national language or the language spoken by the majority of the students, as has been the situation in Israel, where Arab students were examined in Arabic. Students who took the Arabic version of the PISA 2018 used the same questionnaires as in all other Arab countries.
- Arab students – whether Christian or Muslim – learning in Christian institutes in Israel have had the highest grades in the matriculation examination for decades, much higher than Israeli Jews (e.g. David, 2008, 2009, 2014a, b, 2017; Sha'alan, 2015; Shadma, 2014).

The Achievements are not Actually so Bad; They Could Have Been Interpreted Differently

⁵ Here is the list of these high schools: 1. Moreshet, Tel Aviv; 2. Darchei Sarah, Jerusalem; 3. The Ultra-Orthodox school, Holon; 4. Beit Rivkah (Chabd), Netanya; 5. Beit Ya'akov, Haifa; 6. Beit Ya'akov, Or Yehudah; 7. The girls' Haredi high school, Petach Tikvah; 8. The Experimental-observant school – Pelech, Jerusalem; 9. The Lustig Ultra-Orthodox girls' school, Ramat Gan; 10. The girls' Ultra-Orthodox school – Kanfei Yonah, Zefat; 11. Beit Hannah (Chabad), Zefat; 12. The girls' Ultra-Orthodox school – Akko, 13. The girls' Ultra-Orthodox school – Horev, Ra'anana; 14. Beit Ya'akov, Rechasim; 15. Ultra-Orthodox girls' school "Bnot Leah", Yavneh.

⁶ A Beit Ya'akov traditional seminar is an Ultra-Orthodox girls' high school where no matriculation exams are taken, and thus none of them was included in the PISA 2018 sample.

⁷ 1. Ha'Yishuv He'Chadah, Tel Aviv; 2. Ma'aravah, Chashmonaim; 3. Nehorah, Mevo Horon; 4. Neharde'ah, Ganei Tikvah.

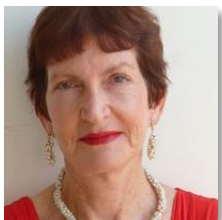
- The rate of the excellent students in all 3 examined areas was 2%, as was the OECD average (Dabul [Dvir], 3.12.2019). What does this fact have to do with the poor Israeli average? What about Israel's pride as the "high-tech country"? is it enough if 3% of Israeli students are outstanding – the same rate as among developed countries whose total average is so much higher than the Israeli? Does it compensate for the high rate of the weak students?
- According to Yanko (3/12/2019), there has been an improvement since 2006. Indeed, this is true, but this justification suffers from two substantial faults: first, comparisons are always done since the last test, the last decade, or the last revolution, plan or re-organization. If any comparison will do, why not to compare the PISA 2018 achievements to those of TIMSS 1963/4, when Israel had the world best achievements in the first international test? And second, taking into consideration the huge amount of money invested in the Israeli education system, at least some improvement could have been expected.
- According to the chief executive officer of the Ministry of Education, there was a positive tendency in the "Growth and Effectiveness Measures for Schools" test [MEIZAV] results of Arab students" (Yarkechy, 3.12.2019). What does this expected – or hoped for – improvement have to do with the PISA 2018 results?
- According to Tzadkani (9/12/2019), "one should not judge because of isolated results". The results of a statistics-based study are not "isolated" – they are valid and reliable even if they do not satisfy the observer.
- Tzadkani (ibid) explains, that the grade-deterioration was "just of a few points", and insignificant in comparison to the previous PISA test. Should we be glad that our deterioration was not more substantial? Or blame the other countries for not deteriorating and thus "making us look bad"?
- According to Ma'or and Dattel (2019), citing Prof. Salberg, "We" [Israelis] should not earn from the countries where the achievements are the highest in the world, namely, from East-Asian
- countries, as the "the children there are miserable". Is it really so? Does a bad score in the most important international test contribute to the students' happiness?

Short Summary

This is the first of a 2-part analysis of the Israeli results in the PISA-2018 test. The article presents the main findings, focuses on the gaps among sub-populations, and refutes the suggestions that "it is not as bad as presented". The second part of the analysis is to discuss the future implications of the gaps among the various sub-populations, including a part about gender differences in achievements.

Had all the detailed facts about the coverage of the PISA 2018 been taken into consideration, Israel's coverage would have been fallen well under the minimal 80% – the minimal coverage allowed by the PISA test rules. Thus, the conclusion is that the bad Israeli results of the PISA 2018 test are much worse than published.

Biodata of Authors



Hanna David received her PhD, "magna cum laude", from Ludwig Maximilians Universität, München and was a college lecturer in Psychology and literature. Dr. David's undergraduate studies started at the Hebrew university of Jerusalem where she majored in Physics and mathematics, and also graduated in Hebrew Literature. She received her Master's degree from the Jewish Theological Seminary in New York at age 22. She is currently a counselor for gifted students and their families; a well-known lecturer in national and international conferences of psychology, education, and giftedness, and an expert evaluator of research proposals for the European Commission. David has published widely in English, Hebrew, French and German, she has authored 18 books and 200+ papers. Dr. David is a licensed

Pilates instructor and practices yoga. **Research interests:** Mathematical education, giftedness, educational psychology, creativity, counseling, feminism **Affiliation:** Tel Aviv University, Emerita **E-mail:** hannadav@tauex.tau.ac.il **Phone:** 972-39674748 **Orcid No:** 0000-0002-7917-3152 [AcademicEdu](#) [ResearchGate](#) [GoogleScholar](#)

Books:

David, H. (2020). Dynamic assessment of gifted children. New York: Nova Science Publishers.

David, H. (2020). On-line dynamic assessment of gifted children during corona-time. New York: Nova Science Publishers.

David, H. (2019). *Emotionally, Socially and Learning Disabled Gifted Children: Theory and Treatment*. New York: Nova Science Publishers.

David, H. (2016). Gifted children with learning disabilities or emotional/social problems (Hebrew). Retrieved from Hebrew Psychology: <http://www.hebpsy.net/articles.asp?id=3476>

David, H. (2015). *The gifted girl: Case studies*. Retrieved from <http://www.hebpsy.net/articles.asp?id=3351>

David, H. (2014). Demographic characteristics of students accepted to The Young Person's Institute for the Promotion of Creativity and Excellence: Findings in three decade-cohorts. Retrieved from <http://www.hebpsy.net/articles.asp?id=3216>

David, H. (2014). *The gifted child in school* (Hebrew). Retrieved from <http://www.hebpsy.net/articles.asp?id=3105>

David, H. (2014). *The gifted Arab child in Israel*. Saarbruecken, Germany: Lambert Academic Publishing.

- David, H. (2013). *Parenting the gifted child* (Hebrew). Retrieved from <http://www.hebpsy.net/articles.asp?t=0&id=3021>
- David, H. (2011). *The gifted child in the periphery: Studies in nurturing and teaching* (Hebrew). Retrieved from <http://www.hebpsy.net/articles.asp?t=0&id=2616>
- David, H., & Wu, E. (2009). *Understanding Giftedness: A Chinese-Israeli Casebook*. Hong Kong: Pearson Education South Asia.
- David, H. (2009). Mathematics learning in the Israeli junior high school. The influence of gender, religion, grade, class-type, and religiosity on mathematics learning in the Israeli junior high school. Saarbrücken, Germany: VDM Verlag.
- Ziegler, A., David, H. & Stöger, H. (2004). Male stereotype: An Empirical Study on the Effects of the Concept of a Successful Academic Person. *Ulmer Forschungsberichte aus den Pädagogischen Psychologie*, 8. Universit of Ulm: Germany.
- Zorman, R. & David, H. (2000). *There is another way: Girls and women – Achievements and challenges*. Jerusalem: The Henrietta Szold Institute and The Ministry of Education (Hebrew).
- David, H. (1998). Index to Keshet [Rainbow]: A Literary Periodical + Introduction. Tel Aviv University.
- David, H. (1995). *The divorcing woman: Prejudices, truths and half-truths*. Tel Aviv: Yaron Golan Publishing House.
- David, H. (2017). Gifted Education in the Middle East. In: S. Pfeiffer, E. Shaunessy-Dedrick & M. Foley Nicpon (Eds.), *APA Handbook of Giftedness and Talent* (pp. 113-129). Washington, DC: APA Books.

Selected Journal Articles:

- David, H. (2019). Shared parenting in the modern family from a feminist point of view. *Journal of Interdisciplinary Sciences*, 3(2), 36-54.
- David, H. (2019). Teaching Mathematically Gifted Students in Israel: The State of the Art. *Journal for the Education of Gifted Young Scientists*, 7(1), 57-69.
- David, H. (2018). Problems and challenges of the gifted adolescent: School-related problems of the gifted adolescent. *Journal of Interdisciplinary Sciences*, 2(2), 113-131.
- David, H. (2018). To be a gifted adolescent. *Journal of Interdisciplinary Sciences*, 1(2), 8-23.
- David, H. (2018). 4.5-5.5-year-old gifted students: Findings from the 2004 cohort of the Erika Landau Institute. *Scholarly Journal of Psychology and Behavioral Sciences*, 1(4), 75-81.
- David, H. (21.1.2018). Ten questions frequently asked by parents of children participating in enrichment programs for the gifted (Hebrew). Retrieved from <https://www.hebpsy.net/articles.asp?t=0&id=3634>
- te Nijenhuis, J., van den Hoek, M., Metzzen, D., & David, H. (2017). Spearman's hypothesis not supported? Three meta-analyses of Black and White prisoners, Northeast Asians, and Arabs and Jews. *Personal and Individual Differences*, 117(1), 52-59.
- David, H. (2017). Giftedness – How does it work with Sensitivities, learning disabilities, and disorders. *Journal of Interdisciplinary Sciences*, 1(1), 61-75.
- David, H. (2017). Seeking help for young gifted children with emotional or educational problems: Who looks for counseling? Part I: Between the telephone call and the meeting. *Journal for the Education Gifted Young Scientists*, 5(1), 57-70.

References

- Aharon, I. (2012). The new Haredim founded a new seminar "like Beit Ya'akov". Retrieved from <https://www.kikar.co.il/>
- Alyan, N., Sela, R., & Ramati, T. (August 2012). Failed-Grade: The failing education system in East Jerusalem. Retrieved from <https://law.acri.org.il/he/wp-content/uploads/2012/12/Failed-Grade-en.pdf>
- Arlozorov, M. (13/12/2012). The success in the international tests – Reality of legend? Retrieved from <http://www.themarker.com/news/1.1885101>
- Chai, Sh (12/12/2012). Without Ultra-Orthodox and Arab [students]. The jump-off in the [achievements] in the international tests. Retrieved from <http://www.ynet.co.il/articles/0,7340,L-4318599,00.html>
- Chai, S. (12/12/2017). A new agreement with the teachers: Initial [monthly] salary of 8,000 Shekel. Retrieved from <https://www.ynet.co.il/articles/0,7340,L-5055524,00.html>
- Dabul (Dvir), N. (3.12.2019). Left-behind in mathematics and struggling in reading: [Israeli] worrying results in the PISA [2018] results. Retrieved from <https://www.israelhayom.co.il/article/712417>
- Dattel, L. (6/12/2016). A catastrophe in education: The worst student in the west. Retrieved from The Marker web <https://www.themarker.com/news/education/1.3144079>
- Dattel, L. (3/12/2019a). The big failure of the Ministry of Education: Israeli students deteriorated in all international tests. Retrieved from <https://www.themarker.com/news/education/1.8217664>
- Dattel, L. (3/12/2019b). Crisis in Arab society: the education system went 15 years back. Retrieved from <https://www.themarker.com/news/education/1.8218330>
- Dattel, L (13/5/2019). One third of Israel's religious students are exempt from studying math, science and English. Retrieved from <https://www.haaretz.com/israel-news/business/haredi-exemptions-from-core-curriculum-soaring-1.7225781>
- David, H. (2008). Educational gaps between Jews and Arabs in Israel. *Al-Nibras, Articles in Education, Science & Society*, 4, 35-53.
- David, H. (2009). The Arab gifted child in Israel: Book summary. *Gifted Education Press Quarterly*, 23(4), 9-15.
- David, H. (2014a). Are Christian Arabs the New Israeli Jews? Reflections on the Educational Level of Arab Christians in Israel. *International Letters of Social and Humanistic Studies*, 21(3) 175-187.
- David, H. (2014b). *The gifted Arab child in Israel*. Saarbruecken, Germany: Lambert Academic Publishing.
- David, H. (2015). The PISA Results in mathematics and science: A comparison between Israel and Turkey. *Journal for the Education of the Young Scientist and Giftedness*, 3(1), 22-28.
- David, H. (2017). Gifted Education in the Middle East. In: S. Pfeiffer, E. Shaunessy-Dedrick & M. Foley Nicpon (Eds.), *APA Handbook of Giftedness and Talent* (pp. 113-129). Washington, DC: APA Books.
- Ettinger, Y. (2011). Only 4 Yeshiva-high-schools enable Torah studies and learning for the matriculation certification. Retrieved from <https://www.haaretz.co.il/misc/1.1070607>

- Grønmo, L. S. (2010). Low achievement in mathematics in compulsory school as evidenced by TIMSS and PISA. In B. Sriraman, C. Bergsten, S. Goodchild, G. Pálsdóttir, B. Dahl, & L. Haapasalo (Eds.), *The first sourcebook on Nordic research in mathematics education* (pp. 49-69). Charlotte, NC: Information Age.
- Harari, O. (15/11/2016). The [Israeli] Minister of Education launched the "we shall meet at 5" [=5-point matriculation examination, the highest Israeli high school level math exam]. Retrieved from <https://www.inn.co.il/News/News.aspx/333691>
- Hole, A., Grønmo, L.S. & Onstad, T. (2018). The dependence on mathematical theory in TIMSS, PISA and TIMSS Advanced test items and its relation to student achievement. *Large-scale Assessments in Education*, 6(3). doi: 10.1186/s40536-018-0055-0
- Ilan, Sh (23/10/2018). A new report: The gaps between the rich and the poor in Israel are among the highest in the OECD. Retrieved from <https://www.calcalist.co.il/local/articles/0,7340,L-3748225,00.html>
- Ilan, Sh. (3/12/2019). The PISA 2019 test: The Israeli students' grades are lower than the OECD average. Retrieved from <https://www.calcalist.co.il/local/articles/0,7340,L-3775025,00.html>
- The Jewish Agency for Israel (2020). Introduction: The Diversity of Israeli Society. Retrieved from <http://archive.jewishagency.org/society-and-politics/content/36171>
- Kashti, O. (11.12.2012). What is not said about the international tests. Retrieved from <http://www.haaretz.co.il/news/education/1.1884223>
- Kashti, O. (4/12/2019). The PISA [2018] results are the first symptoms: The Israeli education system is ill. Retrieved from <https://www.haaretz.co.il/news/education/.premium-MAGAZINE-1.8221015>
- Kogahinof, L. (3/12/2019). The PISA 2018 test: Israel took the first place in [educational] gaps; the lowest ever record in the achievements of the Arab students. Retrieved from <https://www.kan.org.il/item/?itemid=62767>
- Korach, M. & Choshen, M. (2019). Jerusalem: Facts and Trends. The State of the City and Changing Trends. Jerusalem institute for Policy Research, Publication No. 505. Retrieved from <https://jerusalemstitute.org.il/en/publications/facts-and-trends-2019/>
- Krakowski, M. (19/9/2019). The truth about secular studies in Haredi schools. Retrieved from <https://forward.com/opinion/431757/the-truth-about-secular-studies-in-haredi-schools/>
- Kregensbild, T. (22/12/2028). The Israeli Education system: The PISA test. Retrieved from <https://easyconomy.com>
- Livnat, O. (3/12/2019). The Israeli average grades is lower than the OECD average. Retrieved from <https://www.maariv.co.il/news/israel/Article-733006>
- Malach, G., Choshen, M., & Chaner, L. (2016). The annual of the Ultra-Orthodox society in Israel. Retrieved from https://www.idi.org.il/media/7882/haredi_shnaton.pdf
- Ma'or, D., & Dattel, L. (17/12/2019). A world education expert: "Israel should not learn from the best countries in the world – the children are miserable there". Retrieved from <https://www.themarker.com/news/education/.premium-1.8279177>
- Meniv, O. (12/12/2012). About a quarter of Israeli students did not participate in the international tests. Retrieved from <http://www.nrg.co.il/online/1/ART2/421/734.html?hp=1&cat=404&loc=1>
- Ministry of Finance (2018). A new agreement for [salaries of] high school teachers (14/3/2018). Retrieved from the The Ministry of Finance web https://mof.gov.il/Releases/Pages/morim_heskem.aspx
- OECD (2019). *PISA 2018 Results (Volume I): What Students Know and Can Do*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/5f07c754-en>
- PISA 2015 (December 2016). *PISA – Programme for International Student Assessment*. An Israeli view (2016) (in Hebrew). Retrieved from http://meyda.education.gov.il/files/Rama/PISA_2015_Full_Report_8_Chapters.pdf
- PISA 2018: Programme for International Student Assessment. An Israeli view (2019). Literacy of 15-year-old Israeli students in reading, mathematics and science (in Hebrew). The State of Israel, The Ministry of education: The National Institute for Educational Measurement and Evaluation. Retrieved from http://meyda.education.gov.il/files/Rama/PISA_2018_Report.pdf
- PISA 2018 Global Competence (2018). Retrieved from <https://www.oecd.org/pisa/pisa-2018-global-competence.htm>
- Poverty rates and social gaps in Israel (2016). The 2015 annual report of the Social Security Institute (in Hebrew). Retrieved from https://www.btl.gov.il/Publications/oni_report/Documents/oni2015.pdf
- Press release (31/12/2018). 9.0 million citizens lived in Israel on the turn of the year 2019. Retrieved from <https://www.cbs.gov.il>
- Ramon, A. (2018). The Arabs of East Jerusalem, what next? The residency and citizenship issues – state of the art and policy recommendations (in Hebrew). Retrieved from <https://jerusalemstitute.org.il/wp-content/uploads/2019/09/Pub>
- A record of all times in students taking the 5-point [highest level] math matriculation examinations (2017). Retrieved from the [Israeli Ministry of Education web <https://edu.gov.il/owlHeb/Pages/math-record.aspx>
- Report of The Association for Civil Rights in Israel (2017). East Jerusalem: Facts and data (in Hebrew). Retrieved from <https://www.acri.org.il>
- Sha'Alan, H. (18/9/2015). The excellent [schools] are striking: A glimpse into the ecclesiastical schools. Retrieved from <https://www.ynet.co.il/articles/0,7340,L-4701593,00.html>
- Shadma, A. (2014). 'Leading' Arab schools in Israel: Review of the phenomenon, and the future social-economic integration of their graduates. Retrieved from <https://employment.molsa.gov.il/Research/Documents/X12892.pdf>
- Spiegel, A. (2011). "But the study of Torah is equal to them all".⁸ Ultra-Orthodox education for boys in Jerusalem. Jerusalem Institute for Policy Research, Publication No. 405. Retrieved from <https://jerusalemstitute.org.il/en/publications/facts-and-trends-2019/>

⁸ Mishnah Peah 1:1: These are the things that have no measure: *Peah* [corner of the field which, while harvesting, must be left for the poor], *Bikurim* [First-fruits that must be brought to the Temple and given to the priest], the appearance-sacrifice [brought to the Temple on Pilgrimage Festivals], acts of kindness, and

- Statistical Abstracts of Israel – No. 70 (2019). Jerusalem: The Central bureau of Statistics. Retrieved from <https://www.cbs.gov.il/en/publications/Pages/2019/Statistical-Abstract-of-Israel-2019-No-70.aspx>
- Tversky, D. (3/12/2019). The under average level of the [Israeli] education system. The PISA test: Deterioration of the achievements of Israeli students and the increase of the gaps between the rich and the poor. Retrieved from <https://www.davar1.co.il/202048>
- Tzadkani, R. (9/12/2019). Did the Israeli education system really fail? Retrieved from <https://www.kipa.co.il>
- Tzipori, E. (10/4/2017). The bog failure of the Education budget. Retrieved from <https://www.globes.co.il/news/article.aspx?did=1001184658>
- Yanko, A. (3/12/2019). Decrease in the scores and gigantic gaps between Jewish and Arab students: The Pisa test results. Retrieved from <https://www.ynet.co.il/articles/0,7340,L-5636364,00.html>
- Yarkechy, D. (3.12.2019). Weak in reading, mathematics and science: The exposure of the grades of Israeli students. Retrieved from <https://news.walla.co.il/item/3327160>

