

The Impact of Cultivation Index and Teacher Characteristics on Global Competence Teaching in Primary Schools: The Israeli Case

Hagit Hazan

Universidad Camilo José Cela. hazanhagit1@gmail.com

Abstract

This study investigates the relationship between the cultivation index, teacher characteristics, and the implementation of global competence skills in elementary schools in Be'er Sheba, Israel. The sample included 156 teachers from public elementary schools in Be'er Sheba. We collected data via an online questionnaire assessing global competence across four dimensions: examination of global and cultural issues, understanding diverse perspectives, effective cross-cultural communication, and collective action. Statistical analyses included Spearman correlation and factor analysis.

Our study revealed a weak positive correlation between the cultivation index and aspects of global competence, such as critical thinking and understanding diverse perspectives. Teacher seniority showed a negative correlation with global competence, while professional development demonstrated a strong positive correlation. The study found a significant link between diverse teaching approaches and higher global competence.

The findings emphasize the significance of professional development and diverse teaching approaches in fostering global competence, particularly in socioeconomically disadvantaged schools. Furthermore, the study highlights the need for targeted teacher training and resource allocation to promote global education and prepare students for 21st-century challenges. These results have important implications for educational policy, suggesting that investing in continuous teacher professional development and promoting pedagogical diversity can effectively bridge achievement gaps in disadvantaged schools.

Keywords: Global competence, Teacher characteristics, Cultivation index, Professional development, Elementary education, Israel.

Introduction

The 21st century has seen rapid developments and changes in many areas of life immigration, globalization, technological development, changes in knowledge and the labor market, and numerous other factors that reshape the reality in which we live. Some changes are global, and others moral, demographic, and social changes are unique to Israel. In light of these changes, the education system redefines the requirements for future graduates. The expectations placed on the system are also being reexamined. In the past, the education system was primarily required to convey an agreed-upon body of knowledge and develop essential skills. Today, especially given the rapidly changing needs and the uncertainty that accompanies them, it must also cultivate

educated citizens and democratic citizenship. Furthermore, the education system should promote welfare, enhance motivation for learning, provide tools for creating new knowledge, and commit to advancing both citizens and society (Zohar & Busharian, 2020).

Global competencies in education are becoming increasingly significant. They encompass the abilities to understand and navigate global issues, assess different perspectives, effectively engage in cross-cultural interactions, and act for the benefit of both the local and global community (OECD, 2018). Therefore, it is crucial to develop these skills in students in a culturally diverse country such as Israel.

In an increasingly interconnected world, schools are required to equip their students with global competencies, enabling them to cope with diverse cultural, social, and economic landscapes. Teachers are vital in shaping students' understanding and attitudes toward these issues. Therefore, a change in teacher training is required (Ferguson-Patrick et al., 2018).

The role of school leadership is critical in shaping the educational environment and ensuring the successful implementation of pedagogical innovations. Leithwood et al. (2008) emphasize that effective school leadership directly impacts student achievement and teacher development by fostering a collaborative and supportive learning culture. In the context of global competence education, school leaders play a crucial role in providing teachers with the necessary resources, professional development opportunities, and a vision that integrates global perspectives into the curriculum.

The policy of the Israel Ministry of Education is founded on the principle that less advantaged students require additional support to bridge educational gaps, thus increasing their chances to succeed in school. Ultimately, the goal is to improve overall achievement distribution and enhance social resilience. One method of investing in less-advantaged students is to allocate additional resources to their schools. In Israel, the allocation of necessary additional resources is known as the cultivation index (Ben David-Hadar, 2023). Several Israeli studies have explored teacher characteristics. However, very few studies have examined the question of their distribution among schools in accordance with the school's cultivation index (Ayalon et al., 2019). The data indicate that in the Israeli education system, the gaps in teacher characteristics manifested in education, seniority, and wages are not significant (Blass, 2008). Quality of teachers in the school is the most influential component in student achievement. Therefore, quality teachers are needed in all schools regardless of class, religion, or geographic location (Tamir, 2019).

Schools that offer more significant support to teachers in the form of training, mentoring, and guidance have been found to allow for teachers' more successful professional and personal development (Leithwood et al., 2019).

Successful professional development must be structured as a continuous learning process rather than a one-time event. Van Driel et al. (2001) emphasize that collaborative professional networks and peer coaching lead to higher adoption rates of innovative teaching methods. To enhance global competence education, policy frameworks should support school-based professional learning communities, where teachers can share best practices, reflect on their pedagogical strategies, and engage in collaborative inquiry.

The findings of this study highlight the importance of strong and visionary leadership in promoting global competence in schools. As Leithwood & Jantzi (2006) argue, transformational leadership fosters teacher empowerment, pedagogical innovation, and a shared commitment to educational reform. School principals should receive specialized training in leadership strategies that emphasize collaborative decision-making, teacher mentorship, and professional learning communities. Integrating transformational leadership approaches into school policies can help create a more adaptive and inclusive educational environment, ensuring that teachers are well equipped to develop students' global competencies.

There is a positive relationship between the level of professional support that teachers receive and the development of the global skills required in teaching in the 21st century. Support in the form of expert individual mentorship, participation in professional learning communities, consistent feedback, and collaboration with colleagues enables teachers to acquire advanced pedagogical tools and implement innovative teaching methods. These methods focus on developing the global skills of critical thinking, complex problem-solving, intercultural sharing, effective communication, and technological literacy. Continued support gives teachers space

to experiment, reflect, and adapt practices to various teaching contexts, thus strengthening their ability to cope with modern-era educational challenges. Consequently, there is a positive relationship between the level of support teachers receive and the level of global skills they develop (Darling-Hammond et al., 2017).

Research indicates that transformational school leadership is essential for driving pedagogical innovation and fostering an educational culture that supports global competence teaching (Leithwood et al., 2008). Schools led by visionary leaders who promote continuous learning, cross-disciplinary collaboration, and professional communities tend to be more successful in integrating global skills into their teaching practices. Leaders who provide structured professional development programs and create an open and inclusive environment encourage teachers to implement global perspectives in their classrooms.

The global era requires teachers to acquire specific tools in order to cultivate and amplify soft skills in their students, especially in diverse and complex educational systems. The cultivation index can serve as a central marker for educational institutions that prioritize proper teacher training to address the challenges of globalization. Teachers need broader support throughout their training and career to successfully apply suitable teaching methods in the rapidly changing world (Schleicher, 2018). Teachers focused on developing global skills require training, resources, and appropriate tools to bring about changes at the classroom level and nurture a culture of openness and tolerance in students.

The research literature on teacher cultivation teacher cultivation and professional development emphasizes strong institutional support as an essential element in professional development in general and in the development of global skills in particular. Darling-Hammond et al.'s study (2017) found that teachers who received institutional support in their professional development continued to foster and strengthen advanced educational approaches throughout their careers. Schools that allow for greater

flexibility in teaching methods encourage creativity and innovation and enable teachers to advance skills related to understanding the broader world in a more meaningful way (OECD, 2020).

Educational environments promoting personal and professional development allow teachers to expand their understanding of global issues and lead students toward understanding intercultural realities (Leithwood et al., 2019). This study corroborates the key role of educational institutions in preparing and mentoring teachers to lead their students into the global age.

This study aims to examine how the school cultivation index and teacher professional development affect the promotion of global competence. The study involved elementary schools in Be'er Sheba, focusing on differences in the schools' cultivation index, along with teachers' experience and collaboration, to explore how these factors affect the teaching of global competence.

Moreover, this study focuses on the factors that influence the implementation of global competence in elementary schools. Specifically, it examines the relationship between the school's cultivation index - an indicator of the socioeconomic status of the school population - and the extent of application of global competence. Additionally, the influence of teacher characteristics, such as professional experience and education, on the implementation of these qualifications and their instructional methods is analyzed.

The study is based on five main hypotheses:

1. The higher the school's cultivation index, the lower the level of knowledge and teaching of global competence will be.
2. The more extensive the teacher's professional experience, the lower the level of knowledge and teaching of global competence will be.
3. The higher the level of education of teachers, the higher the level of knowledge and teaching of global competence will be.

4. The more regulated professional development that contemporizes professional knowledge, the more globally qualified teachers will be.

5. The more diverse teaching methods employed by teachers, the greater the scope of teaching global competencies will be.

Ethical Considerations

We conducted the study following the ethical standards of educational research. All participants provided informed consent, participation was voluntary, and we collected data anonymously. The research adhered to institutional guidelines for ethical conduct.

Method

Participants

The study included 156 elementary school teachers from 18 public schools in Be'er Sheba, Israel. Teachers were recruited via convenience sampling, with principals distributing invitations to all homeroom teachers (grades 1–6). The response rate was 55.7%.

Sample characteristics: The majority of participants were female (96.8%), reflecting the gender distribution in Israeli elementary education (CBS, 2020). Teachers had an average of 14.9 years of teaching experience ($SD = 10.6$) and had worked at their current school for an average of 8.8 years ($SD = 8.1$). They taught classes averaging 28.65 students (range: 22–36). Schools in the sample had a mean cultivation index of 6.8 ($SD = 1.12$, range: 4–9), indicating that most served populations facing considerable socioeconomic challenges.

Education levels included bachelor's degrees (77.0%), master's degrees (21.8%), and doctoral degrees (1.3%). The majority (91.0%) had participated in professional development within the past two years, with 42.9% having engaged in global competence-specific training.

Rationale for site selection: Be'er Sheba was selected due to its socioeconomic diversity (cultivation indices ranging 2–9), regional significance as a peripheral city, and administrative accessibility. Findings are

therefore context-specific and may not generalize to central urban areas, high-SES communities, or non-Hebrew-speaking sectors.

Instrument

We developed a 45-item questionnaire to assess global competence implementation, based on the OECD (2018) Global Competence Framework. The instrument measured four dimensions: (1) examining local, global, and cultural issues (12 items); (2) understanding and appreciating diverse perspectives (10 items); (3) engaging in intercultural interactions (9 items); and (4) taking action for collective wellbeing (8 items). Additional sections assessed professional development participation (3 items), pedagogical diversity (3 items), and demographic variables.

Development process: Items were generated through literature review, refined by an expert panel ($n = 7$), tested in cognitive interviews ($n = 12$), and piloted with 43 teachers. All items used a 6-point Likert scale (1 = Strongly Disagree to 6 = Strongly Agree).

Psychometric properties: Internal consistency was excellent for the total scale (Cronbach's $\alpha = .94$) and good for subscales ($\alpha = .83–.89$). Exploratory factor analysis (Principal Axis Factoring, Promax rotation) confirmed the four-dimension structure, with $KMO = .92$ and four factors explaining 63.4% of variance. All items loaded $\geq .40$ on their intended factors.

We obtained the cultivation index from official Ministry of Education records. This composite indicator (range: 1–10) reflects parental education, income, geographic peripherality, and immigration status, with higher scores indicating greater socioeconomic disadvantage (Ben David-Hadar, 2023).

Procedure

we collected data online (Google Forms) from May 15 to June 30, 2023. Teachers accessed the questionnaire via a unique link distributed by school principals. Participation was voluntary and anonymous, with informed consent obtained electronically. The study received ethical approval from Universidad Camilo José Cela IRB

and Be'er Sheba Municipality Education Department. Median completion time was 18 minutes. Missing data were minimal (< 2% per item) and handled using expectation-maximization imputation.

Data Analysis

Table 1 Descriptive Statistics for Study Variables

Variable	M	SD	Range	Skewness	Kurtosis
Global Competence (Total)	4.68	0.85	2.1–6.0	-0.34	-0.12
Dimension 1: Examine Issues	4.44	0.95	1.0–6.0	-0.41	0.08
Dimension 2: Understand Perspectives	4.73	0.89	1.0–6.0	-0.52	0.21
Dimension 3: Intercultural Interaction	4.51	0.88	1.7–6.0	-0.28	-0.35
Dimension 4: Take Action	4.59	0.85	1.9–6.0	-0.31	-0.18
Cultivation Index	6.80	1.47	3.3–10	0.15	-0.82
Teacher Seniority (years)	14.9	10.6	1–41	0.89	0.12
Professional Development	4.92	0.94	2.0–6.0	-0.67	0.34
Pedagogical Diversity	4.57	0.97	1.7–6.0	-0.41	0.02

Note. N = 156.

We used Spearman's rank-order correlations (rs) to examine relationships between variables, given non-normal distributions. Significance was set at $\alpha = .05$ (two-tailed). Factor analysis validated the instrument's structure. We conducted all analyses in SPSS 28.0.

Results

Table 2 Spearman Correlations Between Study Variables and Global Competence Dimensions

Variable	Dim 1	Dim 2	Dim 3	Dim 4	Total GC
Cultivation Index	.159*	.237**	.112	.093	.178*
Teacher Seniority	-.197*	-.142	-.175*	-.168*	-.183*
Education Level	-.184*	-.208*	-.263**	-.195*	-.231**
Professional Development	.384***	.325***	.298**	.341***	.372***
Pedagogical Diversity	.472***	.538***	.419***	.403***	.512***

Note. N = 156. Dim 1 = Examining global issues; Dim 2 = Understanding perspectives; Dim 3 = Intercultural interaction; Dim 4 = Taking action; GC = Global Competence.

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

Regarding the effect of the cultivation index, the findings show a positive but weak correlation between the cultivation index and global competence, which contradicts the hypothesis. A positive relationship was found between the cultivation index and the ability of teachers to promote critical thinking on global issues (dimension 1, factor 3, rs = .159, p = 0.048) and understand diverse perspectives (dimension 2, factor 1, rs = .237, p = 0.003). These findings indicate that even schools with high cultivation index measures (which indicate socioeconomic challenges) understand the importance of teaching global competence.

In terms of teacher seniority, a weak negative correlation was found between the variables of teacher seniority and the promotion of global competence. That is, the longer the teachers taught, the less likely they were to integrate global competencies in their teaching (rs = -.197, p = 0.015). This tendency was also evident in other dimensions, as less experienced teachers were more engaged in intercultural communication and cooperation (Dimension 3, rs = -.175, p = 0.031).

Contrary to the research hypothesis, the study found a weak but distinct negative correlation between a higher level of formal education and

cooperation in teaching global competence (rs = -.263, p < 0.001). This finding suggests that teachers with less formal education tend to be more involved in collaborative professional development initiatives focused on global competence.

However, professional development showed a strong positive correlation with the promotion of global competence. For example, teachers who participated in well-organized professional development showed more significant involvement in promoting cultural understanding (rs = .384, p < 0.001) and in developing communication skills for intercultural dialogue (rs = .325, p < 0.001).

Furthermore, the study revealed significant positive correlations between the different teaching approaches focusing on cultural differences and the application of global competence. Thus, a moderate positive relationship was found between various teaching approaches and "understanding and evaluating the perspectives and perceptions of others" (rs = .538, p < 0.001), confirming the initial hypothesis.

Discussion

This study examined the relationship between the school's cultivation index, teachers' professional experience and education, and their level of knowledge and use of global teaching skills. In addition, it explored the relationships between organized professional development, a range of educational approaches, and the implementation of global skills.

Contrary to the initial research hypothesis, a weak but significant positive association was found between the cultivation index and several aspects of global skills implementation. This finding was unexpected, given existing research suggesting that schools serving low socioeconomic populations tend to focus primarily on basic academic achievement rather than on complex skills such as global competencies (Anyon, 1980; Darling-Hammond, 2010). The primary finding of this study thus highlights a positive albeit weak correlation between the cultivation index and the implementation of global competencies in schools, particularly in areas such as critical thinking and understanding diverse perspectives.

These findings align with broader discussions on the impact of neoliberal educational policies on resource allocation and pedagogical priorities. Dahan and Yona (2005) argue that the neoliberal transformation of Israel's education system has led to increased privatization, competition, and a reduced state role in promoting educational equity. These systemic changes disproportionately affect schools with high cultivation indices, which often struggle to integrate innovative pedagogical approaches due to financial constraints and policy pressures. The emphasis on standardized testing and performance metrics, a hallmark of neoliberal reforms, further constrains teachers' ability to adopt creative, student-centered instructional methods.

This raises critical questions about the capacity of schools facing socioeconomic challenges to promote complex and innovative skills despite structural constraints and systemic limitations. While classical research perspectives emphasize that underprivileged schools tend to focus on essential academic achievements due to external pressures (Anyon, 1980; Darling-Hammond,

2010), the current findings offer a more nuanced and updated picture, supported by more recent studies.

Contemporary research underscores the role of global education through fostering critical thinking, intercultural communication, and a global perspective in reducing gaps and empowering students from disadvantaged backgrounds, thereby enhancing their social mobility (Boix-Mansilla & Jackson, 2011; Reimers, 2020; Zhao, 2010). Similarly, Banks (2015) argues that integrating innovative pedagogies that promote global thinking enables students to expand their horizons beyond their immediate context and prepares them for active participation in a rapidly changing world.

In the Israeli context, over the past decade the Ministry of Education has attempted to address these challenges through initiatives such as "Marom" and "Innovative Learning Spaces." These programs are designed to foster pedagogical innovation, particularly in peripheral socioeconomic and geographic regions, and to facilitate the development of 21st-century skills (Ministry of Education, 2020, 2021).

The weak but positive correlation found in this study can be attributed to several key factors. First, as Reimers (2020) notes, teachers in schools with high cultivation indices may view the development of global competencies as a means of providing their students with equal opportunities and reducing educational gaps. Second, the Ministry of Education has increased systemic support for professional development programs that equip teachers with practical tools for implementing innovative teaching practices, even under challenging conditions. Additionally, the broader sociocultural context and growing awareness of the need to prepare students for global challenges may serve as driving forces that encourage schools even in underprivileged areas to promote these competencies.

At the same time, in line with the academic literature, the findings underscore persistent educational challenges. Thrupp (1999) argues that systemic disparities continue to hinder innovation in disadvantaged schools due to a lack of resources, inadequate teacher training, and

pressure to achieve immediate academic results. This reinforces the evident need to strengthen support for such schools through targeted professional development, investment in technological infrastructure that facilitates global learning, and the gradual integration of global education into the broader curriculum.

Taken together, these findings deepen our understanding of the complexities within the Israeli education system. They highlight the positive potential of promoting global competencies even in schools with high cultivation indices. By combining systemic support, teacher professional development, and growing awareness of the importance of global education, educators can build a solid foundation for the comprehensive and effective integration of global competence teaching in schools. Such efforts are crucial for reducing educational disparities and promoting social equity.

With regard to the common claim that schools in low socioeconomic contexts tend to focus primarily on essential academic achievement, the reality in Israel appears more complex. Studies have identified substantial gaps between schools serving populations from different socioeconomic backgrounds (Blass, 2014). However, recent years have seen a shift, particularly in light of the “fairness” concept promoted by the Elementary Education Department of the Ministry of Education (Ministry of Education, 2018). This department emphasizes the importance of developing a wide range of skills among all students, regardless of socioeconomic background. Its fairness framework is based on providing differential responses to foster equal opportunities. Thus, instead of focusing solely on essential academic achievements in low-SES schools, the department encourages a more holistic educational approach.

This approach is evident in existing programs such as “Innovative Learning Spaces” and “Controlled Parental Choice,” which target diverse learner populations. The “Controlled Choice Areas” initiative, launched in 2010, allows parents to enroll their children outside traditional neighborhood zones. This policy

enables student mobility between schools (in line with the Director General’s Circular), based on agreed-upon criteria related to students’ abilities, aspirations, and needs, while simultaneously maintaining balance between schools and promoting equal opportunities (Ministry of Education, 2019).

The Israeli education system is characterized by significant disparities between different population groups, and differential funding policy has become a central tool for reducing educational inequality. According to Ayalon, Blass, Feniger, and Shavit (2019), schools with a high cultivation index receive increased resources and extensive professional support, enabling them to invest in advanced curricula and improved teaching quality. Differential budgeting thus helps allocate additional resources to schools serving disadvantaged populations, allowing them to invest in teacher training, pedagogical development, and more equitable learning opportunities. In this way, policy can contribute to narrowing gaps between students from different socioeconomic backgrounds and promoting social mobility through education (Ayalon et al., 2019). Reimers (2020) similarly suggests that schools serving disadvantaged populations sometimes display heightened awareness of the need to prepare students for global challenges, reflected in increased emphasis on intercultural skills and global thinking.

Despite growing investment in promoting global competencies, research indicates that their implementation in schools with high cultivation indices still faces considerable challenges. Lack of resources—including limited access to technology, shortages of skilled teachers, and inadequate facilities—remains a major barrier (OECD, 2023). Recent PISA 2018 and 2022 data reinforce this complexity: Israel’s average global competence score (496) was higher than the international average of 474 and comparable to the average of the participating OECD countries (OECD, 2018). However, the distribution of scores in global competencies in Israel was the broadest among the 27 countries participating in this segment of the study. A similar range of scores was observed in both language sectors,

although dispersion among Hebrew-speaking students was wider than among Arabic-speaking students. Across all Israeli sectors and among Hebrew and Arabic-speaking students separately global competence scores increased consistently with higher socioeconomic and cultural backgrounds, and female students outperformed male students. These internal disparities underscore the uneven development of global competence in Israel, despite the relatively high national average.

An analysis of the sub-dimensions contributing to these disparities reveals further polarization. Israeli students reported high self-efficacy in discussing international economic issues and strong adaptability to diverse situations. However, they also demonstrated limited knowledge of global issues, reduced capacity for perspective taking, and lower interest in learning about other cultures (OECD, 2018). Awareness of global issues varied substantially: students expressed high awareness of gender equality but lower awareness of global health issues, including pandemics (OECD, 2018). Although PISA data are not reported at the school level, patterns observed across linguistic sectors and socioeconomic groups provide a useful proxy for understanding how global competence manifests in schools characterized by high versus low cultivation indices.

These patterns align with the demographic and institutional characteristics of the teachers in the current study. The sample included 156 teachers, the vast majority women (96.8%) and only 2.6% men—a distribution reflective of the Israeli elementary school system. The teachers had an average of 14.9 years of experience ($SD = 10.6$) and 8.8 years ($SD = 8.1$) in their current school. They taught relatively large classes (mean 28.65 students, range 22–36) in schools whose mean cultivation index was 6.8 ($SD = 1.12$), indicating that most schools in the study serve populations facing considerable socioeconomic challenges. Since the cultivation index is based on indicators such as parental education, income level, geographic peripherality, and immigration status, these working environments mirror the structural barriers documented in OECD reports regarding students' learning conditions.

This correspondence suggests that the disadvantages documented among students limited technological infrastructure, overcrowded classes, and scarce exposure to innovative pedagogies—continue to shape their educational trajectories even when these students later become teachers. In other words, the “cycle of structural inequality” described in OECD analyses can also be observed in teachers’ capacity to implement global competence: teachers who were educated in resource-poor environments often return to teach in similar contexts, where systemic constraints inhibit the adoption of globally oriented pedagogies. This dynamic is further reinforced by research showing that global competence programs in Israel are not always adapted to local contexts and may face indifference or resistance from teachers and students (Agbaria & Pinson, 2019).

The connection between these findings and Freire’s (1970) theory of critical consciousness is noteworthy. Freire argues that learners including teachers interpret and act within educational systems through the lens of their lived experiences. Many teachers in this study are themselves graduates of the same high-nurture-index schools in which they now work, carrying with them the historical imprint of unequal educational conditions. Their expressed commitment to integrating global competence, despite systemic constraints, can be understood as an act of “reading the world”—a Freirean process of recognizing and critically addressing the social and structural inequalities shaping educational reality. Nevertheless, Freire emphasizes that critical awareness alone is insufficient; transformative action requires material conditions and institutional support. The limited resources available in many of these schools may therefore restrict teachers’ ability to translate their awareness into sustained pedagogical innovation.

Moreover, socioeconomic inequality continues to adversely affect students’ ability particularly those from lower socioeconomic backgrounds—to acquire global skills such as perspective-taking, intercultural communication, critical thinking about global issues, and the ability to understand and act on global and local

interconnections, due to gaps in access to advanced educational opportunities (OECD, 2023). Studies indicate that educational programs designed to develop global competencies are not always adapted to local contexts, leading to indifference or resistance among teaching staff and students (Agbaria & Pinson, 2019). Consequently, there is a need for continued research focusing on mechanisms that can support the successful implementation of global competencies in schools operating under challenging conditions, while integrating context-appropriate policies and targeted resource allocation (Utina, Arsyad, Pratiwi, Manahung, & Wantu, 2023).

These schools often recognize global competencies as essential tools for addressing the challenges of an evolving, interconnected reality. This recognition aligns with OECD reports emphasizing that global competencies enable individuals to navigate an increasingly interdependent world and participate effectively in diverse social, civic, and economic environments (OECD, 2018, 2022). Furthermore, these competencies are associated with skills that support inclusion, employability, and readiness for a rapidly changing labor market, thereby contributing to expanded future opportunities and potential social mobility. This unexpected correlation therefore challenges traditional assumptions about the relationship between socioeconomic status and educational innovation and suggests the need to re-evaluate how global competencies are implemented across different educational contexts. The present analysis thus contributes both to theoretical understanding and to practical implications for educational policy and practice, particularly in addressing educational inequities through global competency development.

A possible explanation for these findings is that in schools with a higher cultivation index (i.e., lower socioeconomic status), there is heightened awareness of the importance of acquiring global skills as a means of narrowing gaps and providing equal opportunities for students. It is possible that such schools, in practice, invest more in teaching global skills than is commonly assumed. However, despite these efforts, substantial

challenges remain. Yogeved et al. (2009) show that schools serving weaker populations still tend to focus primarily on obtaining a basic high school diploma. While the argument about a narrow focus on essential achievement in low-SES schools remains relevant to some extent, a clear trend is emerging in the Israeli education system toward emphasizing the development of diverse skills and equal opportunities for all students.

The findings regarding teacher characteristics further refine this picture. In line with the research hypothesis, a weak but distinct negative relationship was found between professional experience and several aspects of global skills implementation. This result corresponds with literature suggesting that more experienced teachers may find it more challenging to adopt innovative approaches and adapt to pedagogical change (Hargreaves & Fullan, 2012), particularly when they lack appropriate training (Darling-Hammond et al., 2017). Hargreaves (2005) found that veteran teachers tend to be less flexible and open to changes in teaching practices in later career stages, relying on familiar, long-tested methods, showing natural resistance to change, and experiencing greater difficulty adapting to new technologies—especially in the absence of sufficient training (Fullan, 2007). Skaalvik and Skaalvik (2010) further suggest that burnout and fatigue after many years in the profession may reduce motivation to embrace significant changes. At the same time, this is a generalization; many veteran teachers do adopt innovative approaches with enthusiasm. The solution, therefore, lies in continuous training, professional support, and the creation of a school environment that encourages innovation and professional growth for all teachers, regardless of seniority (Day & Gu, 2009).

Another possible explanation for the negative relationship is that less experienced teachers who have recently completed their training were more exposed during their studies to contemporary conceptions of global education. Younger teachers may also possess more personal experience with global communication technologies and social networks, making it easier for them to integrate global aspects into their teaching (Tondeur et al., 2010).

Nevertheless, the study's findings show that these relationships are generally weak and not significant across all dimensions of global skills, underscoring the importance of continuous professional development in global skills for teachers at all stages of their career. Professional development programs can help bridge gaps between veteran and novice teachers and provide all teachers with tools for effectively fostering global skills (Darling-Hammond et al., 2017).

Contrary to the research hypothesis, a weak but significant negative correlation was also found between teachers' education level and several aspects of global skills implementation, particularly their collaboration in teaching global competencies. Further examination suggests that teachers with higher academic degrees may encounter specific challenges that influence this pattern. These include greater pedagogical rigidity, as highly educated teachers may rely more on traditional disciplinary approaches; a gap between theoretical academic training and practical classroom application, such that advanced degrees do not necessarily equip teachers with concrete strategies for integrating global competencies; limited exposure to global-competence content in graduate programs; and reduced flexibility in adopting innovative technologies and tools, which are essential for implementing global skills effectively.

This finding is complex in light of extensive evidence pointing to a generally positive association between higher education and advanced pedagogical abilities, as well as openness to innovation. Comprehensive academic education provides teachers with deep pedagogical knowledge and advanced teaching skills, which improve instruction and student achievement (Kunter et al., 2013; Darling-Hammond, 2000). Teachers with higher education also tend to be more open to adopting new technologies and innovative methods (Tondeur et al., 2017; Bakkenes et al., 2010). Ongoing professional development, which often includes additional academic study, contributes to improved teaching practices and the adoption of innovative approaches (Avalos, 2011). Nonetheless, the current findings highlight that formal academic education alone does not

guarantee effective implementation of global competencies. Practical experience, institutional support, and personal characteristics play significant roles in teachers' professional development and their ability to implement global skills. Studies such as Wenglinsky (2002), Goldhaber and Brewer (2000), and Kunter et al. (2013) emphasize that advanced degrees can enhance teaching quality and student outcomes but do not always ensure the integration of new pedagogical paradigms.

This complexity is also reflected in research suggesting that teachers with advanced degrees may, at times, be more attached to traditional methods, which can hinder the adoption of novel approaches (Zeichner & Liston, 2013). Tondeur et al. (2017) found that the relationship between teachers' education level and their willingness to adopt new technologies is not linear, and in some cases, less formally educated teachers demonstrated greater flexibility. These findings underscore the importance of focused, relevant training on global education rather than negating the value of higher education itself. Another plausible explanation is that teachers with advanced degrees tend to specialize more deeply in specific subject areas and devote less attention to cross-cutting skills such as global competencies. Advanced study programs may not adequately emphasize global education or provide sufficient tools for its practical implementation (Zhao, 2010). This underscores the need to better integrate global education into advanced teacher training and specialization programs, ensuring that more highly educated teachers not only deepen their subject matter knowledge but also acquire tools for embedding global skills in their instruction (Zhao, 2010).

Consistent with the research hypothesis, significant positive correlations were found between the degree of organization of professional development and the implementation of global skills. This finding aligns with literature emphasizing the role of high-quality, sustained professional development in implementing innovative teaching approaches (Darling-Hammond et al., 2017). Desimone (2009) highlights the importance of structured and coherent professional development, arguing

that such formats support teachers in integrating new knowledge and skills into their practice. In the context of global skills, Reimers (2020) stresses that well-organized professional development is critical for implementing innovative, globally oriented teaching. Similarly, Avalos-Bevan and Bascopé (2017) found that teachers participating in structured professional development programs reported broader implementation of innovative approaches, including those related to global skills. The positive correlation found in this study between organized professional development and the use of global skills is thus grounded in both theoretical and empirical understandings of the importance of structure in teachers' professional learning processes.

These findings underscore the need to invest in high-quality professional development programs that focus on global skills, with an emphasis on professional learning communities, knowledge-sharing among teachers, and practical experience in implementing global skills in the classroom (Avalos, 2011). In line with the research hypothesis, significant positive correlations were also observed between various approaches to teaching cultural diversity and the implementation of global skills. This is consistent with academic literature highlighting the importance of diverse pedagogical approaches in promoting complex competencies such as global skills (Banks, 2015).

Culturally responsive teaching practices help students develop awareness and appreciation of cultural diversity, which form the foundation for global skills (Gay, 2018). Teaching that incorporates multiple cultural perspectives promotes critical thinking and cross-cultural empathy, which are core elements of global competence (Ladson-Billings, 2014). Moreover, teachers who employ varied instructional methods that emphasize cultural diversity are more successful in helping students develop skills such as analyzing global issues from different perspectives (Sleeter & Carmona, 2017). Integrating diverse teaching techniques—including simulations, discussions, and project-based learning in the context of cultural diversity—contributes to the development of

intercultural communication and global problem-solving skills (Merryfield, 2008). Boix-Mansilla and Jackson (2011) further emphasize that using varied instructional strategies that integrate diverse cultural perspectives supports the development of "global thinking" and the ability to function in multicultural environments. Overall, the research literature offers strong support for the positive correlation between diverse methods of teaching cultural diversity and the development of global skills, underscoring the importance of multifaceted and multidimensional pedagogical approaches.

These findings reinforce the need to encourage teachers to adopt diverse pedagogical approaches and to provide them with adequate training and opportunities to practice a variety of methods. Particular emphasis should be placed on the connection between these approaches and the development of global skills (Boix-Mansilla & Jackson, 2011).

Conclusions

This study examined the relationships between schools' cultivation index, teachers' professional experience and education, the organization of professional development, and diverse pedagogical approaches in relation to the knowledge and implementation of global skills in Israeli primary schools. The findings reveal a complex interplay between structural constraints, teacher characteristics, and systemic inequalities, and highlight both obstacles and opportunities for strengthening global competence education.

1. Influence of Cultivation Index on Global Skills Implementation

A central conclusion emerging from the results and reinforced in the discussion is that schools with higher cultivation indices typically serving lower socioeconomic populations—exhibit higher teacher awareness of global competencies but reduced capacity to implement them due to systemic barriers. This aligns with OECD reports showing that students from disadvantaged backgrounds in Israel experience lower access to advanced learning opportunities and global learning environments (OECD, 2018, 2022). Despite these constraints, teachers in such

schools appear to recognize the potential of global competencies as tools for equity (Reimers, 2020), consistent with the study's finding of a weak yet positive correlation.

This pattern resonates with Freire's (1970) theory of critical consciousness: teachers working in high-nurture-index schools may be acutely aware of social inequalities shaping their students' realities, but awareness alone is insufficient for systemic transformation without institutional and material support.

2. Teacher Experience and Education: Unexpected Negative Relationships

The study identified weak but significant negative correlations between:

Professional experience and several aspects of global skills implementation.

Teachers' education level and collaboration in teaching global competencies.

These findings contrast with literature demonstrating that higher education improves pedagogical ability (Kunter et al., 2013; Darling-Hammond, 2000). However, they align with research indicating that veteran teachers may resist innovation or struggle with technological integration (Hargreaves, 2005; Fullan, 2007), and that advanced academic programs do not always emphasize global competence or applied pedagogy (Zeichner & Liston, 2013; Zhao, 2010).

The results underscore the need to bridge gaps between theoretical training and practical implementation, especially in global and intercultural education.

3. Central Role of Organized Professional Development

As expected and strongly supported by the findings, organized, structured professional development (PD) showed a significant positive association with the use of global skills. This reinforces extensive literature on the critical importance of PD in supporting pedagogical innovation (Avalos, 2011; Darling-Hammond et al., 2017). Effective PD such as learning

communities, mentoring, and collaborative inquiry—helps teachers translate global education frameworks into classroom practice (Hargreaves & O'Connor, 2018; Reimers, 2020).

4. Culturally Responsive Teaching as a Foundation for Global Competence

Consistent with results and discussion, strong positive correlations were found between culturally responsive approaches and global competencies. These findings are supported by Banks (2015), Gay (2018), and Merryfield (2008), who emphasize that multicultural and intercultural pedagogies promote perspective-taking, empathy, and global awareness all core components of global competence.

5. Implications for Policy and Practice

Based on the integrated findings, several applied recommendations emerge:

Strengthening Support for Disadvantaged Schools-given the alignment between the study's results and OECD evidence of structural inequality, targeted investment is required for schools with high cultivation indices—particularly in technology, teacher training, and global learning resources.

Enhancing Professional Development-PD should be long-term, structured, and aligned with practical global-competence implementation. Programs must support both novice and veteran teachers and should include hands-on pedagogical training.

Integrating Global Competence into Teacher Education-teacher training—both initial and advanced—must prioritize global competence frameworks, culturally responsive teaching, and experiential pedagogies (Zhao, 2010).

Curriculum Adaptation-curricula should embed global competencies across disciplines and be adapted to the diverse needs of students from schools with different cultivation indices (OECD, 2018).

Developing Assessment Tools-there is a need for validated tools to assess global competence

implementation at the school level (Siczbek & Engel, 2019), enabling continuous improvement.

6. Directions for Future Research

Future studies should examine:

Mechanisms mediating the gap between teacher awareness and classroom implementation.

Longitudinal patterns of teachers' global-competence development.

Qualitative inquiry into school-level conditions that enable or constrain global pedagogies.

Mixed-methods approaches (Creswell & Creswell, 2017) could deepen understanding of how teachers interpret and enact global competence.

7. Final Remarks

The findings highlight the necessity of aligning teacher training, school-level support, and national policy to promote global competence in Israel. Addressing disparities in implementation—particularly in disadvantaged contexts—requires systemic investment and pedagogical innovation. By adopting these recommendations, the education system can better prepare students to navigate the complexities of the 21st century.

Conflict of Interest Statement

The author declares no conflicts of interest related to this research.

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Ethics Approval

We conducted this study in accordance with ethical guidelines for research involving human participants. All participants provided informed consent, and we collected data and stored in compliance with privacy and data protection regulations.

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References:

1. Agbaria, A. K., & Pinson, H. (2019). Navigating Israeli citizenship: How do Arab-Palestinian teachers civicize their pupils? *Race Ethnicity and Education*, 22(3), 391–409. <https://doi.org/10.1080/13613324.2018.1511527>
2. Anyon, J. (1980). Social class and the hidden curriculum of work. *Journal of Education*, 162(1), 67–92. <https://doi.org/10.1177/002205748016200106>
3. Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education*, 27(1), 10–20. <https://doi.org/10.1016/j.tate.2010.08.007>
4. Avalos-Bevan, B., & Bascopé, M. (2017). Teacher informal collaboration for professional improvement: Beliefs, contexts, and experience. *Education Research International*, 2017, Article 1357180. <https://doi.org/10.1155/2017/1357180>
5. Ayalon, H., Blass, N., Feniger, Y., & Shavit, Y. (2019). Educational inequality in Israel: From research to policy. Taub Center for Social Policy Studies in Israel. https://www.taubcenter.org.il/wp-content/uploads/2020/12/educationinequalit_yinisraeleng.pdf
6. Banks, J. A. (2015). Cultural diversity and education: Foundations, curriculum, and teaching. Routledge.
7. Bakkenes, I., Vermunt, J. D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction*, 20(6), 533–548.

https://doi.org/10.1016/j.learninstruc.2009.09.001

8. Ben David-Hadar, I. (2023). Cultivation index: A background paper (in Hebrew). Bar-Ilan University.
<https://meyda.education.gov.il/files/LishcatMadaan/MadadTipuach/review-bendavid-hadar.pdf>
9. Blass, N. (2008). Literature review on indicators on teachers and teaching in the education system. Israel Academy of Sciences and Humanities.
<http://education.academy.ac.il/English>
10. Blass, N. (2015). Inequality in the education system: Who opposes and who benefits from it? Taub Center for Social Policy Studies in Israel. <https://www.taubcenter.org.il/wp-content/uploads/2020/12/inequalitiesintheeducationsystemenglish.pdf>
11. Boix-Mansilla, V., & Jackson, A. (2011). Educating for global competence: Preparing our youth to engage the world. Council of Chief State School Officers.
12. Cochran-Smith, M. (2005). Studying teacher education: What we know and need to know. *Journal of Teacher Education*, 56(4), 301–306.
<https://doi.org/10.1177/0022487105280116>
13. Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage Publications.
14. Cushner, K. (2016). Human diversity in education: An intercultural approach. McGraw-Hill.
15. Dahan, Y., & Yona, Y. (2005). Spokeswoman report: On the neo-liberal revolution in education (in Hebrew). Van Leer Institute.
16. Darling-Hammond, L. (2000a). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8(1), 1–44.
<https://doi.org/10.14507/epaa.v8n1.2000>
17. Darling-Hammond, L. (2000b). How teacher education matters. *Journal of Teacher Education*, 51(3), 166–173.
<https://doi.org/10.1177/0022487100051003002>
18. Darling-Hammond, L. (2010). The flat world and education. Teachers College Press.
19. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development. Learning Policy Institute.
20. Day, C., & Gu, Q. (2009). Veteran teachers: Commitment, resilience, and quality retention. *Teachers and Teaching*, 15(4), 441–457.
<https://doi.org/10.1080/13540600903057211>
21. Day, C., Sammons, P., Hopkins, D., Harris, A., Leithwood, K., Gu, Q., & Brown, E. (2010). 10 strong claims about successful school leadership. National College for School Leadership.
22. Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181–199.
23. Ferguson-Patrick, K., Reynolds, R., & Macqueen, S. (2018). Integrating curriculum: A case study of teaching global education. *European Journal of Teacher Education*, 41(2), 187–201.
24. Freire, P. (1970). Pedagogy of the oppressed. Continuum.
25. Fullan, M. (2007). The new meaning of educational change (4th ed.). Teachers College Press.
26. Gay, G. (2018). Culturally responsive teaching (3rd ed.). Teachers College Press.
27. Goldhaber, D. D., & Brewer, D. J. (2000). Does teacher certification matter? *Educational Evaluation and Policy Analysis*, 22(2), 129–145.
28. Hargreaves, A. (2005). Educational change takes ages. *Teaching and Teacher Education*, 21(8), 967–983.
29. Hargreaves, A., & Fullan, M. (2012). Professional capital. Teachers College Press.
30. Hargreaves, A., & O'Connor, M. T. (2018). Collaborative professionalism. Corwin Press.
31. Kennedy, M. M. (2016). How does professional development improve teaching? *Review of Educational Research*, 86(4), 945–980.

32. Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers. *Journal of Educational Psychology*, 105(3), 805–820.

33. Ladson-Billings, G. (2014). Culturally relevant pedagogy 2.0. *Harvard Educational Review*, 36(1), 74–84.

34. Leithwood, K., & Jantzi, D. (2006). Transformational school leadership. *School Effectiveness and School Improvement*, 17(2), 201–227.

35. Leithwood, K., Harris, A., & Hopkins, D. (2019). Seven strong claims about school leadership revisited. *School Leadership & Management*, 40(1), 5–22.

36. Merryfield, M. M. (2008). Scaffolding social studies for global awareness. *Social Education*, 72(7), 363–366.

37. Ministry of Education (2018–2021). Fairness in education; Controlled parental choice; Innovative learning spaces; Marom program (in Hebrew).

38. OECD. (2018). Preparing our youth for an inclusive and sustainable world. OECD Publishing.

39. OECD. (2020). Global competency for an inclusive world. OECD Publishing.

40. OECD. (2022). PISA 2022 results (Vols. 1–3). OECD Publishing.

41. OECD. (2023). Global competency for an inclusive world. OECD Publishing.

42. Reimers, F. M. (2020). Educating students to improve the world. Springer.

43. ResearchGate. (2023). Challenges and Opportunities for Children's Education in the Era of Globalization. https://www.researchgate.net/publication/371552346_Challenges_and_Opportunities_for_Children's_Education_in_the_Era_of_Globalization

44. Schleicher, A. (2018). World class. OECD Publishing.

45. Siczek, M. M., & Engel, L. C. (2019). Teachers' interpretation of global education initiatives. *Educational Policy*, 33(3), 486–515.

46. Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and burnout. *Teaching and Teacher Education*, 26(4), 1059–1069.

47. Sleeter, C. E., & Carmona, J. F. (2017). Un-standardizing curriculum. Teachers College Press.

48. Tamir, E. (2019). Disparities in the education system in Israel (in Hebrew). Mofet Institute.

49. Thrupp, M. (1999). Schools making a difference. Open University Press.

50. Tondeur, J., van Braak, J., Sang, G., Voogt, J., Fisser, P., & Ottenbreit-Leftwich, A. (2012). Preparing pre-service teachers to integrate technology. *Computers & Education*, 59(1), 134–144.

51. Tondeur, J., van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2017). Teachers' beliefs and technology use. *Educational Technology Research and Development*, 65(3), 555–575.

52. Van Driel, J. H., Beijaard, D., & Verloop, N. (2012). Professional development and reform in science education. *Journal of Research in Science Teaching*, 39(1), 137–158.

53. Wenglinsky, H. (2002). How schools matter. *Education Policy Analysis Archives*, 10(12), 1–30.

54. Yogeved, A., Livneh, I., & Feniger, Y. (2009). Social filtering and inequality. *Megamot*, 36(3), 306–328.

55. Zeichner, K. M., & Liston, D. P. (2013). Reflective teaching: An introduction. Routledge.

56. Zhao, Y. (2010). Preparing globally competent teachers. *Journal of Teacher Education*, 61(5), 422–431. <https://doi.org/10.1177/0022487110375802>

57. Zohar, A., & Busharian, O. (2020). Adapting curricula for the 21st century (in Hebrew). Israel Academy of Sciences.