When the Cheese Moves: How Arab and Jewish Education Students Perceive the Transition to Distance Practical Teaching During the Covid-19 Crisis

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Abstract

The goal of the current study was to examine teaching students’ positions and perceptions regarding the transition to an online format for practical teaching during Covid-19, and whether differences exist between Jewish and Arab students’ positions. The study also examines teaching students’ technological and pedagogical self-efficacies for distance teaching and the extent of differences between the Arab and Jewish students’ self-efficacies. In addition, the study examined which background and personality variables predict positions and perceptions. The findings are based on a questionnaire completed by 279 Arab and Jewish teaching students from two Israeli teacher education colleges that transitioned to online practical teaching as a result of the Covid-19 crisis. Semi-structured interviews were also conducted to gain a deeper understanding of the questionnaire findings and to expand on topics not referred to in the questionnaire. The study reveals that teaching students accept the importance of the distance teaching experience during training in order to prepare them for the changing reality. Nevertheless, this cannot fully replace field experience because of the need for support and the limited ability to learn from the distance experience about face-to-face teaching.

Keywords: Covid-19 crisis, online practical teaching, pedagogical self-efficacy, positions, practical teaching, teacher education, technological self-efficacy

1. Introduction

The Covid-19 outbreak in March 2020 confronted all aspects of life with complex global challenges, including the educational system and institutes of higher education. To prevent the spread of the pandemic, lockdowns were imposed (Karakose, Yirci, & Papadakis, 2021). In most cases, access to educational institutions was prohibited (Marinoni, 2020). Educational and academic institutions had to adapt practical aspects of their programs to comply with Ministry of Education (MOE) regulations. Teachers had to think flexibly and creatively, adopt new technological teaching methods, deal with technical problems (DePietro, 2020; Dhawan, 2020) and apply emotional tools to reduce stress and anxiety (Johnson, 2020). As in the rest of the world, teacher education had generally been in a face-to-face format, especially the practicum—the teaching experience in schools.

The current study aimed at examining teaching students’ positions about the transition to an online format for practical teaching, given the significance of this part to teacher education and the transition from students to teachers during this new reality. We will review different practical teaching models, specifically Israeli practice models, to understand the context of teacher education in Israel and the different challenges that students of Jewish and Arab societies face. We will also review students’ positions about online learning and teaching, including their self-efficacies regarding the technological aspect of distance teaching, which was also examined in this study.

The study also examined which background and personality variables predict positions and perceptions. The findings were analyzed as a general picture, but also compared Jewish and Arab students due to the bicultural aspect of Israel: Israel’s population at the beginning of 2021 was 9.291 million residents (Central Bureau of Statistics—CBS, 2021), of whom 74% were Jews and 21% Arabs.

Using mixed methods, we first identified students’ positions regarding distance learning. Then, focused, in-depth
interviews were conducted to uncover a deeper picture and learn more about the students’ paradigms through their narratives.

The study contributes to an understanding of students’ positions and perceptions and may indicate ways for optimizing teacher education that incorporates hybrid elements, enabling face-to-face or distance teaching during both routine and emergency periods. These recommendations may be valuable for academic institutes, teacher education institutes and policy-makers.

2. Theoretical Background

2.1 Ramifications of the Covid-19 Crisis on Teaching in Institutes of Higher Education

The Covid-19 pandemic forced an unplanned transition in educational institutions from a traditional pedagogical face-to-face approach to online distance pedagogy after years of refusing to change their pedagogical approach. This dramatic and unplanned transition involved challenges and opportunities that pedagogical teams had not faced previously (United Nations, 2020). The sharp and swift transition to online learning deeply influenced diverse aspects of teaching, ranging from teaching methods and the design of study materials to decisions about learning contents (Moore & Kearseley, 1996; Perry & Pillati, 2011).

Israel's educational system is characterized by centralization, with policy being fixed by the MOE (Shmueli, 2003). It is a complex system, with contradictions in how it supervises and funds various societies and populations. The MOE is constantly being criticized for a lack in providing support for Arab society and insufficiency in narrowing the gaps in infrastructures and a wide range of pedagogical aspects within that society (Gibton, 2011). Based on the findings of national and international achievement tests, the gaps between various sectors of Israeli society are among the widest in OECD countries (Ayalon et al., 2019). Among Arab citizens, the percentage of homes not connected to the Internet is significantly higher than in the Jewish population, and the Jewish population’s use of computers is twice as high as among the Arab population (CBS, 2021).

Efforts to make teacher education accessible to all populations are characterized by a wide range of teacher training institutions, many of which are culturally identified with one of the societies (Banks, 2008). Studies on education in Israel recognized the gaps between Arab and Jewish education in many aspects: budgets, infrastructure, study programs and collaboration in decision-making (Arar, 2012; Ayalon et al., 2019; Masry-Herzallah & Stavissky, 2021).

2.2 Practical Teaching and Israeli Practice Models

Practical teaching is an integral and significant part of teacher education, connecting academic studies with actual teaching—theory with practice (Anderson & Caires, 2013; Caires et al., 2012). During practical teaching, the student applies his theoretical knowledge and receives hands-on experience (Baber, 2020; Feiman-Nemser et al., 2014; Lofthouse et al., 2020). The effort to reduce the gap between academic and practical aspects led to the formulation of alternative teacher education models in the field. In the past 15 years, two new models of field experience for teaching students were added in Israel. The former practicum model was based on routines of modeling representations by the workshops’ mentor and imitating rehearsals by students, rather than having real-life approximations (Lehavi, 2009).

The new models seek to bring peer relationships, i.e., the establishment of a partnership between colleges and schools in the field operating in the format of professional development schools (PDS). This model is based on a model first presented in the Holmes Group report (Case et al., 1986). The core concept of the PDS model is reinforcing the partnerships between the parties involved in the practicum: teaching students, academic institute proxies (pedagogical instructors), mentor teachers, and other school officials (Maskit & Mevarech, 2013; Moore & Reichel, 2016). This framework includes the practical experience of the college’s teaching students and instructors in one or several schools.

In the 2015-2016 academic year, a new program called ‘Academy-Class’ was founded, aimed at improving the process and ensuring that trainees and faculties are more committed to and involved in field institutes (MOE, 2014, 2018). The requirement for additional field experience emphasized its importance and raised questions regarding the effect of the transition to distance learning on teaching students.

2.3 Teacher Education for Online/Distance Teaching

Over the years, institutes of higher education worldwide have adopted online learning and developed courses for distance learning, a trend that is continuing to grow (Barak et al., 2016). In Israel, despite great efforts to develop online learning in institutes of higher education, the number of such courses offered was negligible and did not lead to significant changes (Davidovitch & Cohen, 2020). With the outbreak of Covid-19, the academic educational
system transitioned to online learning and the pedagogical staff had to accept the change (Cohen & Davidovitch, 2020; Dahwan, 2020).

Incorporating this teaching method should promote techno-pedagogical literacy among teaching students, as well as provide them with pedagogical tools to encourage and motivate schoolchildren by providing emotional and social solutions (MOE, 2020). Moreover, transitioning to online learning requires an agile work culture, enabling flexibility in unit/lesson planning and an ongoing dialog with students (Bryant & Bates, 2015; Duesbery et al., 2019). Nevertheless, this requires a complex process in which the lecturers should address not only the practical aspects but also the emotional aspects of changing teaching styles, such as providing a sense of belonging (Peacock et al., 2020).

2.4 Students’ Positions about Practical Teaching and Online Learning

In 1993, the Israeli MOE published its proposal for ICT (information and communications technology) reform in schools—“The Five-Year ICT Plan”—aimed at adapting the educational system to the technological developments of the 21st century (Blau & Shamir-Inbal, 2016). However, distance learning did take place at all in the school system and it was only implemented with the outbreak of Covid-19 (Masry-Herzalla & Stavissky, 2021). Studies conducted before Covid-19 showed that most school principals and teachers were under-enthusiastic about implementing ICT at school, stressing its disadvantages among populations having low digital infrastructures. But as opposed to the staff, high-school students in the periphery were willing to participate in distance learning programs (Avriel-Avni et al., 2020). After the Covid-19 outbreak, studies still indicated negative positions, difficulties in adapting and distrust regarding the transition to online learning (Abbasi et al., 2020; Agung et al. 2020).

2.5 Online Practical Teaching

Recent studies about the characteristics of online learning during lockdowns have shown that it has many benefits as well as challenges. Students had widespread opportunities for collaborative learning, joint evaluation, exposure to varied teaching methods, especially innovative ones, as well as to the necessary technological skills (Donitsa-Schmidt & Ramot, 2020). Examination of students’ positions about incorporating technology shows that they recognize the advantages of this platform (Ali, 2020; Ana et al., 2020; Hoque et al., 2020). They value the flexibility in the time and place of studies, personalized learning pace, incorporation of study aids to deepen understanding of the subject matter, and availability of the material (Baber, 2020; Hoque et al., 2020; Soffer & Cohen, 2019; Tartavulea et al., 2020).

However, these positions are not accepted by all, and students are expressing their reservations about the possibility of online learning in becoming an alternative to traditional learning (Ana et al., 2020; Khan et al., 2021; Tartavulea et al., 2020). They report low involvement because no interaction exists between them and the pedagogical staff (Dhawan, 2020; Peacock et al., 2020).

Teaching students noted limitations in their technological abilities, the unpreparedness of the pedagogical staff and their unprofessionalism in online teaching (Cohen et al., 2020; Dhawan, 2020). Despite a growing body of research, only scant attention has been paid to background variables (Mustaji, 2020). Initial findings show that in technologically disadvantaged countries, online learning is perceived to be of low quality, with more objections to online learning (Adnan & Anwar, 2020).

2.6 Technological Self-Efficacy

The main challenge of incorporating technology as an inseparable learning component is influenced by several factors including students’ accessibility and motivation (Ali, 2020), individuals’ positions toward technology (Teo, 2011) and self-efficacy (Bar-Tal & Seifert, 2020).

The term self-efficacy has been discussed extensively, beginning with Bandura (1977), who focused on a person’s perception about their ability to perform various tasks and persist and improve in performing them. Self-efficacy is based on self-perceptions about cognitive aspects and knowledge, ability and skill, as well as aspects of control over future challenges (Goddard et al., 2004). It plays a crucial role in professional development considerations, influences the goals and directions that people set for themselves and impacts their chances of achieving them (Filippin & Paccagnella, 2012; Wu et al., 2009). In that manner, self-efficacy in educational practice refers to a teacher’s expectation to have the ability to influence student outcomes (Armor et al., 1976; Baroudi & Shaya, 2022; Lemon & Garvis, 2015). Research studies have shown positive correlations between the teacher’s self-efficacy and the students’ achievements (Goddard et al., 2000; Tschannen-Moran et al., 1998), as well as the teacher’s overall satisfaction productivity (Ayllón et al., 2019; Hampton et al., 2020; Moore, 2005). Other findings showed that females have a higher efficacy in teaching online (Horvitz et al., 2014), and teachers at early stages of
their career more readily accept technological and other innovative pedagogical approaches (Suprayogi et al., 2017).

Regarding online learning, the literature emphasizes three levels of technological self-efficacy: 1. Computer handling; 2. Internet use and information seeking; and 3. Organization and management of online learning (Alqurashi, 2016). These play an important role in students’ readiness and success in online learning (Aguilera-Hermida, 2020; Albelbisi & Yusop, 2019; Martin et al., 2020) and in their satisfaction with this tool (Aguilera-Hermida, 2020; Albelbisi & Yusop, 2019; Landrum, 2020; Mustaji, 2020). Thongsri et al. (2021) showed that self-efficacy for online learning largely influenced students’ decisions to continue on to higher education.

Baroudi and Shaya (2022) showed that receiving online instructional support and professional development in online teaching impact teacher’s acceptance of technological online-teaching transitions. The current study adds to the growing body of literature about the advantages and challenges brought about by the swift and enforced transition to online learning. The study focuses on practical teaching and examines students’ positions and perceptions about this part of teacher education due to the Covid-19 outbreak, their self-efficacies in teaching online and their feelings about those who lead it. The study highlights unique features found in the Arab and Jewish sectors about these positions. The study also examines whether Arab and Jewish students have different perceptions and self-efficacies about distance practical teaching, and which background and personal variables predict positions and perceptions.

The following research questions were formulated:

RQ1. A. What are the positions of teaching students about distance practical teaching? B. Are there differences between Arab and Jewish students regarding their positions on distance practical teaching?

RQ2. A. What is the level of self-efficacy of teaching students regarding distance practical teaching? B. Are there differences between Arab and Jewish students regarding their self-efficacies for distance practical teaching?

RQ3. What variables of background (e.g., gender), learning environment (e.g., practical teaching model) and personality (e.g., technological self-efficacy) predict positions and perceptions about distance practical teaching?

RQ4. How do teaching students perceive the transition to online learning (qualitative measures)?

Since the transition to full distance learning was a new situation not experienced before, we have no assumptions regarding the positions or self-efficacies of teaching students about distance learning, nor about the differences between Arab and Jewish students.

3. Method

The study was conducted in a deductive process using mixed methods combining quantitative and qualitative tools (Tashakkori & Creswell, 2007). First, a questionnaire was distributed that yielded initial results, which we then analyzed. Second, we conducted focused in-depth interviews to uncover a deeper picture and learn more about the students’ paradigms through their narratives. The interviews aimed at getting a broader and deeper understanding of questions that could not be sufficiently answered in the closed-ended questionnaire. Additionally, we discovered recurring themes and examined various meanings, thus reinforcing the study’s reliability. The interviews were recorded to increase the study’s validity and reliability and to maintain accuracy (Noble & Smith, 2015). The qualitative data were analyzed through Creswell’s (2014) steps of content analysis.

3.1 Study Population

The study population comprised 279 students, 161 of whom (58%) were Arab and 118 (41%) Jewish (age: M = 23.84, SD = 5.69). They studied in two teacher education colleges in Israel that had transitioned to online practical teaching due to the Covid-19 crisis. The gender distribution was in line with the Israel teacher gender distribution (92% females, 8% male). During the study year, 20% were first-year students, 22% second-year, 37% third-year and 21% fourth-year. Regarding the practical teaching model, 42% were in the traditional model, 13% in the PDS model and 35% in the Academy-Class model.

3.2 Study Tools

3.2.1 Quantitative Tool–Questionnaire

A questionnaire was designed specifically for the current study based on Jansen et al. (2017), including the following calculated variables:

1) Availability of technological resources: questions regarding the student’s technical accessibility to practice distance practical teaching (e.g., access to a computer, Internet, smartphone; a work environment enabling
continuous work without breakdowns or distractions).

2) Positions on distance practical teaching (26 items including 10 reverse items, \( \alpha = .91 \); this section was prepared by the authors. A factor analysis was conducted. When loadings less than 0.30 were excluded, the analysis yielded an eight-factor solution with a simple structure (factor loadings \( \geq .30 \)). For example: “It was the right thing to continue the practical teaching part as distance teaching during the Covid-19 crisis.”

3) Self-efficacy for distance practical teaching: questions regarding several aspects of self-efficacy. The students were asked to rate the extent to which they agree with each item on a Likert scale format from 1 (not at all) to 6 (to a very great extent).

A. Technological self-efficacy (8 items; \( \alpha = .87 \)). For example, “I feel that I have knowledge and skills in distance practical teaching in my discipline.”

B. Pedagogical self-efficacy: the capability of performing the required teaching tasks (11 items; \( \alpha = .96 \)). For example: “To empower my student’s abilities.”

C. Pedagogical knowledge and tools (8 items; \( \alpha = .94 \)). For example: “Ability to plan a distance lesson.”

4) Demographics. Personal details (age, gender, social group, family status, etc.), practical teaching framework (geographical area, education stage, sector, etc.) and college studies (program, study year, focus group, etc.).

The questionnaire was designed using the Qualtrics (SAP, Germany) platform, and the responses were received from July 7, 2020, to January 8, 2021.

3.2.2 Qualitative Tool–Semi-Structured Interviews

To answer RQ4, 12 interviews were conducted with six Arab and six Jewish students from all disciplines. The interviewees were chosen randomly out of those who agreed to be interviewed among the study sample. Analysis of the interviews was performed in two stages. First, an initial analysis was conducted that revealed initial themes to understand the general meaning of the interviews. The second was a mapping analysis: the initial themes were grouped into similar categories to find the associations between them. To reinforce reliability, the first author conducted the analysis and the second author was the critic (Marshall & Rossman, 2014). See Appendix A for the interview questions.

4. Results

4.1 Technological Accessibility

In order to examine the existence of basic technological conditions for distance teaching, we first examined the extent of accessibility to distance practical teaching. The results are shown in Figure 1. No significant differences were found between Arab and Jewish students in the conditions for distance practical teaching and the number of computer aids: \( t(277) = 1.69, p = 0.09 \).

![Access to Technological Devices](image)

Figure 1. Access to technological devices
RQ1. Students’ Positions about Distance Practical Teaching
RQ1A. We calculated the average of all 28 items on positions regarding distance practical teaching: the average was medium (M = 3.44, SD = 0.84). RQ1B. There was no difference between Jewish and Arab students in their positions regarding distance practical teaching (t(277) = 1.17, p = 0.24. Appendix B shows the averages of each item and the percentage of students who agreed to “a great extent” or “to a very great extent” for each item.

RQ2. Students’ Self-Efficacy for Distance Practical Teaching
RQ2A. We examined technological and pedagogical self-efficacies, and pedagogical knowledge and tools for distance teaching. The results were medium to medium-high. Figure 2 shows the averages according to sector.

RQ2B. When comparing the two groups using a t-test, the findings show that the Arab students had higher scores in all three variables (scale: 0-6): technological self-efficacy [t(277) = 3.26, p = 0.001]; pedagogical self-efficacy [t(277) = 4.17, p < 0.001]; and pedagogical knowledge and tools [t(277) = 4.46, p < 0.001].

Figure 2. Technological and pedagogical self-efficacies, pedagogical knowledge and tools: a comparison between Arab and Jewish students

RQ3. Predicting Students’ Positions on Distance Practical Teaching
Before conducting a hierarchical regression analysis, we examined the associations between the positions, perceptions, sectors and other demographic characteristics, and tested the correlations between the variables using Pearson’s R.

Table 1. Pearson correlation coefficients between the study variables and selected demographic variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
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<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
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</tr>
<tr>
<td>Year of study</td>
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<td>0.19**</td>
<td>0.06</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Conditions for distance practical teaching</td>
<td>0.03</td>
<td>-0.11</td>
<td>0.05</td>
<td>-0.12*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Technological self-efficacy for practical</td>
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<td>0.19**</td>
<td>0.02</td>
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<td>0.37**</td>
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<td>Pedagogical self-efficacy for practical</td>
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<td>0</td>
<td>0.13*</td>
<td>0.18**</td>
<td>0.56**</td>
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<td>-0.03</td>
<td>0.13*</td>
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<td>0.64**</td>
<td>0.79**</td>
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<td>-0.08</td>
<td>-0.16*</td>
<td>0.07</td>
<td>-0.22*</td>
<td>-0.34**</td>
<td>-0.14*</td>
<td>-0.20**</td>
<td>-</td>
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<td>0.07</td>
<td>0.1</td>
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<td>0.65**</td>
<td>0.57**</td>
<td>0.61**</td>
<td>-0.34**</td>
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</table>

*Note.* * = p < 0.05; ** = p < 0.01; N = 279; a = dummy variable (1 = male, 2 = female); b = dummy variable (1 = Jewish, 2 = Arab).
Table 2 shows that positive, moderately strong and statistically significant correlations were found between the practical teaching students’ positions on distance practical teaching and technological and pedagogical efficacies for this teaching format. Similarly, positive, moderate and statistically significant correlations were found between the practical teaching students’ positions and their traits to oppose change. In contrast, negative, moderate and statistically significant correlations were found between the practical teaching students’ positions and their trait of opposing change.

Next, we conducted hierarchical regression for predicting the practical teaching students’ positions. First, the demographic variables were entered into the model. Second, the background variables were entered: conditions enabling distance practical teaching and trait opposition to change. Third, the self-efficacy, pedagogical knowledge, and pedagogical tools variables were entered (see Table 2).

### Table 2. Hierarchical regression for predicting the practical teaching students’ positions on distance practical teaching

<table>
<thead>
<tr>
<th>Variable</th>
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<th>SE</th>
<th>β</th>
<th>F</th>
<th>F change</th>
<th>R²</th>
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<td>0.13</td>
<td>0.05</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum of the third stage</td>
<td>35.43**</td>
<td></td>
<td></td>
<td>71.30**</td>
<td>.54**</td>
<td></td>
</tr>
</tbody>
</table>

Note. * = p < 0.05; ** = p < 0.01; N = 279; a = dummy variable (1 = male, 2 = female); b = dummy variable (1 = Jewish, 2 = Arab).

As seen in Table 2, the demographic variables were not significant. The background variables significantly improved the model. The addition of self-efficacy and pedagogical knowledge and tools also significantly improved the model and were found to be significant predictors. It is interesting to note that in the third stage, the social belonging variable became a significant predictor. Thus, when the other variables in the model are deducted, Jewish students were found have more positive positions to distance practical teaching.

### 4.2 In-Depth Issues Arising from the Qualitative Interviews

#### 4.2.1 Sharp Transition in Practice Teaching—Descriptions and Positions

Before giving their observations about the essence of the change, the interviewees spent a significant amount of time discussing the intensiveness of the transition. Some noted that the speed of the transition to a different form of practice teaching did not give them time for technical adjustment and important emotional and adaptive preparation. Ron (Note 1), who is studying to be a literature teacher:
If they would have told us to take a two-week break and then come back with answers, we would have overcome this difficulty. We would have skipped over it. It would have been easier had we been given orderly instructions that were not constantly changing.

The students noted that the pedagogical advisors’ behavior was also confusing. Many of the interviewees referred to contradicting and unclear messages, and a feeling that the advisors themselves had difficulties fulfilling their role. Oshrit stated: “It seems to me that the pedagogical advisor was also not sure at all, and it certainly felt that way.”

4.2.2 The Relationship with the Mentor Teacher and Pedagogical Advisor

School leadership is highly important for teachers, especially in times of crisis, as was found by previous studies (Karakose, Polat, & Papadakis, 2021). In the current study, the interviewees noted the emotional support they received from their pedagogical advisor during this stressful time, with one even stating that her advisor “became like a grandmother for me.” However, the students noted that they did not receive optimal pedagogical support for distance teaching because both the pedagogical advisor and mentor teacher were not sufficiently experienced and professional. They also emphasized that they lacked evaluation and feedback:

The roles of the pedagogical advisor and mentor teacher did not change, but they did not know how to evaluate us properly. If they would have observed us in the classroom, they could have evaluated us better and given us more specific comments or insights.

The interviewees gave the impression that the pedagogical advisors also experienced some kind of “migration crisis” in the transition to digital practice. One of the interviewees stated: “I would have taught a course on distance teaching to the pedagogical advisors and mentor teachers to help them teach.” This statement indicates a breakdown in the professional hierarchical perception toward the pedagogical advisor, with the student offering “advice” on how to train the advisor.

4.2.3 The Distance Practical Teaching’s Contribution to the Perception of Teaching

Despite the difficulties and learning gaps students experienced, they felt that the teacher’s status had improved – both in their view and the view of the schoolchildren they taught. The tremendous challenge of the crisis, as well as the public stress about the schools’ closure, likely increased the perception that teachers play a vital role, having a mission and a higher status. One of the interviewees noted that the very fact that the teachers showed flexibility and readiness to react swiftly to the changing reality caused him to appreciate the teaching profession anew:

I used to think of teaching as a static, non-dynamic profession. However, distance practical teaching completely changed this perception. I now believe that the teaching profession reacts to changes and facts on the ground, and adjusts itself, despite the circumstances that are such an influencing factor.

A sense of schools’ appreciation of student-teachers was also noted. It is likely that at that time, any help given to the teacher was gladly accepted and was even critical. Moreover, the students’ technological literacy and relatively high self-efficacy about technology were significant factors in their contribution to the school and the learning. As a result, the sense of appreciation of the value added by the student-teachers increased. When Talia began her practical teaching, she had no background in technology, yet she was able to close the gap:

I learned how to prepare interesting PowerPoint presentations and short movie clips, and parents said that it was really amazing. I think that until that point, the schoolchildren felt that their teachers were old, technophobes and so they felt distant from them. Now they changed their impressions.

Interestingly, some students talked about the opportunities presented by online learning, such as designing modular learning or focusing on small groups of children, allowing for more personal attention.

The learning is more personal, all students are equal, and everyone can see everyone else, and this creates a comfortable feeling. For example, when I give a private lesson to two children, they feel at ease and talk about their personal lives.

4.2.4 Positions on Distance Practical Teaching as a First Choice

The students considered the decision to continue with the practical teaching even during the Covid-19 crisis to be correct. Although the students had reservations about how the practical teaching was conducted during the crisis, many found a contribution in distance practical teaching—in the variety of teaching methods it offers and even requires, and how it adapts to innovative teaching in routine and certainly in emergency. Ismael claimed:
I certainly do not agree that teacher education should only be distant without having practical face-to-face teaching experience in real schools because distance education is not the preferred way... I have no problem if up to 30-40% of the practical teaching is distant...

The students also emphasized that they saved time and money. They could stay at home and avoid traveling. Another factor cited as motivating was the diversity necessary for digital learning in which games and practical learning are more pervasive.

The teacher had to use varied attractive learning methods and better-quality education. ... schoolchildren’s learning improved because they began to learn following the requirements suitable to their age group and the technology of their generation... For example, when I used the ‘Kahoot’ game for distance teaching, the interaction with students was greater.

Similar to the reports of schoolchildren’s involvement in games-based learning, one of the interviewees noted that in the practical learning she found wider opportunities for developing her listening skills and even the dialog culture among her students.

Some of the interviewees found that the distance teaching format contributed to their development as future teachers, both in the physical and the online learning environments. One interviewee stated that online practical teaching “obliterates teachers’ technological illiteracy.” Discussing the option of incorporating distance learning in schools as a relevant tool, three students claimed that the fact that life is becoming more technologically oriented means that these abilities must be implemented in schools “to keep up-to-date with current demands, to expose the schoolchildren to diverse teaching methods, and to make education more accessible and richer.” “This is not a possibility; it is an obligation.”

In contrast, four students strongly opposed this option and stated the difficulties they had to support their position. They also felt that the interpersonal relationships (between the student and advisor, teacher and schoolchildren) were adversely affected:

In my opinion, there should no distance learning at all because it causes a lot of problems to the children in class and the practical teaching students, which will affect the whole practical teaching process... there is no room for empathy, dialog, meeting and creating friendships among the schoolchildren.

When referring to what could have helped them deal with the transition to online learning, some of the students emphasized technological knowledge: “During the practical teaching, my main help was my technological knowledge. Had they given us the technological tools before the school year began…” A significant number of students mentioned that they closed the gap independently through self-learning. “I overcame this difficulty by personally seeking technological methods and tools for teaching.” When asked about a better model for beginning online practical teaching, some stated the need to be prepared and present a full and coherent picture before even beginning practical teaching. One of the students even claimed that continuous feedback should be given during the entire practical teaching process to improve the pedagogical advisor’s functioning in their interactions with the students in the new model.

5. Discussion

The transition to distance learning and practical teaching during the Covid-19 pandemic occurred suddenly, without warning or preparation, necessitating changes in the relationships between various parties involved in the practical teaching process. The current study aimed at examining teaching students’ positions and perceptions regarding practical teaching that was transitioned to the online teaching format during the Covid-19 period. Additionally, we aimed at identifying differences between Jewish and Arab students’ positions. Through interviews, we tried to gain an in-depth understanding of their positions and perceptions on how the practical teaching occurred, how it contributed to them as future teachers and how they were treated as people during the change. The data were collected from students from two teacher education colleges—one in the Arab sector, and one in the Jewish sector. We aimed at investigating whether this difference leads to social, ethical and socio-economical differences. Several factors were examined: the students’ technological self-efficacy; the degree of accessibility; the students’ positions; as well as various background variables.

5.1 The Availability of Technological Resources and their Association with Positions about Distance Teaching

As expected, a high degree of correlation was found between the availability of technological resources enabling distance practical teaching and the students’ positions. The ability to maintain continuous practical teaching is heavily dependent on having the relevant infrastructures. The fact that the vast majority of students had the technological means and that the environmental conditions that they reported enabled them to teach online explain
their positive positions on distance practical teaching. It should be noted that no difference was found between students from the Arab and Jewish sectors regarding technological means and environmental possibilities. This finding differs from previous studies that indicated a significant gap favoring the Jewish students (Gibton, 2011). This can be explained by the fact that most of the Arab respondents come from central Israel and their socio-economic level is higher than Arab students from the periphery (CBS, 2021). Moreover, the Covid-19 outbreak soon made it apparent that appropriate technological means were necessary to enable learning and academic training to continue, and so the students were technologically equipped for their training. An additional explanation involves the schools. It is likely that since the infrastructure standard was low and they were not well prepared, students were not required to show a high level of technological complexity. Similar to previous reports and studies, the infrastructure aspects and technological difficulties were very prominent in the qualitative interviews, particularly in interviews with the Arab students. The academic institutions were also perceived as not being well prepared for the transition and they did not make sufficient efforts to close gaps. Moreover, the interviewees pointed out that the pedagogical advisors were confused and could not understand the new reality.

5.2 Positions about Distance Practical Teaching

The first research question regarded students’ positions about distance practical teaching and the differences between sectors in those positions. We found that students from both sectors, without significant differences, expressed moderately positive positions on the transition to distance practical teaching during Covid-19. The interviews were conducted several months after the transition, enabling gaining insights into the process. They spoke about difficulties in the organizational stages and the sense of urgency and disorder. This influenced their positions and self-efficacies, as well as their perceptions of the pedagogical advisors. Although the general position is understanding the reasons for the transition to distance practical teaching, several aspects of this picture need to be examined in more detail, including students’ positions and self-efficacies.

5.3 Students’ Self-Efficacies

The second research question regarded technological self-efficacy, pedagogical self-efficacy and pedagogical knowledge and tools. It was found that the three variables were medium-high, with significantly higher results among the Arab students. These results are somewhat surprising since no orderly or prolonged preparation was made for the technological aspects – a variable that has been shown to correlate with the sense of self-efficacy of teachers (Baroudi & Shaya, 2022). At the same time, the fact that this group is composed mostly of female teachers, as well as the fact that it is a group of young people at the beginning of their profession development, may explain the relatively high result of a sense of self-efficacy (Horvitz et al., 2014; Suprayogi et al., 2017).

5.4 Predicting Variables of Distance Practical Teaching

The third research question aimed at identifying variables predicting positions regarding distance practical teaching. It was found that technological self-efficacy, pedagogical self-efficacy, and pedagogical knowledge and tools are significant predictors of students’ positions regarding distance practical teaching. Objection to change was identified as a negative predictor for those positions. The sector was also found as a predictor, showing that Jewish students have more positive positions to distance practical teaching.

When the self-efficacy and technological tools variables were removed, the Jewish students had more positive positions on distance practical teaching. A possible explanation is that in the Arab sector in general, the infrastructure enabling distance learning is at a lower level than in the general population. Thus, although the students may have a good infrastructure and technological setup, they expressed greater reservations regarding their positions on the system-wide question.

The study found that neither the practical teaching model (traditional, PDS, Academy–Class) nor self-efficacy had distinguishing variables about the students’ perceptions. This is an interesting and surprising observation because studies conducted on face-to-face practical teaching before Covid-19 showed significant differences between the various models when examining similar variables to the ones in the current study. We surmise that the characteristics and regulations of practical teaching, which are very different in routine times, were unbalanced and even canceled during the Covid-19 crisis.

5.5 Contribution of Distance Practical Teaching to Students: Optimal Training Aspects

Although the students reported that distance practical teaching caused them to be anxious, invest more time and experience technological difficulties, their general positions were positive. They recognized that the practical teaching contributed to their professional development, justified the effort, and provided them with relevant pedagogical knowledge and tools for their future practice. This finding was also apparent in other studies (Maskit & Mevarech, 2013; Moore & Reichel, 2016). The greatest contributions were made to their technological skills,
knowledge and learning strategies. The students also felt that their self-learning and time management skills improved. Their positive positions were influenced by time management flexibility and learning pace, as also seen in previous studies (Hoque et al., 2020; Nissim & Simon, 2020; Soffer & Cohen, 2019). Possibly, the price to pay had they been forced to postpone the practical teaching may have contributed and led them to this position.

The current study, as well as recently published parallel studies (e.g., Agung et al., 2020), raises several challenging issues that must be addressed. Developing meaningful personal relationships between the practical teaching student and the schoolchildren was shown to be the most difficult aspect. In the qualitative interviews, one student linked the difficulties in communicating and creating a learning atmosphere with the fact that attendance was not enforced, including turning on cameras (or perhaps because of technical problems):

\[
I \text{ did not manage to create a learning atmosphere and teach as well as I would have liked to... I did not see the children; it is difficult to talk to a computer... it would have been better had they been required to turn on their cameras.}
\]

Another student emphasized that there was more involvement in face-to-face teaching: “Interactions with the children, face-to-face dialog… experiencing the children’s emotions… and many more situations that we miss out on when teaching on Zoom.”

5.6 Conclusions

The current study aimed at examining teaching students’ positions and perceptions regarding practical teaching that was transitioned to online teaching during Covid-19. The findings indicate that the students’ positions demonstrated their willingness to adapt to the new reality. Generally, they had positive positions regarding the decision to transition to distance practical teaching and perceived that they could succeed in this task, showing medium-high self-efficacy in technology and pedagogy. The quantitative and qualitative findings lead to several conclusions and principles of action that must be addressed, both when preparing for an emergency and for improving teacher education during routine times.

First, in the context of policy-makers, we assert that infrastructure is a basic prerequisite for narrowing gaps and also plays a role when teachers build their sense of professional self-efficacy as future teachers. Comprehensive, in-depth efforts should be made to reduce ethnic and socioeconomic gaps between sectors. Regarding college preparedness, it is clear that adequate training for distance technological learning must be instituted, and faculty members will also be required to meet the requisite knowledge and skill standards in this field. The students’ positions on the digital platform as an effective training tool show that they recognize the importance of incorporating digital learning in routine times, both as a solution and as an opportunity for meaningful practical teaching. However, it is evident that they do not see this platform as an overall replacement for traditional teaching methods. Efforts should be made to create models that incorporate the advantages of both platforms—traditional and digital. However, since the positions of the students in the Arab sector showed greater reservations about incorporating these technologies, a dialog with the traditional sectors must take place and the digital platforms should be adapted to their cultural values and reservations. The protocols for implementing digital platforms both in emergency and routine times must take cultural aspects into account that should be considered part of the necessary infrastructure for the development and resilience of the educational system and the training of new teachers.

In addition to the cultural and sociological aspects, personal aspects such as self-efficacy should also be taken into account. Programs aimed at increasing these aspects by gaining a supportive, crucial and gradual experience in using technological tools should be drawn up.

The fact that the questionnaire was disseminated online may cause a certain bias in that the participants are more likely to be those who had easy accessibility to technological means (even though this does ensure that these means are good enough for practical teaching). We recommend conducting an additional study that examines wider populations, as well as complementary studies that cross-validate the data from the current study with the positions of pedagogical advisors, teachers and even schoolchildren.

We believe that the results of this study will assist in focusing on and adapting how students are mentored and supported during their practical teaching, in whatever context this may be. These recommendations are of value to academic teacher education institutes and policy-makers in the MOE.

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Note

Note 1. All names in the paper are pseudonyms.

Appendix A

The Semi-Constructed Interview Questions

1. To what extent do you feel that you were prepared for the task of distance practical teaching? Describe and evaluate your training for distance practical teaching and what could have helped you better prepare?

2. To what extent is distance practical teaching compatible with your teaching discipline? In your opinion, are there tracks for which distance practical teaching is more appropriate?

3. Describe if and what were your key difficulties/challenges in distance practical teaching. Who/what helped you with the difficulties?
4. In your opinion, is distance practical teaching efficient for your teacher training?
5. Do you have any skills that improved as a result of distance practical teaching? Give details.
6. To what extent did your integration into online teaching improve the schoolchildren’s learning. If so, give an example.
7. Did your perceptions of the teaching profession change as a result of your distance practical teaching? If so, how?
8. Did the role of the pedagogical advisor and mentor teacher change as a result of your distance practical teaching? If so, how?
9. Does distance practical teaching have any advantages? If so, give details.
10. In your opinion, should distance practical teaching become part of practical teaching? Why? To what extent do you feel comfortable with the possibility that you will have to teach online in the future? Give reasons.
11. How would you improve training for distance practical teaching if you were in charge of this training?

**Appendix B**

**Positions of Practical Teaching Students, Averages, SD and Percentage of Agreement to a Great Extent or a Very Great Extent**

<table>
<thead>
<tr>
<th>Position</th>
<th>Average</th>
<th>SD</th>
<th>% of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pedagogical advisor was very patient during the distance practical teaching</td>
<td>4.65</td>
<td>1.45</td>
<td>64%</td>
</tr>
<tr>
<td>Distance practical teaching improved the technological skills relevant for me as a future teacher</td>
<td>4.50</td>
<td>1.33</td>
<td>55%</td>
</tr>
<tr>
<td>I feel that the mentor teacher was very patient during the distance practical teaching</td>
<td>4.40</td>
<td>1.50</td>
<td>54%</td>
</tr>
<tr>
<td>Distance practical teaching exposed me to more varied teaching methods and strategies</td>
<td>4.35</td>
<td>1.37</td>
<td>51%</td>
</tr>
<tr>
<td>I developed new teaching methods by using ICT in my distance practical teaching</td>
<td>4.29</td>
<td>1.43</td>
<td>50%</td>
</tr>
<tr>
<td>Distance practical teaching favorably changed my appreciation of the teacher’s role</td>
<td>4.23</td>
<td>1.57</td>
<td>50%</td>
</tr>
<tr>
<td>Distance practical teaching enabled me to have more effective time management</td>
<td>4.12</td>
<td>1.57</td>
<td>47%</td>
</tr>
<tr>
<td>Continuing distance practical teaching during the Covid-19 crisis was the correct thing to do</td>
<td>3.96</td>
<td>1.79</td>
<td>46%</td>
</tr>
<tr>
<td>Distance practical teaching did (not) harm my self-efficacy as a teacher*</td>
<td>3.94</td>
<td>1.78</td>
<td>43%</td>
</tr>
<tr>
<td>Distance practical teaching furthered me as an independent teacher</td>
<td>3.91</td>
<td>1.48</td>
<td>37%</td>
</tr>
<tr>
<td>I gained more knowledge in my discipline as a result of distance practical teaching</td>
<td>3.87</td>
<td>1.56</td>
<td>38%</td>
</tr>
<tr>
<td>Distance practical teaching contributed to my status in the school/ kindergarten as a practical student teacher</td>
<td>3.72</td>
<td>1.57</td>
<td>33%</td>
</tr>
<tr>
<td>Distance practical teaching during the Covid-19 crisis was efficient for the practical student teachers</td>
<td>3.54</td>
<td>1.61</td>
<td>28%</td>
</tr>
<tr>
<td>Distance practical teaching during the Covid-19 crisis made a very small (large) contribution to my teacher training*</td>
<td>3.53</td>
<td>1.56</td>
<td>29%</td>
</tr>
<tr>
<td>Even after the Covid-19 crisis, I would recommend that the college continues with distance practical teaching as part of the regular teacher education program</td>
<td>3.33</td>
<td>1.84</td>
<td>29%</td>
</tr>
<tr>
<td>If I had the choice, I would prefer (not) to forego distance practical teaching*</td>
<td>3.22</td>
<td>1.85</td>
<td>28%</td>
</tr>
<tr>
<td>Being involved with the technical and technological aspects does (not) detract from my focus on the discipline I am supposed to teach in my practical teaching*</td>
<td>3.15</td>
<td>1.55</td>
<td>20%</td>
</tr>
<tr>
<td>Distance practical teaching did (not) cause me any pressure during social isolation*</td>
<td>3.12</td>
<td>1.64</td>
<td>22%</td>
</tr>
<tr>
<td>Distance practical teaching did (not) enable a sharing of feelings between me as a practical teaching student and my students*</td>
<td>2.88</td>
<td>1.51</td>
<td>16%</td>
</tr>
<tr>
<td>Distance practical teaching was an opportunity for me to get to know the students better</td>
<td>2.78</td>
<td>1.5</td>
<td>13%</td>
</tr>
<tr>
<td>In distance practical teaching, I covered less (more) material in school/ kindergarten*</td>
<td>2.76</td>
<td>1.44</td>
<td>12%</td>
</tr>
<tr>
<td>In distance practical teaching, the students in school/ kindergarten are less (more) active</td>
<td>2.54</td>
<td>1.32</td>
<td>8%</td>
</tr>
<tr>
<td>I feel that face-to-face contact with the pedagogical advisor and my peers is (not) necessary for efficient practical teaching*</td>
<td>2.45</td>
<td>1.53</td>
<td>11%</td>
</tr>
<tr>
<td>I did (not) have to put more effort into distance practical teaching than into face-to-face practical teaching*</td>
<td>2.40</td>
<td>1.39</td>
<td>10%</td>
</tr>
<tr>
<td>I feel that face-to-face contact with the mentor teacher is (not) necessary for efficient practical teaching*</td>
<td>2.38</td>
<td>1.45</td>
<td>10%</td>
</tr>
<tr>
<td>I feel that face-to-face contact between me, the practical teaching student and the students is (not) necessary for efficient practical teaching*</td>
<td>2.12</td>
<td>1.38</td>
<td>8%</td>
</tr>
</tbody>
</table>

*Note. * = responses that were reversed. The addition that was not in the original item appears in parentheses and clarifies the meaning of the item after reversal.
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