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## School and Home as Study Spaces: Attitudes of Teachers, Parents, and Students to E-learning During the COVID-19 Period: The Case of Israel

Miri Ben -Amram\*   
Ariel University, ISRAEL

Nitza Davidovitch   
Ariel University, ISRAEL

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**Abstract:** During the period of the Coronavirus disease (COVID-19), the boundaries between the home and the school as study spaces were blurred. School studies entered the home, with the parents present and observing their children's e-lessons and the teachers' teaching methods. The purpose of the current study was to explore the explicit and implicit attitudes of the lesson partners: teachers, parents, and students, to e-learning. The study explores whether and to what degree the attitudes of teachers, students, and parents to e-teaching are compatible, and what are the implications for the future. The study shows that although in recent years the relationships between parents and the school and between teachers and students have waned, with regard to the separation of authorities between the home and school, the period of the COVID-19 crisis clarified the need to enhance the relationship and cooperation between the home and the school as two meaningful study spaces for independent learners. The research findings raise the paradox that not only does technology not increase the distance rather it has the potential to strengthen the relationships between parents, teachers, and the school. The study points to the need to prepare holistic guidance sessions and professional development courses.

**Keywords:** COVID-19 period, e-learning, social-emotional, study spaces.

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### Introduction

The 21st century has brought with it many changes, where one of their main features is the blurred boundaries between social settings (home and work, family and school, virtual and real friendships) as well as between roles (parent and teacher, child, and adult; Cho, 2020). The pace of change has accelerated, and the technological transitions have created cultural changes, new needs, different expectations, and irregular challenges. Concepts such as availability, immediacy, and updating have become dominant. Technologies that have become accessible to the general public have created transformations in the structure of the labor market, in family life, and in social and civil functioning.

Moreover, cultural and technological transitions in recent years reinforce the need for a new view of school-family interrelations and of the role of each in children's development process (Garbe et al., 2020). In addition, during the outbreak of the COVID-19 pandemic the boundaries between the home and the school as study spaces were blurred. School studies entered the home, with the parents present and observing their children's e-lessons and the teachers' teaching methods, and the teachers sometimes observing the student's room and home conduct. Moreover, e-learning means use of information technology and communication in open learning (Kumar Basak et al., 2018).

The purpose of the current study is to explore the explicit and implicit attitudes of the lesson partners: teachers, parents, and students. The study explores whether and to what degree the attitudes of teachers, students, and parents to e-teaching are compatible. What is the practical meaning of these attitudes for the manner of teaching in the future after conclusion of the COVID-19 crisis?

\* Corresponding author:

Miri Ben -Amram, Ariel University, Israel. ✉ [miri.ba39@gmail.com](mailto:miri.ba39@gmail.com)



## Literature Review

### *The development of school-family interrelations*

The relationship between parents and their children's homeroom teachers serves as a foundation of the child's development, functioning, achievements, and mental health (Berthelsen & Walker, 2008). Psychologists who treat children and parents encounter problems in the relationship between parents and teachers.

From the early 20<sup>th</sup> century, the educational system in Israel was characterized by schools that were closed to the parents. These were almost completely excluded from the educational system. The parents relied on the school to teach the children and shape their behavior and there was almost no contact between the parents and teachers unless there was a need to punish a student. In the 1970s, a compartmentalized relationship began between the family system and the educational system, and in the 1980s a significant change occurred, with the beginning of parent involvement in the educational system. Since the 2000s, parents are included in the school as an educational value (Friedman, 2011).

Another transformation in the relationship between parents and homeroom teachers regards responsibility and ways of coping with the child's difficulties. In the 1970s the educational system mainly dealt with learning and behavior problems independently; at present the parents have major responsibility for their child's achievements and behavior (Farooq & Asim, 2020).

Over the years, alliances have been formed that include only two of the three main partnership components: teachers, students, and parents. When the State of Israel was established, the alliance was between the adults, i.e., teachers and parents, with the children excluded. Following the waves of immigration to Israel from countries in Asia and Africa, the composition of the alliance changed, and this time the teachers and students were the allies while the parents, for whom the school culture, procedures, and language remained alien, were excluded (Todd & Higgins, 1998). Currently, a third alliance is in force – the parents and children are the allies with the teachers excluded (Friedman, 2011). The parents back their children in any situation and in any condition, and thus disrupt the school's ability to educate. The dynamics of these alliances, comprised as they are of "two versus one", indicates the solution. The partnership should be based on all its components, such that each of the partners should contribute and thus also enhance the contribution of the others.

The digital era is creating new challenges for student, parent, and teacher relations (Hutchison et al., 2020). Knowledge, which in the past belonged to the adults, is now open and available to everyone. The role of the adults versus the children is in a process of change. In the digital era, students clearly have preference over their teachers and parents due to their proficiency in the new world. The availability and accessibility of the teacher-school relationship is gradually changing before our very eyes. Use of new technologies is creating new opportunities and new difficulties in the relations between the partners. Establishing a school digital communication system enables rapid and efficient transfer of information. In this way it is possible to follow the academic development of each student and detect difficulties and processes of deterioration. However electronic media cannot replace the personal connections between the partners, connections that make it possible to reinforce verbal expressions by means of body posture, facial expressions, and other emotional expressions necessary for interpersonal communication that is more complex than only transferring information.

### *Parents' perception of teachers*

The relations between the parents and the educational system depend on how both partners mutually conceive the essence of their relationship, its nature and significance. Positive situations are when parents see the teachers as partners, allies, a meaningful resource for their child, someone who can provide lots of help both for their own child and for the functioning of the entire system (Gerdes et al., 2020). Problematic situations are parents' treatment of teachers as service providers, where when the service is not to their satisfaction they may criticize and even attack. A potential difficulty is parental treatment of teachers as their competitors in educating the children or parent conception of the teachers as "babysitters" who must keep the children busy for the good of the parents or to allow them to work, as well as conceiving them as part of the Mandatory Education Law. Therefore, a change is needed in parents' perception in order to increase the chance of communication and dialogue with allies and develop a good and effective relationship. The dialogue with allies and partners should be optimal and effective, and this requires a change in parents' conception in order to increase the chance of constructive communication between them. How parents perceive the educational system affects the children's perception of their homeroom teachers, whether consciously or unconsciously. Arrogant, critical, or alienated parent attitudes towards the teachers are passed on to the children, who imitate them and reflect them in their own behavior.

### *Teachers' perception of parents*

Perceiving the parents as active and desirable partners and as teachers' allies has the potential to provide help and accommodation. However, seeing the parents as passive observers, as members in the parents' committee who collect money, organize parties and trips, and preferably as "transparent" adults who are not sensed beyond the essential minimum, endangers the ability to cooperate (Gur & Zalmanson-Levy, 2005). These communication styles represent a continuity from parental passivity to activity, from positive to negative expectations of parents, that affects the features

of the parent-teacher dialogue. From these approaches are derived the school-parent relations as a closed or open door. "Closed door" means that most of the educational processes occur within the school and parental presence might be detrimental to them and impair the teacher's authority, and it grants a great deal of power to educated parents from high socioeconomic classes. "Open door" is an approach that sees the parents as an essential resource; therefore, it is important to open the educational system to them and facilitate constant communication between parents and teachers. Parental involvement might provide teachers with assistance and support capable of reducing their professional burnout and enriching the school's activities and the contact with the community. There is also a balanced outlook whereby the school is sufficiently open to parents to enable dialogue and collaboration but not so wide open that teachers' authority and the application of their professional abilities are affected (Friedman, 2011). Perceiving the parents as partners in the educational system will also ensure good communications and effective mutual relations.

### *Integrating technology in teaching and learning processes*

The digital era is characterized by changes that require renewed adjustment in many areas of the educational system (Starkey, 2020). Researchers and educators contend that it is essential to adapt the educational system to the 21<sup>st</sup> century (Ertmer & Ottenbreit-Leftwich, 2010), and when the teaching and learning processes are carried out in an information and communications technology (ICT) environment, all aspects of the learning experience are improved (Hsu, 2016). In Israel beginning from 2010 a reform was implemented in the educational system regarding ICT learning. Its purpose is to instill 21<sup>st</sup> century skills among the students in order to best prepare them for integration in the 21<sup>st</sup> century era (Magen-Nagar et al., 2014). As part of this process, Israel has invested in training and in the professional development of teachers to lead the reform. Since studies indicate that integrating technology in teaching and learning processes in schools involves a deep change (Tondeur et al., 2017) two stages can be identified:

The basic stage consists of assimilating technology in teaching, which focuses on the transition from traditional teaching to ICT teaching in the spirit of the 21<sup>st</sup> century (Magen-Nagar et al., 2014). In this stage the teacher first experiences innovative technology, while teaching is still based primarily on traditional teaching (Nissim et al., 2012; Zhao, 2003). Technology serves as one of many aides within the familiar teaching and learning processes, used for enrichment, demonstration, and practice for the purpose of learning (Barak & Dori, 2009). In this stage, the teacher uses video clips and pictures to illustrate the topics studied, and further on presentations and websites in order to expand knowledge sources, and so on.

The second stage is the stage of assimilating the technology. In this stage, ICT tools become an inseparable part of the teaching and learning process. The teacher shapes instruction through a variety of digital spaces and in fact adapts the teaching process to the digital environment. In the assimilation stage, the teacher constructs a digital learning setup supported by ICT learning tools and materials that enable personal adaptation for each student as well as personal and shared learning by creating interactive knowledge communities that facilitate communication between the teacher and students, among the students themselves, and between the students and other learning communities, generating an opportunity for active learning processes where the students experience the entire array of 21<sup>st</sup> century skills (Eshet-Alkalai & Soffer, 2012).

### *E-learning during the COVID-19 period in Israel*

As part of the national effort to deal with the spreading of the COVID-19 virus, the Israeli educational system with its 2.3 million students halted its activities on March 15, 2020, and remained closed, or partially closed, for one year and two and a half months. Based on the emergency regulations, the Ministry of Education instructed its teachers to avoid coming to school and to switch to remote teaching. This complex and sudden process led to the truncation of the study program, expansion of digital disparities, harm to the children's mental resilience, reducing social interactions, and the generation of technical difficulties and intra-family pressures (Huber & Helm, 2020). During the COVID-19 pandemic, students were required to adapt to e-learning outside the school, which took place in a learning environment to which they were not habituated, including availability of study materials on the web, and was characterized by a minimal number of distractions (Stone & Springer, 2019).

Miltiadou and Savenye (2003) claimed that the need to avoid distractions has become even more meaningful in light of the fact that remote learning takes place in a technological environment that allows students to enter other websites unrelated to the class (Manny-Ikan et al., 2017). All this became a challenge for the teachers. Also, the remote learning setup was conducted for the most part irregularly, deficiencies emerged, as well as many challenges and dilemmas due to the e-learning (Bakker & Wagner, 2020). The transition to e-teaching revealed and increased the digital gaps within the teaching force. Teachers were compelled to make unexpected changes in their teaching methods while adapting their lesson plans to various video chat apps, had to devote a great deal of time to updating lesson plans, working at the computer, motivating students, and maintaining ethics rules on Zoom. For instance, the teachers were warned against recording and transferring personal information or violating copyrights – although asked to record and send the online lessons.

The preparations made by the Israeli educational system for remote learning stemmed from the advanced technology that facilitated remote learning but revealed essential difficulties, particularly in students' accessibility to learning tools. Remote learning was found to intensify the digital gap that existed to begin with between students from different socioeconomic levels and residential areas (Weissblei, 2020). Thus, for example, 24% of Israeli households have no internet connection and 15.7% have no computers. Internet connections, the availability of computers or other end devices, affect the accessibility of remote learning for students. The transition to remote learning increased the disparities between parents' ability to help the students. The physical lockdown led to a rapid transition to remote learning, which placed more responsibility for learning on teachers and guardians (Central Bureau of Statistics, 2019).

#### *Israeli parents' attitudes to remote learning*

A study conducted by the Israeli government through the National Authority for Measurement and Evaluation (NAME, 2020a) in education, based on a survey among 1,241 parents of students in the educational system in grades 1-12, found that most of the parents reported that remote learning was utilized in their children's classrooms and that their children participated in most or all of the online sessions. At the same time, some variables that reduced the likelihood of children's participation in remote learning emerged: attention and concentration difficulties among children; children from younger age levels who had difficulty adapting to the learning format; the presence of many people at home, making it hard to find ICT solutions and form conditions for all the children; motivation and/or emotional space problems among students; and lack of parent availability to help their children.

According to reports from the NAME study, parents of most students indeed felt that the necessary conditions for remote learning existed: end devices, internet connections, conditions at home, and student skills for operating ICT systems. In addition, disparities based on socioeconomic level (including education level) and number of children were evident, such that the remote learning format appears to have the potential to generate or expand disparities in accessibility to education if and when schools close their gates and shift to remote learning.

#### *Features of teaching and learning during school closures*

The parents in the study conducted by NAME raised doubts concerning the quality of teaching and learning during the COVID-19 period. On one hand, many noted that the online sessions were held in a pleasant and calm atmosphere, but on the other it appears that parents do not see a positive atmosphere in class as a guarantee for progressing with the material studied. Parents of students in the younger age levels ascribe to remote learning less qualities than do parents of students in the older age levels. The highest barrier to e-learning was insufficient experience of teachers with remote learning, children's frustration due to the difficulty of dealing with the new study format, and the family's inability to help.

The NAME study also reported that relatively high proportions of parents were doubtful as to the degree to which teachers managed to teach the material as planned. Moreover, many were critical of the degree to which a differential response was provided to students, as well as of the response to students' social needs. More positive opinions were voiced by parents regarding the degree to which students participated in various projects and assignments and regarding the emotional response provided to students – probably a testimony to teachers' efforts to maintain a personal discourse with the students in order to ask how they were doing and let them feel that they are there for them during the complex period. A minority of the parents (about 40%) contended that during the closure period positive developments occurred in the children's learning as well. Some children became more autonomous learners during this period, took responsibility for their learning processes, and strengthened their knowledge and skills in the digital sphere. Most of the parents (about 70%) reported that they were in favor of remote learning, however many of these would like to see changes such as: more learning in small groups, advancing independent learning skills, less synchronous learning, and more assignments and projects, more emphasis on social, ethical, and emotional aspects, as well as improving communication with parents as a means of enlisting them in the educational effort.

#### *Parent participation in the e-learning process*

As a result of the transition to learning at home during the COVID-19 period, the parents became legitimate partners in the educational ecosystem and in the learning process. There is no morning student and afternoon student, it is all one continuity. The crisis has proven that the boundaries and dichotomy are artificial. The class boundaries were "breached" as was the schedule. The different areas and settings supplement each other so that it is possible to provide a holistic response to the student's needs. During this period the students were separated from the school, and studies took place in several different sites, all of which have value for the learners: the private home, the school, the personal activity site, and the site for meeting friends (Garbe et al., 2020).

The research literature contends that parents' involvement in their children's online studies is more important than their involvement in frontal studies (Iivari et al., 2020). Namely, beyond the mental, morale, and pedagogical support that parents must provide in traditional studies, in online studies the child also needs a technological infrastructure, a quiet study environment, and disciplinary supervision at home (Rasmitadila et al., 2020).

Parental involvement can be divided into three main categories:

1. *Absent*: Parents who in general are not involved in their children's studies.
2. *Supportive*: Parents who express interest in their children's studies, pay attention to the teachers' opinion, and increase their involvement when required.
3. *Participant*: Parents who make sure to maintain high involvement throughout the school year by checking grades, supervising execution of tasks, providing guidance and one-on-one work with the child (Borup et al., 2013).

#### *Student attitudes to e-learning*

Kozma (2003) claims that students' attitudes to learning affect their achievements as well: the more positive their attitudes the higher their achievements. Students have different attitudes towards learning in an ICT environment. Elementary and junior high school students are interested and want to learn in such an environment; they enjoy learning in it and perceive ICT systems as advancing learning (Kurtz & Dori, 2015). In contrast, some high school students have a negative attitude. They believe that they are poorer students than those in the generation that preceded ICT learning. They perceive ICT learning as weakening, reducing their learning skills, enabling simple shortcuts, and encouraging laziness (Ben-David Kolikant, 2019). In addition, some high school students have a neutral attitude to learning in an ICT environment: they do not recognize its advantages but also do not object to it (Tuby, 2002). Sometimes student attitudes towards ICT affect its assimilation and utilization (Njagi, 2003). Students who have a positive attitude towards ICT learning make considerable use of technology (Naim, 2010). Studies have found an association between students' experience with learning in an ICT environment and their positive attitudes towards it (Herguner et al., 2020). Then again, a study conducted (Berger-Tikochinski et al., 2016) found an inclination to change in the attitudes of students who use laptops: the students' enthusiasm when beginning their studies leveled out over time and the students attested to lower satisfaction and interest than at first.

#### *Teacher attitudes towards integrating computer technologies*

Teachers' beliefs and perceptions affect their readiness to embrace changes in teaching methods (Albion, 2008). Integrating computer technologies in class and the extent of their integration are affected by teachers' belief that using these technologies will help improve teaching and their professional development. The likelihood of using ICT means grows significantly among teachers who demonstrate positive attitudes to ICT and recognize its benefits (Mioduser et al., 2003). Studies show that teachers demonstrate more positive attitudes to computer use the more they experience it, understand the place of the computer in their role as teachers, and experience success due to its integration in their classes (Abbott & Faris, 2000). Other researchers contend that the change in the pedagogic conception precedes assimilation of computerized tools and leads it. For example, teachers who advocate constructivist approaches tend to use computer technologies and to integrate ICT in their teaching more than do teachers who advocate more traditional beliefs, those that perceive the teacher as the center of teaching and learning processes (Bai & Ertmer, 2008; Matzen & Edmunds, 2007). These premises reinforce the claim that there is need for pedagogic training of the teachers in order to shape a constructivist teaching conception. Teacher views that are based on their beliefs make it possible to predict their teaching behavior (Albirini, 2006). Studies have shown an association between teacher beliefs and conceptions and their behavior and discretion, and these affect their decisions and manners of teaching in class. Nevertheless, several researchers indicate contradictions between teacher beliefs and their behavior in class, for instance an incompatibility was found between teacher beliefs regarding computer technologies and their actual integration in teaching; teachers who attested to themselves as having a constructivist approach used the computer mainly for purposes of revision and practice and only rarely utilized it for the purpose of challenging investigative assignments (Cheng et al., 2020).

#### *Teacher attitudes to e-learning during the COVID-19 period*

A survey conducted by the National Authority for Measurement and Evaluation in Education (NAME, 2020b) among a representative sample of 978 teachers found that most of the teachers reported that they have the necessary equipment and infrastructure for remote teaching, tools such as lesson plans and teaching units, digital pedagogic materials, tools for managing learning, and knowledge in operating ICT systems. Nonetheless, teachers in the secondary age levels reported less access to high-standard materials. A major challenge that arose in this context related to evaluation of student achievements; teachers complained about a shortage of tools for evaluating achievements when students do not attend school and also that the ICT assignments performed by the students are sometimes unreliable and do not reflect their real abilities. About half the teachers reported that over the past two years they received professional development on the topic of remote teaching and learning. Many teachers expressed difficulties with providing a response to students who find it hard to cope with remote learning. While all outstanding students manage to persevere and study even without attending school, struggling students often lag behind.

The preparations made by the Israeli educational system for remote learning stemmed from the advanced technology that enabled remote learning during the COVID-19 period but revealed difficulties and challenges. In addition, the boundary between the home and the school as study spaces became blurred. School studies entered the home, and vice versa. Due to the blurred boundaries between the home and school and the change in the parental and school role during

COVID-19, the following hypotheses were formulated. Therefore, teacher, parent, and student attitudes to e-learning differ and each attitude has benefits and shortcomings. The research hypotheses are:

- (1) Differences would be found in the attitudes of the three groups of participants: teachers, parents, and students, towards e-learning.
- (2) Teacher attitudes towards combining frontal teaching and e-teaching after the conclusion of COVID-19 would be more supportive than those of parents and students.
- (3) Parent attitudes towards the lack of interpersonal interaction experienced by them in e-learning would be higher than those of teachers and students.
- (4) Teacher attitudes towards interest, order, and organization of online lessons would be higher than those of parents and students.
- (5) The personal preference of teachers and students for e-teaching would be higher than the attitudes of parents who occasionally observed online lessons.

### Methodology

#### Research Design

The research participants completed a questionnaire online that presented to the respondents 33 claims related to the quality of e-learning, identifying its advantages and disadvantages. The respondents were asked to rank their replies on a scale of 1 to 5 (where 1 – not at all, and 5 – very much). The items in the questionnaire related to *five* main areas:

Two areas were planned following the cognitive-emotional model devised by Hativa (2014):

- (1) Pedagogic dimension: *interest and order, organization, and clarity of the online lesson*, included 8 items. Cronbach's alpha reliability of 0.79.
- (2) Social-emotional dimension: *interpersonal interaction in the online lesson*, included 4 items. Cronbach's alpha reliability of 0.73.

Two other areas explored in the study were planned according to the model devised by Cohen and Davidovitch (2020):

- (3) *Benefit for my student/child* included 13 items. Cronbach's alpha reliability of 0.71.
- (4) *Personal preference for e-learning*: The dimension included 6 items. Cronbach's alpha reliability of 0.84.
- (5) Preference for combining frontal learning and e-learning in the educational system included 2 items.

#### Analysis of Data

Table 1 lists the reliability of the research measures calculated for each of the research groups.

Table 1: Reliability of the Research Measures

	$\alpha$ parents	$\alpha$ teachers	$\alpha$ students
Benefit of e-learning for the student	0.77	0.75	0.85
Interest, order, organization, and clarity in teaching	0.88	0.82	0.83
Lack of interpersonal interaction	0.84	0.68	0.75
Personal preference for e-learning	0.63	0.82	0.74
Preference for combining online and frontal learning	0.82	0.74	0.49

#### Sample and Data Collection

Convenience sampling was performed by sending an online questionnaire to parents, teachers, and students from Israel. The sample included 124 parents, 124 teachers, and 235 students studying online during the COVID-19 period.

Table 1 lists the background characteristics of the three groups of research participants: parents, teachers, and students.

Table 2: Age Characteristics of the Research Participants

Age	N	Range	Mean	Standard deviation
Parents	124	64-27	45.09	6.69
Teachers	124	66-26	44.22	9.52
Students	235	18-9	15.14	1.44

Table 3: Background Characteristics of the Research Participants

		Parents (N=124)	Teachers (N=124)	Students (N=235)
Gender	Male	%31.5	%12.1	%42.2
	Female	%68.5	%87.9	%57.8
Type of school	Elementary		%23.4	-
	Junior high		%41.1	%27.8
	High school		%35.5	%72.2
School region	North/Haifa	%53.2	%29.8	%48.9
	Center/Tel Aviv	%36.3	%59.7	%38.8
	Jerusalem/South	%10.4	%10.6	%12.2
Education	Secondary/tertiary	%21.0	-	
	Bachelor's degree	%33.1	%44.4	
	Master's degree/PhD	%45.9	%55.6	
Total		%100.0	%100.0	%100.0

### Analysis of Data

The data collected from the surveys was entered into a computer file for analysis using IBM-SPSS, ver. 21.0. Initially frequency distributions and measures of central tendency and distribution were conducted to summarize the demographic characteristics and provide a profile of the sample. The second section used descriptive statistics to provide baseline information. The third section of the research used inferential statistical analysis to address the research questions. All conclusions on the statistical significance of the findings were based on a criterion alpha level of .05. The statistical analysis used to test each research question is presented in the relevant tables attached to each analysis.

Normality of the five main research variables was investigated using the One sample Kolmogorov-Smirnov's test. As can be seen in Table 4, these variables do not distribute normally, as indicated by the significant Kolmogorov-Smirnov test results in the different research groups. This raised concern about the validity of using parameter statistics for the forthcoming statistical analysis.

Table 4: Normality of Distribution- Kolmogorov-Smirnov's Test

	Parents	Teachers	Students
Benefits of e-learning for the student	0.11**	0.07	0.09**
Interest, order, organization, and clarity in teaching	0.07	0.08*	0.06*
Lack of interpersonal interaction	0.19**	0.13**	0.11**
Personal preference for e-learning	0.10**	0.08*	0.07**
Preference for combining online and frontal learning	0.14**	0.24**	0.11**

\* $p < 0.05$ , \*\* $p < 0.01$

A log transformation carried out to create more normally distributed data had no effect so it was thought best to use the original data.

Moreover, several authors indicate that attitudes (similar to other psychological constructs) do not necessarily distribute normally. As Sartori (2006) suggests, prominent psychometricians such as Wechsler and Cronbach stressed the fact that psychological phenomena are not inherently normally distributed, and as early as a century ago (Rice, 1928) field experiments showed that attitudes often don't distribute normally because factors determining individuals' attitudes are not distributed normally. Also, Sullivan and Artino (2013) indicate that data obtained from Likert-type scales are robust enough to be processed using parametric statistics, even if they are not normally distributed. Sartori (2006) adds that normal distribution should not be considered the only and primary indicator of measurement validity in social sciences.

In order to explore the hypothesis that differences would be found in the attitudes of the three groups of participants: teachers, parents, and students, towards e-learning, a one-way analysis of variance was conducted. After calculating the F statistics to find out if groups differ in their means, a post-hoc test with Bonferroni adjustment was used to test for differences between groups.

To further investigate the relationship between the research variables, a linear regression was conducted, in which the dependent variable was personal preference for e-learning, and independent variables were the other four research variables (benefits of e-learning for the student; interest, order, organization, and clarity in teaching; lack of interpersonal interaction; preference for combining online and frontal learning).

### Findings

In order to explore the hypothesis that differences would be found in the attitudes of the three groups of participants: teachers, parents, and students, towards e-learning, a one-way analysis of variance was conducted. We checked for differences in the mean scores between the research groups. Table 5 presents the measure values by group. The findings indicate significant differences in the perceptions of e-learning on all research measures aside from the benefit of e-learning for the student.

Table 5: Mean Scores for the Research Measures by Research Group

	Parents (N=124)		Teachers (N=124)		Students (N=235)		$\eta^2$	F
	M	SD	M	SD	M	SD		
Benefits of e-learning for the student	2.49	0.63	2.70	0.58	2.55	0.83	0.01	2.86
Interest, order, organization, and clarity in teaching	2.32	0.87	2.93	0.79	2.60	0.93	0.06	14.97**
Lack of interpersonal interaction	4.17	0.85	4.06	0.76	3.81	1.00	0.03	7.26**
Personal preference for e-learning	2.31	0.79	2.61	0.93	2.62	0.94	0.02	5.26**
Preference for combining online and frontal learning	2.97	1.38	3.75	1.37	2.72	1.19	0.10	26.31**

\*p<0.05, \*\*p<0.01

In order to check for specific differences between the groups of research participants, a post hoc analysis with Bonferroni correction was conducted.

Table 6 presents the means of the research measures by research population.

Table 6: Means of the Research Measures by Research Group

Research Measures	Finding
Benefits of e-learning for the student	No differences were found between teachers, parents, and students
Interest, order, organization, and clarity in teaching	Higher among teachers than among students and parents. Higher among students than among parents.
Lack of interpersonal interaction	Higher among parents and teachers than among students.
Personal preference for e-learning	No difference between the parent and teacher groups. Higher among teachers and students than among parents.
Preference for combining online and frontal learning	No difference was found between the teacher and student groups. Higher among teachers than among parents and students. No difference was found between the teacher and student groups.

Lack of interpersonal interaction was perceived as the dimension most characteristic of e-learning, as evident from the measure's value. Students contended less than parents and teachers that the lack of interpersonal interaction is a characteristic of e-learning.

The teacher group contended more than others that the pedagogic dimension is an advantage of e-learning, and the group of students supported this perception less than did teachers but more than parents. The teacher group had the most positive attitudes towards e-learning of all groups examined, and students had a slightly higher level of preference for e-learning than parents.

Table 7 presents the statistical data of the regression model for personal e-learning preference by group. The findings indicate that all the models examined were statistically significant.

Table 7: Statistics of the Regression Model

	F	R <sup>2</sup>
Parents	46.42**	0.61
Teachers	47.83**	0.62
Students	66.75**	0.52

\*p<0.05, \*\*p<0.01



Tables 8a-8c present the regression coefficients in each group. The variables that most affected personal preference for learning among parents are preference for combining online and frontal learning and the characteristics of e-learning. The benefits of learning for the student predicted personal preference less than the two first variables, while perceived lack of interpersonal interaction did not affect the preference for e-learning in this group.

Among the teachers, the variable that most strongly predicted personal preference for e-learning was benefits for the student, and the two other variables that explained the preference at a lower intensity than the first variable mentioned are preference for combining online and frontal learning and the characteristics of e-learning. Similar to the previous group, in this group too perceived lack of personal interaction did not affect preference.

Among the students, all the independent variables significantly predicted the preference for e-learning, with the variable most affecting preference being the characteristics of e-learning, followed by lack of interpersonal interaction.

*Table 8a: Coefficients of the Regression Model – Parents*

	<b>B</b>	<b>β</b>	<b>t</b>
Benefits of e-learning for the student	0.27	0.22	2.31*
Interest, order, organization, and clarity in teaching	0.31	0.34	3.41**
Lack of interpersonal interaction	-0.10	-0.10	-1.62
Preference for combining online and frontal learning	0.19	0.33	5.04**

\*p<0.05, \*\*p<0.01

*Table 8b: Coefficients of the Regression Model – Teachers*

	<b>B</b>	<b>β</b>	<b>t</b>
Benefits of e-learning for the student	0.61	0.38	4.63**
Interest, order, organization, and clarity in teaching	0.29	0.25	3.22**
Lack of interpersonal interaction	-0.14	-0.11	-1.85
Preference for combining online and frontal learning	0.18	0.27	4.27**

\*p<0.05, \*\*p<0.01

*Table 8c: Coefficients of the Regression Model – Students*

	<b>B</b>	<b>β</b>	<b>t</b>
Benefits of e-learning for the student	0.17	0.15	2.02*
Interest, order, organization, and clarity in teaching	0.35	0.34	4.35**
Lack of interpersonal interaction	-0.25	-0.26	-5.32**
Preference for combining online and frontal learning	0.20	0.25	4.56**

\*p<0.05, \*\*p<0.01

It is evident from the research findings that there are significant differences between the attitudes of the participants towards e-learning. On the pedagogical dimension, teachers were found to ascribe high significance to e-learning for creating interest, order, and organization in class and for clarity of the studied subject. Less significance was ascribed to these dimensions by the students, and even less by the parents. On the social-emotional dimension, parents were found to ascribe high significance to the diminished interaction with the teacher in the online class as well as to the lack of encounters with friends at school. Less significance was ascribed to this dimension by teachers, and even less by students. In the dimension of personal preference for e-learning, the same degree of significance was found in the attitudes of students and teachers, but parents were found to ascribe less significance, namely, parents prefer frontal learning at school as that is where the absolute majority of personal and interpersonal interactions take place. In the dimension of preference for combining e-learning with frontal learning at the school after the conclusion of COVID-19, teachers' attitudes were found to be high, parents were found to ascribe less significance to this dimension, and students even less. Namely, teachers embrace the pedagogic and technological change encompassed by e-learning and seek to connect the traditional teaching methods with the new and digital methods in the future, more than do parents and students.

The research findings show significant differences in the attitudes of the participants towards e-learning: On the pedagogic dimension teachers were found to ascribe considerable significance to e-learning for creating interest, order, and organization during the lesson, and for the clarity of the topic studied. Students ascribed less significance to these dimensions, and parents even less. On the social-emotional dimension, parents were found to ascribe considerable significance to the little interaction with the teacher in e-lessons as well as to the lack of encounters with peers at school. Teachers ascribed less significance to these dimensions, and students even less. On the dimension of personal preference for e-learning, students and teachers were found to have similar attitudes. But parent attitudes showed less support, namely, parents prefer frontal learning at school because that is where the absolute majority of interactions occur. On the dimension of preference for combining e-learning with frontal learning at the school after the conclusion of COVID-

19, teachers were found to display a high degree of support, parents ascribed less significance to this dimension, and students even less. Namely, teachers embrace the pedagogic and technological change entailed by e-learning and seek to connect the traditional teaching methods with the new and digital methods in the future, more than do parents and students.

### Discussion

The late twentieth century brought tidings of a huge change in the character of western society, including Israeli society, which entered a new era, the postmodern era, where its main features are multiculturalism, globalization, and internet culture, the loss of ideologies, essential changes in social roles and in the labor market, an extensive technological revolution, and others. Relativism and less faith in one absolute truth are leading to an undermining of social and biological structures. The familiar social order is changing (Peters, 2020). The educational crisis in the postmodern era is creating a crisis in the educational system, which includes diverse aspects: student dropout, teacher burnout, poor academic achievements, and others (Aviram, 2004). The discomfort of various stakeholders with the situation in the field of education and the attempt to cope with an unknown future are leading to a search for educational alternatives that try to examine what skills adults will need in order to cope, survive, and succeed in the future.

Nevertheless, two systems have remained stable with regard to their impact and centrality: the family setting – into which the child is born and in which he is raised, and the public educational setting – in which the child develops from pre-school to high school (Đurišić & Bunijevac, 2017). The deep recognition of the crucial significance and influence of the environments in which the child is raised for his development have led to the understanding that coordination and cooperation between the systems that have a part in raising and educating the child has a beneficial impact on the child. Partnership and contact based on mutual respect and involving dialogue, help prevent risks and improve students' functioning with regard to academic achievements and emotional and social adjustment. The relationship between the parents and the school is a dynamic system that has undergone changes over the years and is affected by many factors, including the values that dominate society and political developments. Studies in Israel and elsewhere indicate that the existence of a thoughtful and positive relationship between educators and parents is a significant variable for the student's academic success, one that affects his motivation, achievements, psychological well-being, and avoidance of risk behaviors (Lee & Bowen, 2006).

Parents and teachers see the child from different angles. This diversity makes it possible to see the student with all his uniqueness but can also be a source of conflict. The texture of the relationship between the educational staff and the parents is delicate and contains complexities. In the encounters between the parents and the educational staff in the various educational settings, beside the open dialogue there are also implicit dialogues between additional figures that enter this space: the parent as a student, the teacher as a parent, the parent as a teacher, the teacher as a student, and others. These encounters are often emotionally charged, making it hard to create a partnership between the parent and the school system. In order to deal with this issue, it is necessary to initiate actions and lead processes that will improve the capacity of educators to generate a facilitative discourse with the parents (Clem et al., 2021; Jia et al., 2018; Lippard et al., 2018; Wang & Zhang, 2020).

The quality of the teacher-student relationship is an important aspect of adolescents' development and mental health (Lippard et al., 2018). Previous studies found that a positive and close teacher-student relationship may increase enjoyment in learning and social adjustment, leading to higher satisfaction of psychological needs and increased peer relationships at school, as well as decreasing academic stress and school burnout (Clem et al., 2021; Dong et al., 2021; Romano et al., 2020). Furthermore, some studies have shown the benefits of a positive teacher-student relationship for promoting the development of adolescents' emotional intelligence (Wang & Zhang, 2020) and psychological security (Jia et al., 2018).

We found support for this in the research findings in the social-emotional measures. Parents were found to ascribe considerable significance to the little interaction with the teacher in e-learning and even to the lack of encounters with peers at school. Also, the personal preference for e-learning was found to be lower, namely, parents prefer face-to-face studies at school, since the absolute majority of personal and interpersonal interactions, which can indicate their child's mental health, occur there.

It is evident from the research that although in recent years the ties between the parents and the school and between the teachers and students have become weaker, with regard to separation of authorities concerning learning, the period of the COVID-19 crisis clarified the need to reinforce the relationship and cooperation between the parents and school. At present both study spaces, the home and the school, are significant for the independent learner. In addition, in the digital era the home might provide the technical, emotional, and pedagogic technological infrastructure for learning; therefore, education policymakers should see the two study spaces as one unit in order to encourage the success of students towards the 21<sup>st</sup> century. In order to attain this goal, it is necessary to prepare holistic guidance sessions and professional development courses for policymakers, principals, parents, teachers, and students all together.

## Conclusion

Independent and online learning requires responsibility by learners and a different basket of skills and proficiencies than frontal learning, to which most of the students have become habituated. Following the COVID-19 pandemic, the crisis that led to social distancing accentuated the fact that formal and informal educational settings contribute significantly to the students' personal-social well-being. These constitute the main place for social-emotional learning, nurturing interpersonal skills, social situations, teamwork, and imparting values. The quality of the interpersonal relations and the relationship between educational leaders and students, between parents and educational teams, and among educational teams, become a meaningful element in the growth strategy.

Schools have a clear policy regarding communication between teachers and parents. This policy tends to focus on creating contact with the parents when the student's behavior or progress wavers, instead of regular communication throughout the school year. In fact, both teachers and parents expect each other to make more of an effort to help and support the students (Borup et al., 2015). Hence, the challenge of e-teaching is to define expectations of parent involvement and to provide parents with information on the types of support necessary for the student. It is clear that remote learning in the format it took was not meaningful for many children and did not take into account the difficulties parents were dealing with at home. In many homes the number of computers is insufficient and the quality of the internet connection is poor, posing difficulties for the online learning method. The most important component, which was not sufficiently attended to, is the emotional difficulty of parents and children. Therefore, the research hypothesis which claimed that on the social-emotional dimension parents would be found to ascribe high significance to the diminished interaction with the teacher in the online lesson and also to the lack of encounters with friends at school, was confirmed. The Ministry of Education must change its approach and generate a procedure whereby each child will have personal conversations with his teachers, with the opportunity to receive a response for academic and emotional difficulties. Since remote learning encountered difficulties, it would be desirable to shift to a more individual, emotional approach based on a personal relationship between teachers and students. At present the children are exposed to a variety of digital media and their daily routine is strongly affected, so the educational system should help them deal with the emotional difficulty no less than with the academic material.

Among the explanations for the resistance to remote learning were the lack of computers in homes that have more than one student, parents' difficulty helping with the study material, as well as poor internet connections. Parents whose children did not participate in remote learning but rather received home assignments complained that the amount of assignments is too large and that home assignments are no replacement for frontal studies. Parents complained about the lack of psychological support and the system's over-focus on achievements and completion of study material.

In order to assimilate ICT in the educational system, it is necessary to develop organizational and administrative elements that affect ICT integration, such as adapting the infrastructure and equipment, technical support, adapting the content of the study material, access to digital contents, appointing a school ICT coordinator in charge of operating technological infrastructure together with the teaching staff who should be active in motivating parents to participate in their children's online learning process.

The research hypothesis claiming that teacher attitudes to interest, order, and organization of the online lessons would be more supportive than those of parents and students who observed the lesson but may not have been able to concentrate and were not part of the process, was confirmed. Assimilation of ICT in education requires a cognitive change by teachers. Developing ICT study materials by teachers might lead to change and to meaningful implementation of the innovative pedagogy. Shifting from traditional teaching to an innovative paradigm requires providing teachers with both pedagogic support and professional training. Building a schoolwork plan and imparting knowledge and skills are key elements in successful integration of computers in teaching, as they improve teachers' technological abilities and personal confidence.

The research hypothesis claiming that teachers' and students' personal preference for e-teaching would be higher than parents', was confirmed. Teachers experienced an advantage in studies with no distractions and disturbances and were focused on the content and pedagogy. In addition, the quality of life of teachers and students improved in the transition to e-teaching, as it saves them time and funds for dealing with preparations to travel to school. At the same time, in e-teaching the instruction means are varied, in contrast to parent reports that doubt the quality of teaching and learning during this period. On one hand, many noted that the online encounters were held in a pleasant and calm atmosphere, but on the other it appears that parents do not see a positive atmosphere in class as a guarantee for progressing with the material studied.

The systemic treatment of e-learning requires attention to a large number of issues: content and pedagogy, persistence, personal interactions, recording courses/lessons and building accessible databases, combining virtual and physical labs, evaluation and measurement of achievements, assisting infrastructure, support, preparation and guidance, preparation and development of courses/lessons, digital disparities, individually adapted learning, techno-pedagogic infrastructure, and communication infrastructure. In addition, student willingness to study online is considered one of the preconditions for an efficient learning process and for educational achievements (Dangol & Shrestha, 2019). Nevertheless, in contrast

to face-to-face traditional teaching in the classroom, remote learning does not ensure student attendance, so it is hard to determine students' degree of concentration in e-learning (Tang et al., 2021).

### Recommendations

One of the greatest difficulties of teachers in general is dealing with discipline problems. This difficulty obviously does not exist in e-teaching. But this great advantage is countered by a possibly greater difficulty, which is that of retaining students' level of interest and readiness to continue participating in class. Therefore, the research recommendation is to examine the teacher's didactic ability in e-learning. In addition, the interactions in the e-lesson create a new reality where the instructional activity, and sometimes also the educational activity, between teachers and students becomes open, exposed to the parents, and even more so if it is open to observation by other elements: colleagues, principals, supervisors, directors of education divisions, and others. Therefore, the research recommendation is to examine the teacher's sense of efficacy and empowerment. Holistically, bolstering the role of e-teaching following the COVID-19 crisis may have a far-reaching effect on the character of the school and its important place as the main social environment in the student's life. Such a change also necessitates an essential change in the role perception of the teacher, his training and routine. The teacher will have to be transformed from an authoritative figure who conveys information to a moderator, a mentor who helps his students acquire knowledge and skills and contend with growth processes, maturing, and personality shaping in the critical stages of their life. Therefore, the research recommendation is to examine ways of training teachers in academia and the place of the school for their best training (Balas, 2020).

Post-COVID studies will take place in different sites, which all have value for the learners: the home, the school, the place of personal activity, and the place of encounters with friends. In addition, blended learning must be changed on four dimensions: The place of studies – up close in the classroom or remotely from home; the form of learning: online or face-to face; the time of studies: synchronous or asynchronous; the manner of learning: homogeneous or heterogeneous. In order for teachers, parents, and students to have positive attitudes to e-learning, a change must be affected in their paradigm. It is possible to study at any time, in any place, such that learning will be meaningful and appropriate for the 21<sup>st</sup> century.

### Limitations

The limitation of the study is that it is a case study testing e-learning among parents, teachers, and students only in Israel. It would be desirable to expand it to other countries. Another limitation could be corrected by extending the study to the population of children in primary school, since the parent-student relationship is different from the parent-adolescent relationship in high school,

### Authorship Contribution Statement

Davidovitch: contributed to the concept and design, data acquisition, drafting manuscript, critical revision of manuscript, technical or material support, and supervision. Ben-Amram: data analysis interpretation, statistical analysis, securing funding, admin, supervision, final approval.

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