Distance Learning Lab in the Periphery

Joint Ashalim & the Ministry of Education

April-June 2020

משרד החינוך

JDC Israel Ashalim
for Children, Youth and Young Adults at Risk & their Families

Distance Learning Lab in the Periphery - Background

Following the outbreak of the COVID-19 crisis, Joint-Ashalim, in cooperation with the Ministry of Education (R&D, Primary & Post-Primary Divisions), initiated the establishment of a short-term R&D lab which focuses on distance learning in Israel's social and geographical periphery.

The main questions the lab focused on were:

In the short term:

What are the unique problems of the periphery related to the implementation of distance learning during the COVID-19 crisis and what are the school principles and practices that might help dealing with them?

In the long term:

What will we be able to learn from the distance learning experience of the schools in the periphery during the COVID-19 crisis about improving education in the periphery with relation to the use of the distance learning tool and other insights which will be gained in the lab?

Distance Learning Lab in the Periphery - Background

The lab's work process was built in two phases in accordance with the objectives:

Phase 1

Drawing **relevant knowledge for the COVID-19 crisis** & making it accessible for the field

Phase 2

Shifting focus towards the **long term** & developing main insights for improving education in the periphery in light of lessons learnt during the COVID-19 crisis

Distance Learning Lab in the Periphery - Background

The following actions were taken in the lab:

15

Schools were recruited to the lab
(11 primary schools + 4 junior high schools) in a variety of towns, all of which from the geographical periphery and/or high nurture index towns

Several rounds of interviews, discussions and e-meetings were conducted

With principals, leading teachers and telecommunication coordinators

506

Families participated in a survey

Conducted by the “Midgam-Panel” Institute

53

Interviews were conducted with families

40 with families from the schools participating in the lab (by the principals and teachers) and 13 with families participating in the “Noshmim Lirvacha” program conducted by the Ministry of Welfare, Rashi Foundation and JDC-Ashalim (by lab staff)

An experimental website was built

The website offers organization of distance learning tools based on teachers’ pedagogical needs:

https://technogogoya.ussl.app/

23 students participated in interviews

In the framework of “Noshmim Lirvacha” and “HaMeitiv” programs and

3 Focus Discussions

Were conducted with students from schools participating in the lab

The Purpose of the Presentation

This presentation is the final product of the lab.

The document focuses on the long term and offers insights for nurturing education in the periphery based on lessons learnt from the knowledge accumulated in the lab during the COVID-19 crisis

The Presentation's Target Audiences

School Principals

As a basis for their thinking about the school's action perception

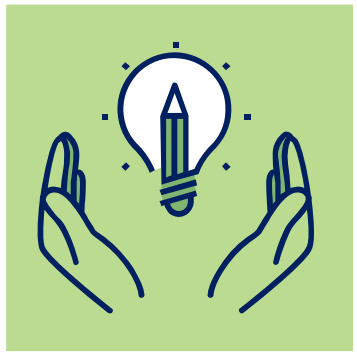
Education Departments in Local Authorities

As a basis for understanding school development

Ministry of Education Headquarter

As a basis for policy decisions and program development

Presentation Map

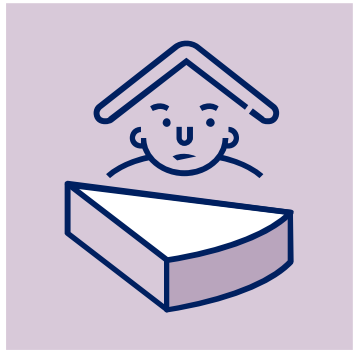


Arenas for Development of Education in the Periphery

- The learning, developing child in systematic perception
- E-learning as a tool for educational enhancement in the periphery
- Updating educational objectives: independent learners, social-emotional learning & agency

Perceptual Switch

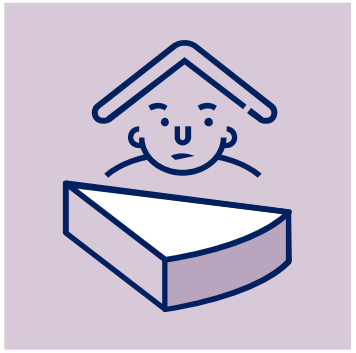
What did effective schools in the periphery do during the COVID-19 crisis?



Educational Challenges in the Periphery during the COVID-19 Crisis

Main challenges & processes that were part of distance learning in the periphery

Part A – **Educational Challenges in the Periphery during the COVID-19 crisis**



This part reviews the main challenges and processes that were part of distance learning in the periphery:

Overview: General Review

The challenge: Facilitate participation in distance learning

Families Survey: The impact of COVID-19 crisis

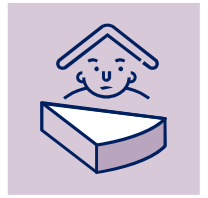
Families Survey: The most common difficulties indicated by parents

Interviews with Parents

Focus Discussions & interviews with students from schools participating in the lab

Questionnaire-based interviews with students from the Noshmim Lirvacha & “Bashvil HaMeitiv” programs

Educational Challenges in the Periphery during the COVID-19 CRISIS
Overview



1

Encouraging children to participate in distance learning and become engaged in it

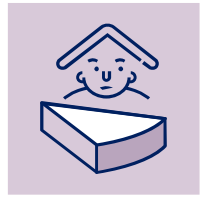
2

Creating meaningful learning experience for the students

3

Bridging potential gaps in knowledge and skills amongst students & across age-groups

Educational Challenges in the Periphery during the COVID-19 CRISIS



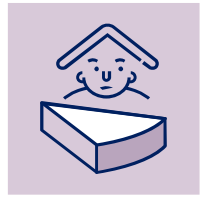
The term **periphery** in relation to COVID-19 is being redefined.

It is difficult to refer to “periphery” as a definite entity. It should be referred to as a range of variables, constraints and conditions that create resilience and a potential for learning and development.
These variables involve high variance everywhere - in Migdal HaEmek or Arraba, but in Ramat-Gan as well.

- Is there a computer at home? Is it sufficient for all the children?
- Has one of the parents, or both of them, lost their job and is under economic pressure?
- Are the parents capable of and available for supporting their children’s distance learning?
- Do the children deal with learning difficulties, emotional difficulties, etc.?

The different answers express totally different conditions for the student and might make all the difference between active participation in distance learning and the ability to benefit from it and, on the other hand, a child who does not perform the tasks and whose academic, social and emotional situation is deteriorating.

Educational Challenges in the Periphery during the COVID-19 CRISIS



The Challenge: Facilitating Participation in Distance Learning

In general, 15 schools in the lab assessed that, on average, 20% of their students do not participate in distance learning and are not engaged in it or, participate in distance learning and are engaged in it at a very low level.
What are the reasons for that?

2%-10%
of students do not have a computer and/or internet access

Families with several children who have only one computer

Difficulty with technical operation of systems

Difficulties related to organization and adhering to a timetable, sleeping late (especially from the 6th grade and up)

Students who do not want to participate in distance learning or spend their time on other things, difficulties related to parental authority

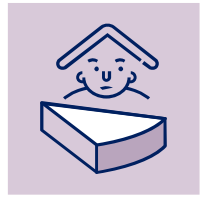
"There are technophobes amongst children too"

Junior-high teacher

"In some families the parents totally lack authority. The days have become nights and vice versa. There are some barriers that cannot be breached, excuses. That was my mission as a homeroom teacher."

Homeroom teacher in junior- high

Educational Challenges in the Periphery during the COVID-19 CRISIS



The Challenge: Facilitating Participation in Distance Learning

In general, 15 schools in the lab assessed that, on average, 20% of their students do not participate in distance learning and are not engaged in it or, participate in distance learning and are engaged in it at a very low level.
What are the reasons for that?

Parents who find it hard to become available for mediation or to become involved in their children's learning

Parents whose mediation and support capabilities (in the technical and academic sense) are low

Economic pressure and dealing with other difficulties

Difficulty to concentrate which is enhanced in distance learning or decreased motivation as a result of learning difficulties

Parents and students who do not perceive distance learning as a serious mode of learning

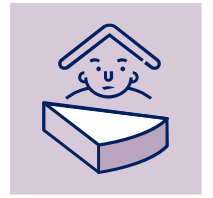
"Unfortunately, distance learning is not suitable for everybody. Students who find it hard to concentrate, children who study in weaker classes… it's very hard for them."

Junior-high teacher

"The difficulty does not always lie in the low socio-economic level. There is this wealthy family where the mother said 'My kids will not submit any of the tasks.' I told the teacher to take it slowly, that we should listen, talk and explain. In the end both of her children handed in their tasks."

Junior-high principal

Educational Challenges in the Periphery during the COVID-19 CRISIS
Families Survey



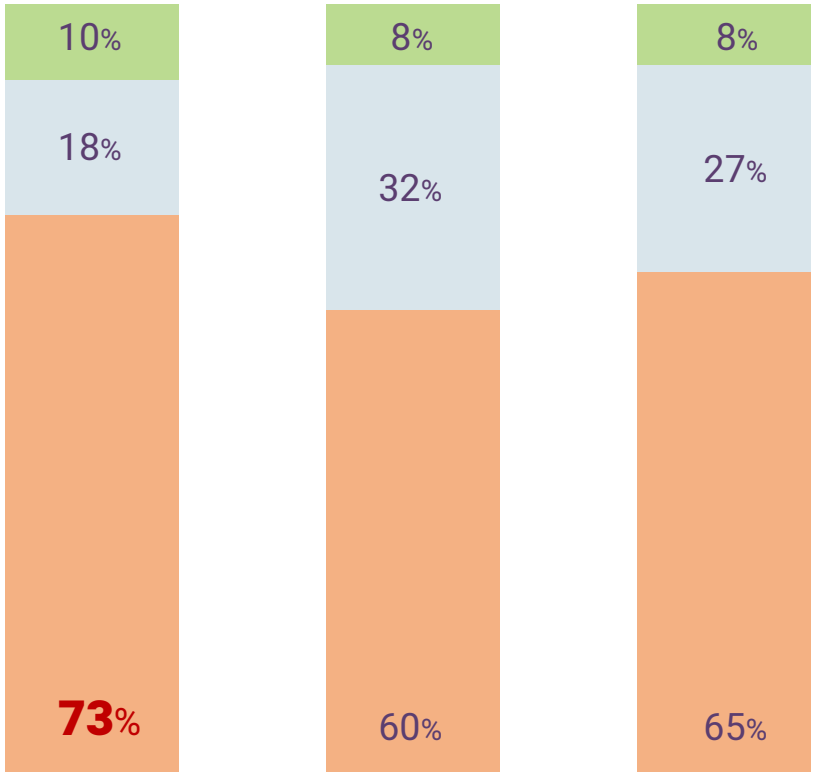
Note: Extreme figures are marked in red

My child's desire to study and level of investment in studies:

improved

has not changed

decreased

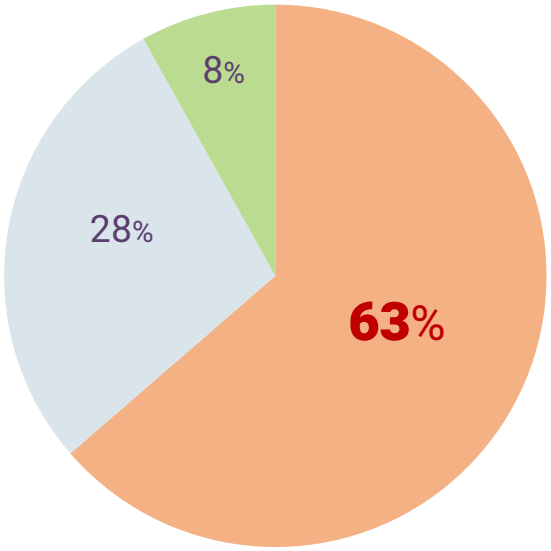


Socio-economic status:

Arab Population
40 families

Average / Above Average
233 families

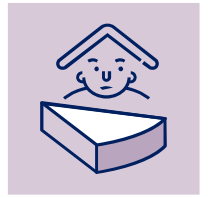
Below Average
233 families



Total
506 families

Educational Challenges in the Periphery during the COVID-19 CRISIS Families Survey

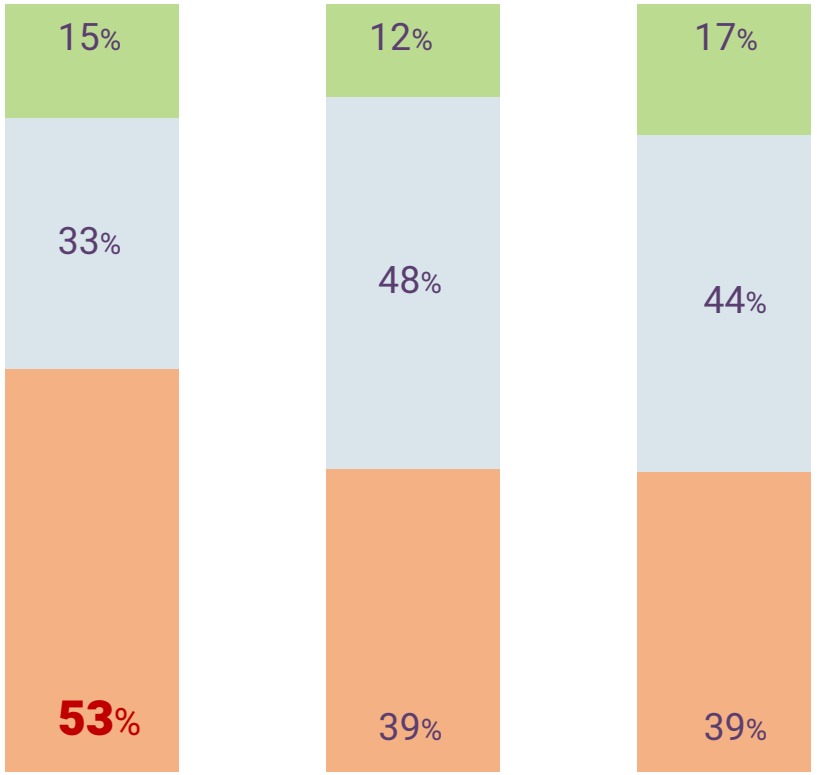
My Child's Behavior:



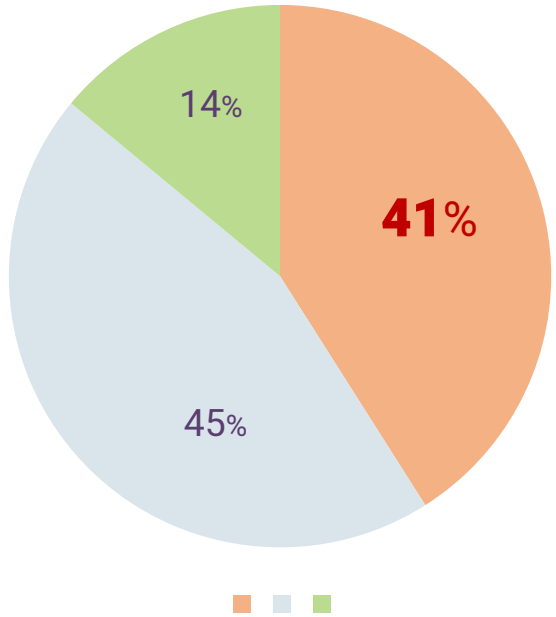
improved

has not changed

Worsened



Note: Extreme figures are marked in red



Socio-economic status:

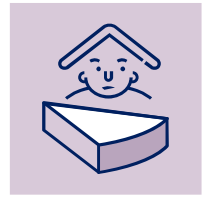
Arab Population
40 families

Average / Above Average
233 families

Below Average
233 families

Total
506 families

Educational Challenges in the Periphery during the COVID-19 CRISIS
Families Survey

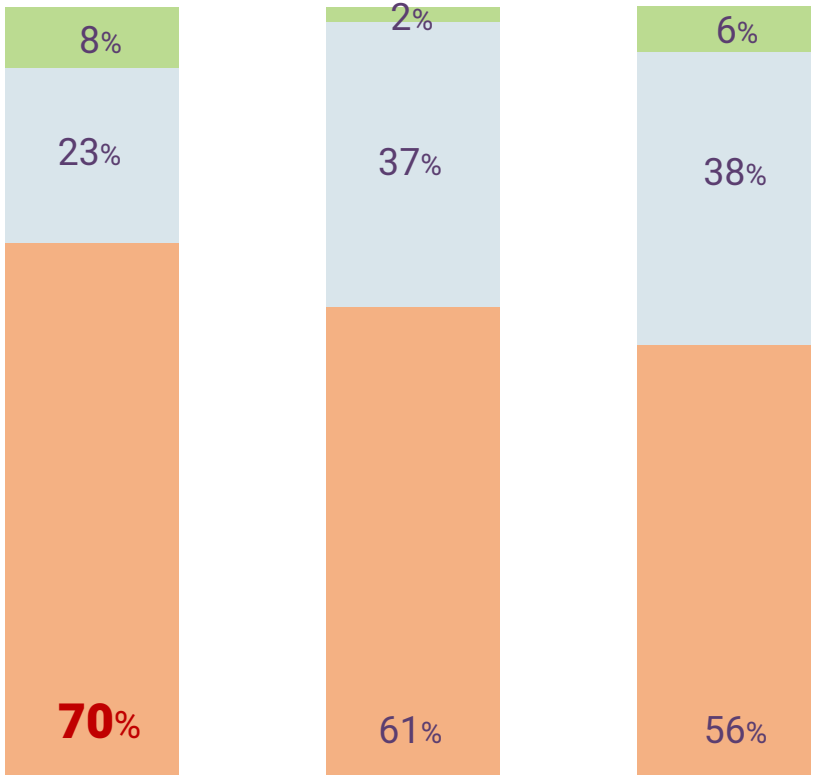


My Child's Social Status:

improved

has not changed

worsened



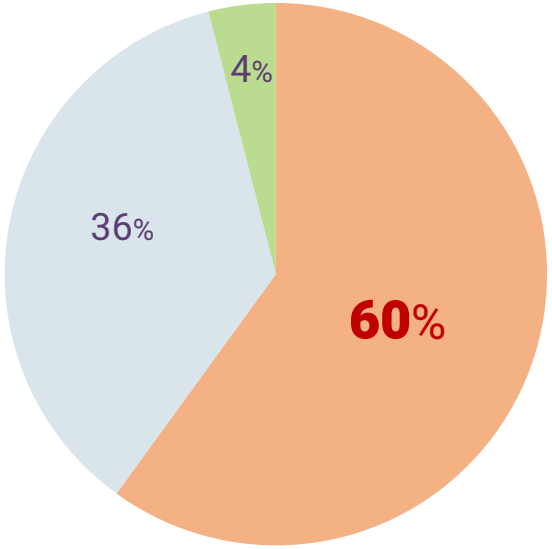
Socio-economic status:

Arab Population
40 families

Average / Above Average
233 families

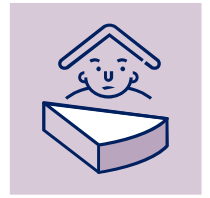
Below Average
233 families

Note: Extreme figures are marked in red

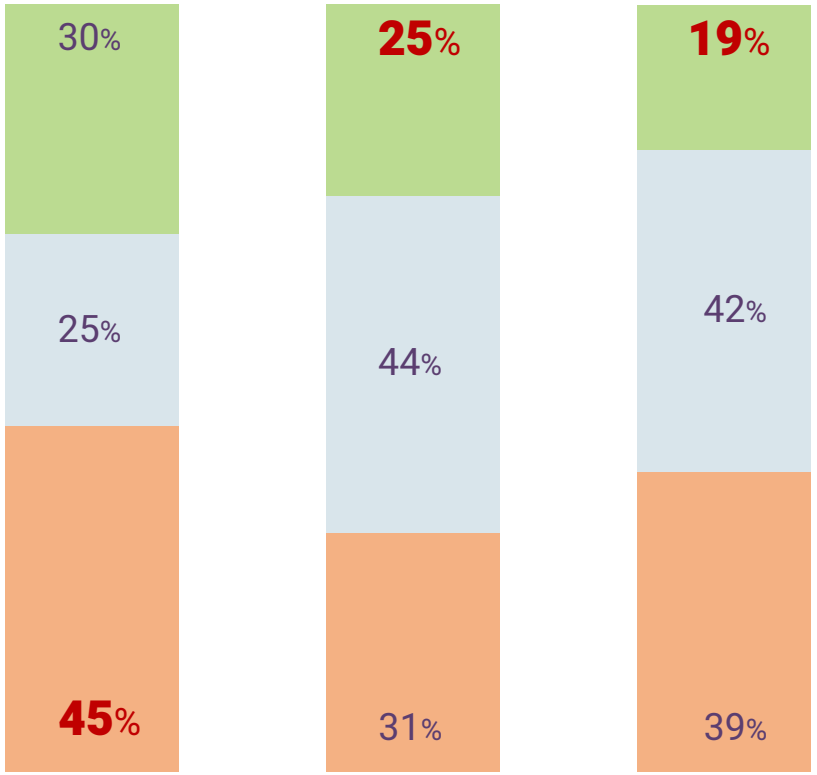


Total
506 families

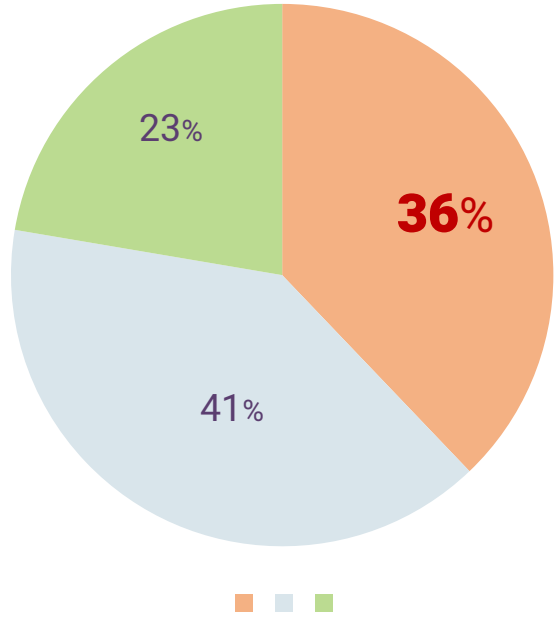
Educational Challenges in the Periphery during the COVID-19 CRISIS Families Survey



My Child's Self-Learning Abilities:



Note: Extreme figures are marked in red



Socio-economic status:

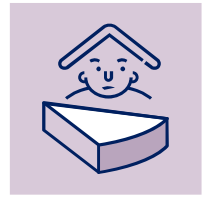
Arab Population
40 families

Average / Above Average
233 families

Below Average
233 families

Total
506 families

Educational Challenges in the Periphery during the COVID-19 CRISIS Families Survey



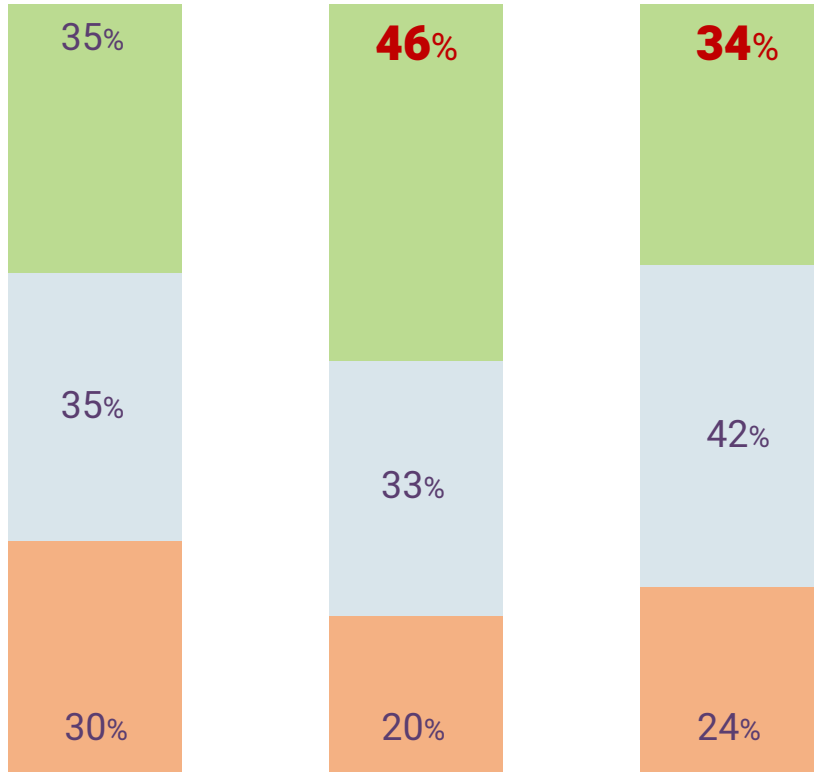
My Involvement in my Child's Learning:

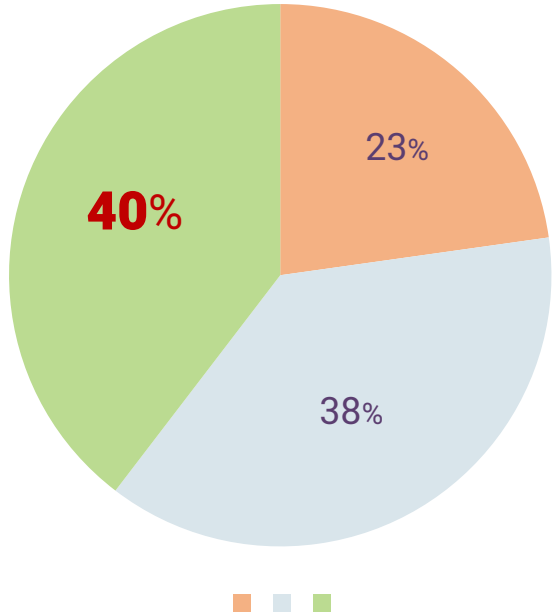
improved

has not changed

decreased

Note: Extreme figures are marked in red





Socio-economic status:

Arab Population
40 families

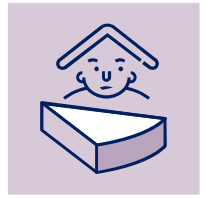
Average / Above Average
233 families

Below Average
233 families

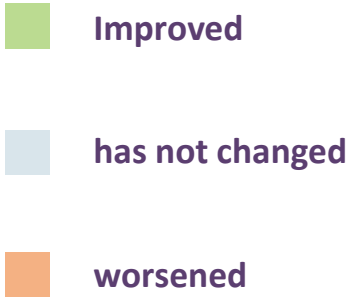
Total
506 families

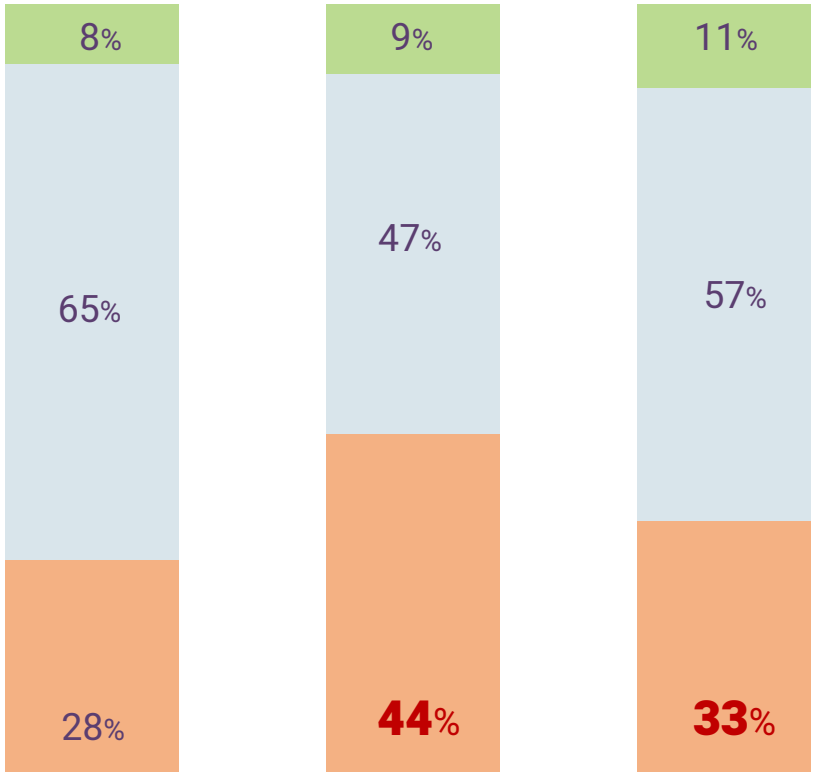
Educational Challenges in the Periphery during the COVID-19 CRISIS Families Survey

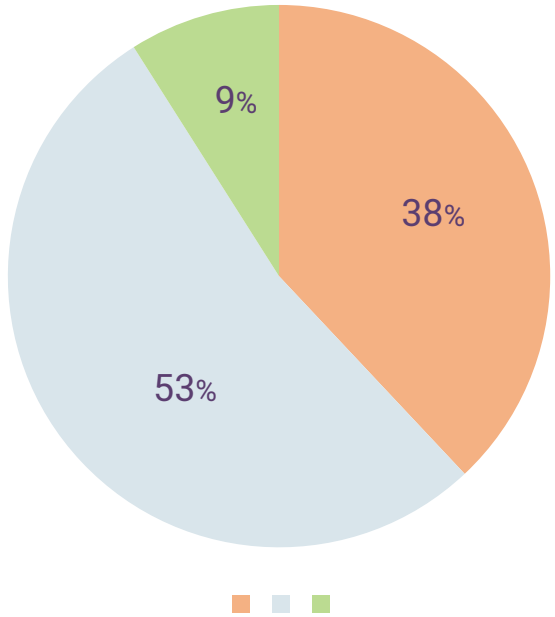
MY Child's Medical Condition (In the context of nutrition & sports)



Note: Extreme figures are marked in red







Socio-economic status:

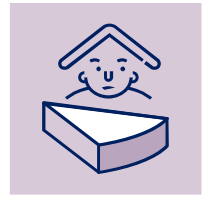
Arab Population
40 families

Average / Above Average
233 families

Below Average
233 families

Total
506 families

Educational Challenges in the Periphery during the COVID-19 CRISIS Families Survey



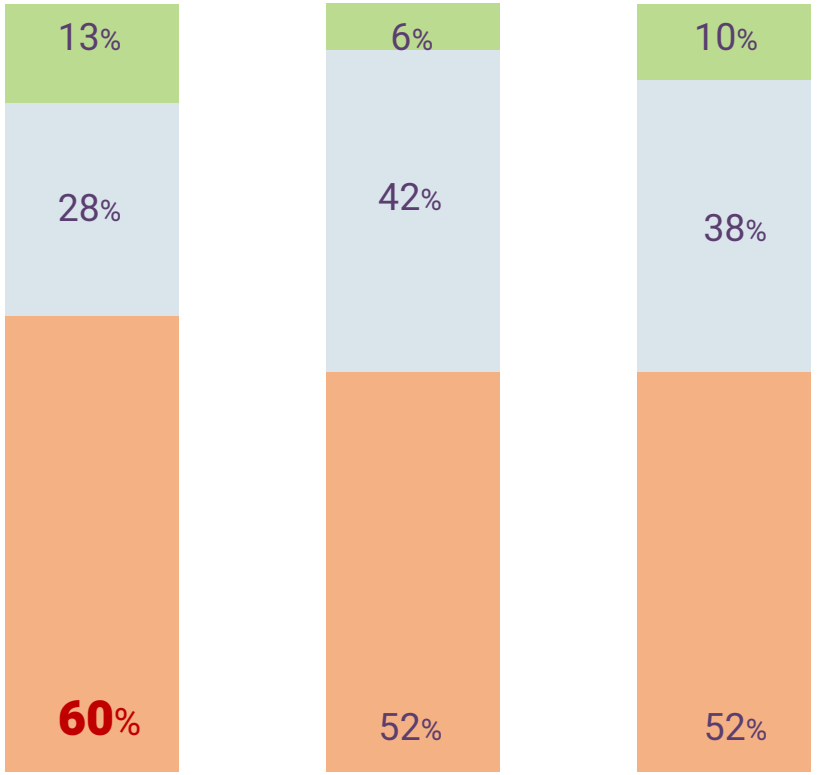
Note: Extreme figures are marked in red

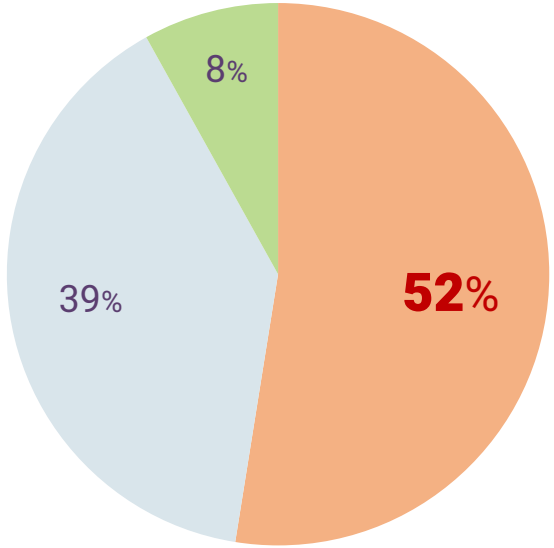
My Child's Enjoyment from Learning

improved

has not changed

decreased





Socio-economic status:

Arab Population
40 families

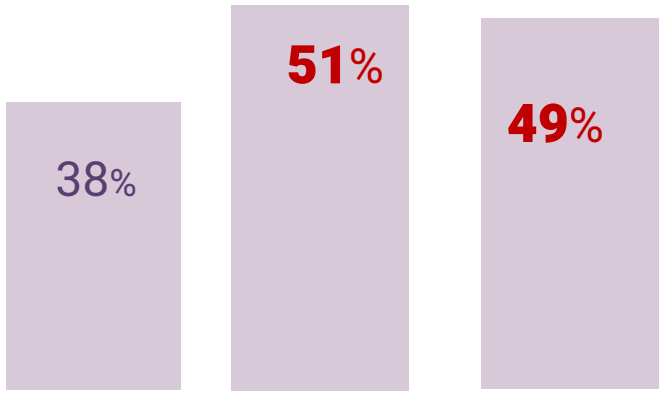
Average / Above Average
233 families

Below Average
233 families

Total
506 families

Educational Challenges in the Periphery during the COVID-19 CRISIS
Families Survey – Most Common Difficulties Indicated by Parents

Total
506 families

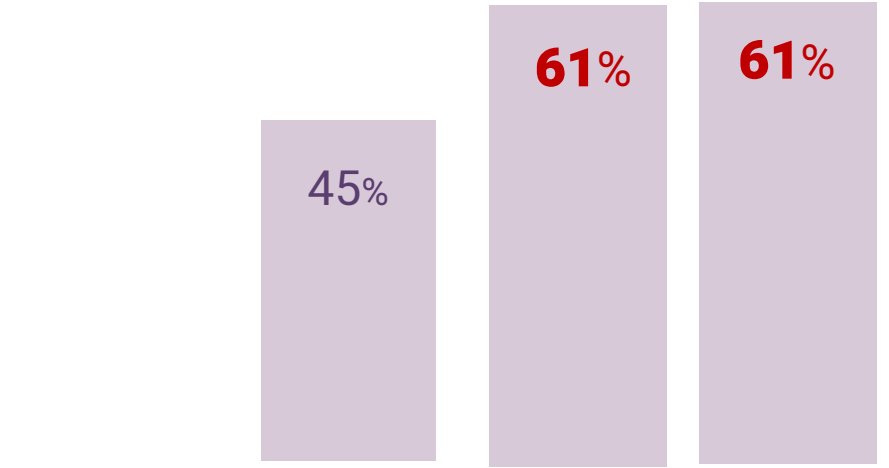


Socio-economic status:

Arab Population
40 families

Jewish Population - Income above average
233 families

Jewish Population – income below average
233 families

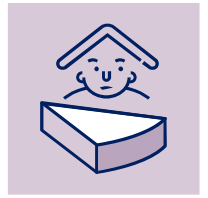


Socio-economic status:

Arab Population
40 families

Jewish Population - Income above average
233 families

Jewish Population – income below average
233 families



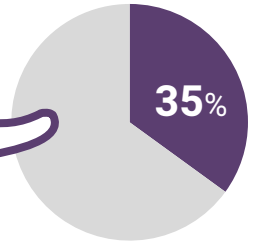
Note: Extreme figures are marked in red

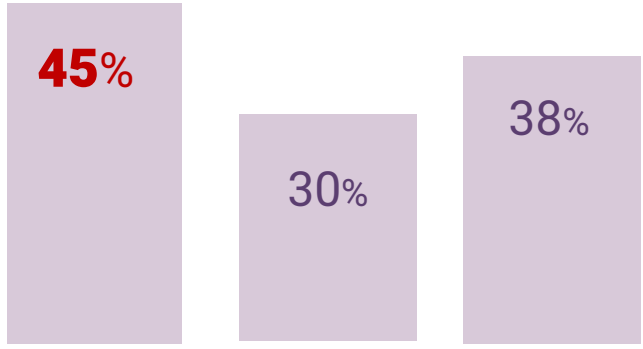
Educational Challenges in the Periphery during the COVID-19 CRISIS
Families Survey – Most Common Difficulties Indicated by Parents

Total
506 families

Note: Extreme figures are marked in red

children do not want to participate in distance learning





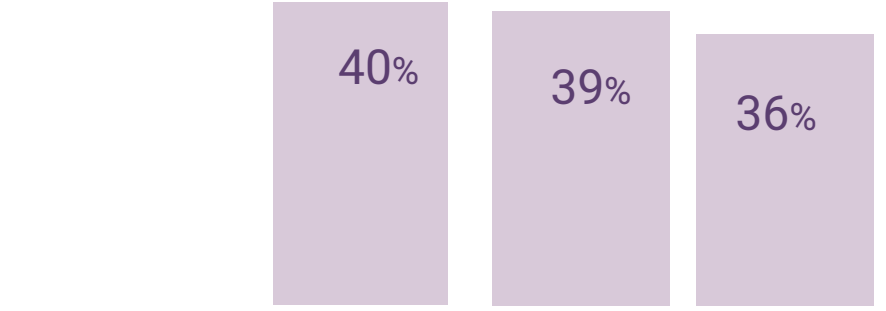
Socio-economic status:

Arab Population
40 families

Jewish Population - Income above average
233 families

Jewish Population – income below average
233 families

There aren't enough computers



Socio-economic status:

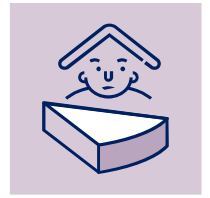
Arab Population
40 families

Jewish Population - Income above average
233 families

Jewish Population – income below average
233 families

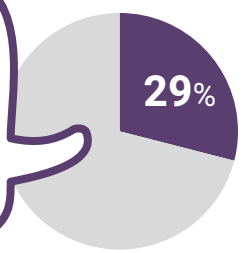
Educational Challenges in the Periphery during the COVID-19 CRISIS
Families Survey – Most Common Difficulties Indicated by Parents

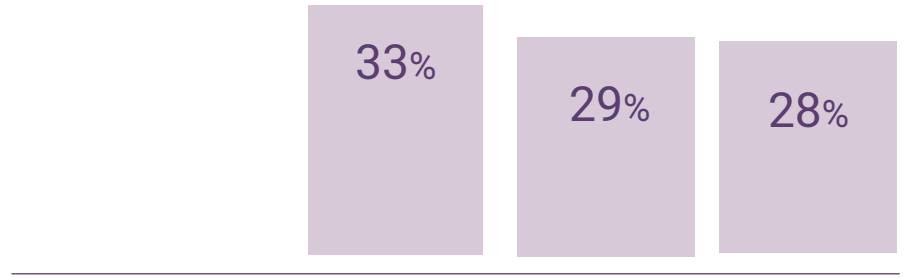
Total
506 families



Note: Extreme figures are marked in red

Home schedule is different from distance learning schedule





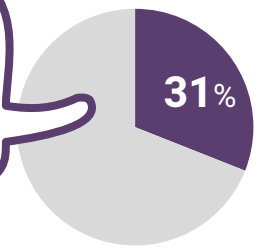
Socio-economic status:

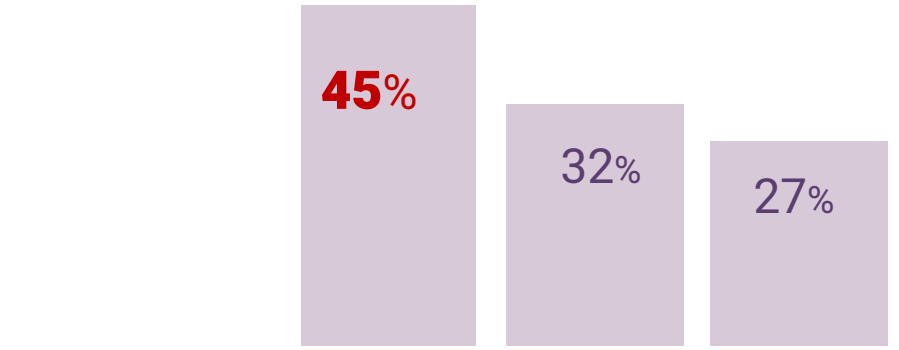
Arab Population
40 families

Jewish Population - Income above average
233 families

Jewish Population – income below average
233 families

Lack of personal contact between the children and school staff





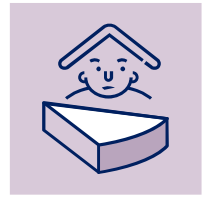
Socio-economic status:

Arab Population
40 families

Jewish Population - Income above average
233 families

Jewish Population – income below average
233 families

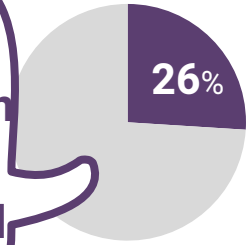
Educational Challenges in the Periphery during the COVID-19 CRISIS
Families Survey – Most Common Difficulties Indicated by Parents

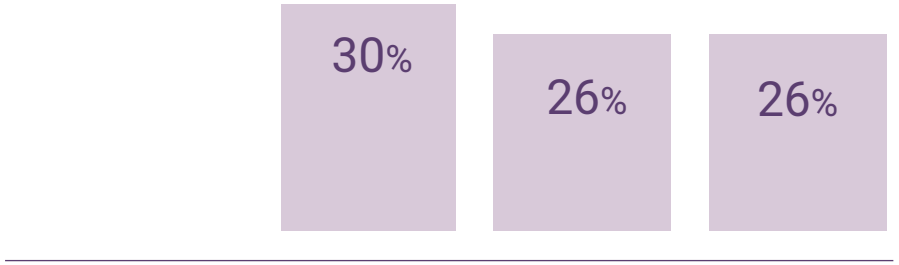


Total
506 families

Note: Extreme figures are marked in red

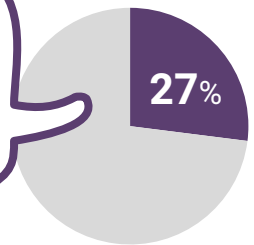
Lack of clear instructions or guidance. Children do not know what they are supposed to do and when

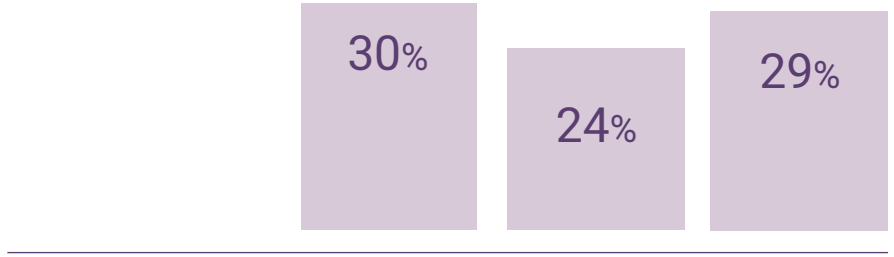




Socio-economic status:	**Arab Population** 40 families	**Jewish Population - Income above average** 233 families	**Jewish Population – income below average** 233 families

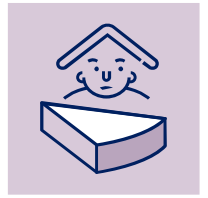
Tension at home due to lockdown and economic difficulties





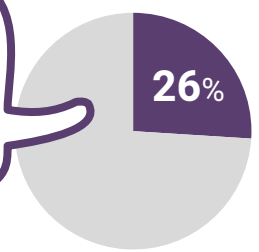
Socio-economic status:	**Arab Population** 40 families	**Jewish Population - Income above average** 233 families	**Jewish Population – income below average** 233 families

Educational Challenges in the Periphery during the COVID-19 CRISIS
Families Survey – Most Common Difficulties Indicated by Parents

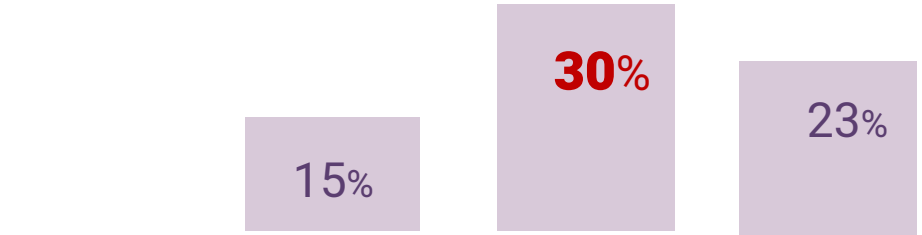


Total
506 families

Lack of space for physical exercises



Note: Extreme figures are marked in red

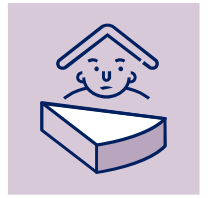


Socio-economic status:	**Arab Population** 40 families	**Jewish Population - Income above average** 233 families	**Jewish Population – income below average** 233 families

Educational Challenges in the Periphery during the COVID-19 CRISIS
Interviews with Parents

- For many families, managing the schedule has become a struggle
- Lack of sufficient computer infrastructure (and/or printer, internet connection) for all the children
- Conflicts related to children's motivation to study
- Technical difficulties related to distance learning
- In weaker homes (but not only) – clear preference for printed materials
- The relationship with the homeroom teacher – the most important element for learning
- Experienced this time as "keeping a routine" rather than learning

Educational Challenges in the Periphery during the COVID-19 CRISIS
Interviews with Parents



- In some households: disappointment from school due to lack of contact or from the system due to insufficient support
- A sense of parental failure – difficulty to support children academically and in terms of resources
- Working parents or parents who have younger children are less available
- Bright side: siblings helping each others (only happened when there was a well-organized schedule)
- The parents are very concerned with the possibility of academic gaps, but sometimes find it difficult to handle the multiple tasks given to the children

Educational Challenges in the Periphery during the COVID-19 CRISIS
Interviews with Parents

"It is very difficult to plan a schedule. There is no schedule. There is only my cell phone and all the kids study with it and I need it as well, so it's very difficult. And the baby cries and I don't have time to help the kids with their studies and it's very stressful."

"My kid's kindergarten teacher is a friend of mine and so she would leave the materials for the week by the door. It was very helpful".

A single mom who has no computer at home: "I went to the library every day to print the materials, but at some point it became too expensive"

"My daughter yells: 'Why can't you buy me a computer?' She is afraid they are going to make her repeat the same grade. My boys take Ritalin, but they refuse to take it at home, so they barely study, they just spend the entire day watching T.V or on the phone."

"My older son is more independent and I don't need to remind him, but the younger girl forgets all the time and I always have to ask her about the schedule and force her to join in."

"The girl sat for an hour every day, then she either ran out of tasks or ran out of patience. They are bored most of the day, climbing the walls and since my mother in law lives with us we did not let the children go outside."

"My daughter is still struggling with her Hebrew, and there is no Russian-speaking teacher in school who could translate and help, so she couldn't do her tasks."

Educational Challenges in the Periphery during the COVID-19 CRISIS
Focus Discussions & Interviews with Students from Schools participating in the Lab

Junior-High Students

- Prefer to study at home
- The output of distance learning was 85-120% of the output of school learning
- At home the schedule is more flexible and it’s easier to concentrate
- Would like to continue studying from home or a combination of home/school

Primary School Students

- Prefer to study at school
- The house in messy, noisy and there are fights between siblings
- It’s difficult to get teachers’ explanations from home
- Missing our friends
- The younger children needed their parents’ help more (especially with technical matters)

Educational Challenges in the Periphery during the COVID-19 CRISIS
Focus Discussions & Interviews with Students from Schools participating in the Lab

All Students:

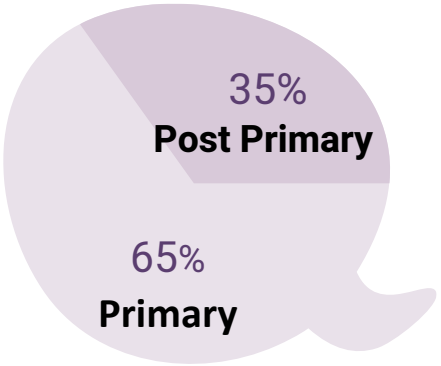
- Prefer tasks with flexible deadlines to Zoom lessons
- Highly appreciate the personal feedback provided by teachers
- Thought it was good that the homeroom teachers called every once in a while to ask how they were doing
- Thought it was good that the teachers used videos and presentations
- Say that it’s important for them to study and that they want to succeed
- As far as they are concerned, there were no special difficulties with their parents during the distance learning period.

Educational Challenges in the Periphery during the COVID-19 CRISIS

Questionnaire-based Interviews with Students participating in the Noshmim Lirvacha & HaMeitiv Programs

The Nosmim Lirvacha & Bashvil HaMeitiv programs (Ministry of Welfare)
are designated to support low socio-economic families and families with complicated problems. The programs are supported by the local authorities.

The lab conducted 23 structured interviews with 4th-9th graders from families participating in the programs:



59%
Did not experience distance learning as enabling a social framework and contact

62%
Experienced lack of success in distance learning

52%
Didn't participate or rarely participated in distance learning

The students indicated the following factors as the most important ones with regards to their motivation, participation and success in distance learning:

16%
Parents' support and encouragement

39%
Their personal motivation to study

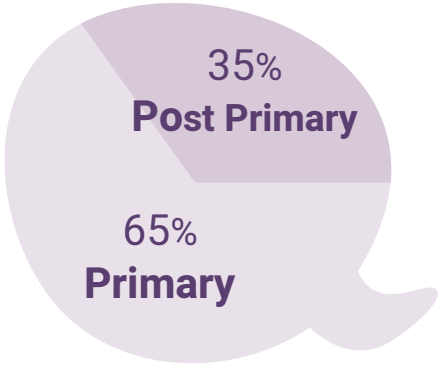
44%
Personal relationship with the teachers

Educational Challenges in the Periphery during the COVID-19 CRISIS

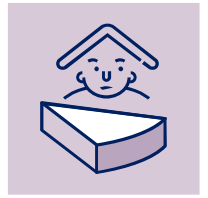
Questionnaire-based Interviews with Students participating in the Noshmim Lirvacha & HaMeitiv Programs

The Nosmim Lirvacha & Bashvil HaMeitiv programs (Ministry of Welfare)
are designated to support low socio-economic families and families with complicated problems. The programs are supported by the local authorities.

The lab conducted 23 structured interviews with 4th-9th graders from families participating in the programs:



Parents' impact and involvement in distance learning was perceived as limited and almost unnoticed. Some of the parents were not involved at all, others put some pressure which was perceived as non-influential. The situation was similar even when the relationship between parents and teachers was good.



Learning from home was perceived as not as good as learning at school

60%

Experienced some development in their self-learning capabilities

Students' Main Difficulties:

19%

Inconvenient home space

28%

Lack of available computer

43%

Difficulty to wake up, get ready, log in and perform tasks

Part B – **Perceptual Switch**

What did effective schools in the periphery do during the COVID-19 crisis?

Change of Perception:
What made some peripheral schools effective during the COVID-19 crisis?

Implementation of the perceptual change:

What did effective peripheral schools do during the COVID-19 crisis?

Some insights we have gained:
Things the school did prior to the crisis which contributed to the success of distance learning

The Perceptual Switch

What made some schools from the periphery effective during the COVID-19 crisis?

From:	To:
Focusing on the curriculum	Focusing on creating a learning & growth process
Referring to the child as the only object of reference	Referring to the child within context – working with the family
The teacher as responsible for providing information	The teacher as responsible for the learning process and the growth-supportive environment
“We do what we can in light of the constraints”	“We can solve problems

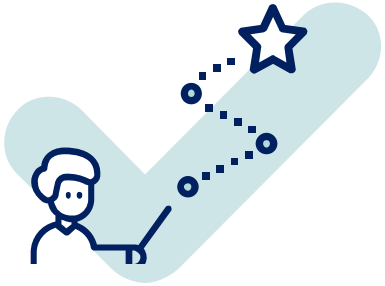
Schools that knew how to make this “switch” managed to significantly increase the rate of participation and engagement of students in distance learning

The Perceptual Switch – The Practical Principles of Perception Change

What did effective schools from the periphery do during the COVID-19 crisis?

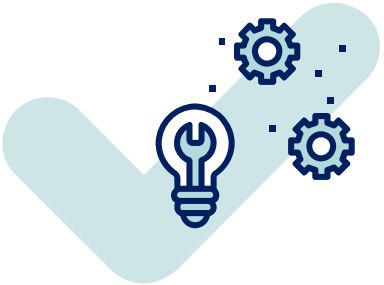
Managing Contact & Communication

- Phone calls and Video calls
- House calls
- Continuous assessment and conveying a message of seriousness



Pedagogical Principles

- Consistent, accurate usage of feedback
- “Recruiting” Pedagogy
- Flexible learning plan
- Combining emotional-social learning (SEL)
- Proactive approach towards families

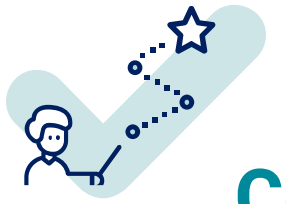


Technical-Infrastructural Modi Operandi

- Systematic tracking of participation
- Providing computers
- Alternative modi operandi (WhatsApp, printed materials)

The Perceptual Switch – Implementation

What did effective schools from the periphery do during the COVID-19 crisis?



Consistent & Accurate Use of Feedback

- Appreciative, immediate feedback
- Expressions of caring and close contact
- Detailed Pedagogical Feedback

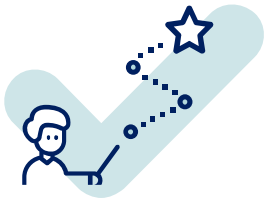
The Perceptual Switch – Implementation

What did effective schools from the periphery do during the COVID-19 crisis?

“Recruiting” Pedagogy:

The Perceptual Switch – Implementation

What did effective schools from the periphery do during the COVID-19 crisis?



Proactive Approach to Parents Relations:

- Nurturing Parents' Leadership
- Creating a "Parents' Network"
- Surveys
- Parents - Target Population for Learning, Advocacy & Guidance
- Nurturing Parents as Potential Mediators or Learning partners
- Developing Activities based on Family Perspective

Insights we have gained along the way:

Things the schools did prior to the crisis which contributed to the success of distance learning

Technological Accessibility

- Program - Providing computers to students

Experience with Online Tools

- Managing schools and learning processes with Learning Management Systems such as Google Classroom, Microsoft Teams
- Integrating online tools into ongoing learning (Ofek, Et HaDaat, Padlet, etc.)

Pedagogy

- Programs for developing independent learners (PBL, Peer Learning)
- Managing Social Emotional Learning (SEL) program
- Emphasis on nurturing the interpersonal relationships between teachers & students (personal meetings, guided learning)

Insights we have gained along the way:

Things the schools did prior to the crisis which contributed to the success of distance learning

Case study: Amit Kennedy High-School, Acco

Technological Accessibility

- The school raised funds for the purpose of providing computers to all students

Integrating online tools into ongoing learning

- Using multiple tools and online information sources throughout the learning process (TailorEd in Math, Et HaDaat, etc.)
- The school participates in an artificial intelligence lab in education
  Routine usage of Leaning Management Platform
- Using Microsoft Teams for management of learning processes, class websites, etc.

Programs that develop independent learners' capabilities

- Multiple research programs for all age groups
- Community Expertise program in the 9th grade

Social-Emotional Learning (SEL)

- Tachlit Program – personal and group coaching led by teachers-coachers in the 7th grade

Nurturing Personal Relations

- Frequent personal meetings between teachers and students
- Pedagogical culture that emphasizes personal relations and tailor-made learning

Insights we have gained along the way:

Things the schools did prior to the crisis which contributed to the success of distance learning

Case study: Yoseftal School, Migdal HaEmek

Technological Accessibility

- The school, led by the municipal department of education, operates a program for providing computers to all students from the 4th grade and up

Integrating online tools into ongoing learning

- Using a variety of tools and online information resources throughout the learning process (such as Et HaDaat, etc.)
- Dominant Telecommunication Coordinator (serves also as vice principal)

Routine usage of Learning Management Platform

- Ongoing work with Microsoft Teams via 'Password for each student'

Programs that develop independent learners' capabilities

- A variety of programs for students' projects

Social-Emotional Learning (SEL)

- Coaching-Pedagogy program: students set weekly goals and objectives and are guided by teachers
- The school participated in a heterogeneous lab and implemented a group-work method

Nurturing Personal Relations

- Homeroom teachers provide personal support to the students through the Coaching-Pedagogy program

Insights we have gained along the way:

Things the schools did prior to the crisis which contributed to the success of distance learning

Case study: Yitzhak Sadeh School, Dimona

Integrating online tools into ongoing learning

- Using a variety of tools and online information resources throughout the learning process

Routine usage of Learning Management Platform

- Ongoing work with Microsoft Teams via 'Password for each student'

Programs that develop independent learners' capabilities

- Project-based research and learning program implemented at school

Social-Emotional Learning (SEL)

- Program for developing students' leadership: setting and meeting personal goals
- The school participated in a psycho-pedagogy lab

Nurturing Personal Relations

- Homeroom teachers act as students' mentors as part of the leadership program
- Pedagogical culture which emphasizes personal relations and tailor-made learning

Part C – **Arenas for Development of Education in the Periphery**

Lessons from the COVID-19 crisis: arenas for development of education in the periphery

The learning, developing child in systematic perception

Online learning as a tool to enhance education in the periphery

Updated Educational Goals:

- Nurturing Independent Learners
- Social-Emotional Learning
- Agency

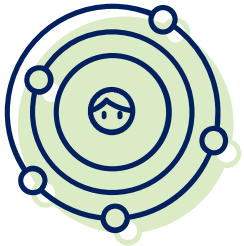
Lessons from the COVID-19 Crisis: Arenas for Development of Education in the Periphery

Updated Educational Goals:

Independent Learners
Social-Emotional Learning

Agency

Online Learning as a Tool to Enhance Education in the Periphery



The Learning, Developing Child in Systematic Perception

The Learning, Developing Child in Systematic Perception

The “Switch” made by effective schools during the COVID-19 crisis was to realize that they do not work only with the students and that they do not only provide knowledge – but **are required to consider the environment surrounding the child and the various factors that affect the child’s ability to learn and develop.**

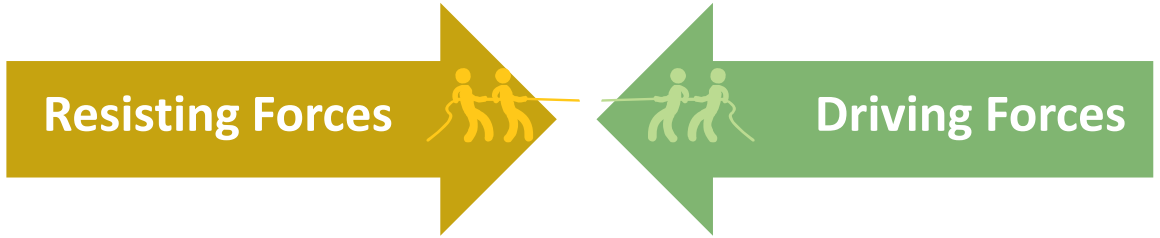
- If the family does not have enough computers for all the siblings to study with - the school’s distance learning schedule should be built accordingly.
- Is there someone at home who can help the child study or not? – It changes the way the school should perceive students’ needs.
- Communication between school and parents, partnership or tension between them will affect the way the students perceive distance learning.

The school does not manage the entire system, but it is part of it and affects it. Systematic perception means that school staff is aware of the complex system, the processes that take place in it and acts accordingly in order to help the students study in a way that will help them to meet their potential.

Systematic Perception:
Two Useful Thinking Tools

SWOT

Forces Analysis



- Use forces against change
- See the disadvantages of change
- Against change

- Use forces in favor of change
- See the advantages of change
- In favor of change

A model developed by Kurt Lewin (1949)

Systematic Perception: Participation & Engagement in Distance Learning – Analysis of Driving & Resisting Forces

	Resisting Forces	Driving Forces
Learning Efficacy	The child struggles with the tasks and gives up. Learning methods are rigid and unadjusted. Curriculum is sent in a “messy”, overwhelming form.	The child is capable of learning independently. The tasks sent by the school are adjusted to the level and learning preferences.
Motivation	Attention & concentration difficulties. Low self esteem Low motivation to study	The child has an internal motivation to learn. Personal relations with the homeroom teacher creates commitment. Learning forms and contents promote participation.
Family	Parents perceive school as a source of pressure. Low expectations regarding learning. Poor ability to assist and mediate.	The parents expect and encourage the child to study. Parents are able to assist and mediate. There is educational discourse amongst family members.
Accessibility	No computer or insufficient number of computers. Crowded house and no working space.	Available computer. Convenient space to work in.

Systematic Perception: Participation & Engagement in Distance Learning – Analysis of Driving & Resisting Forces

- The school may **weaken resisting forces or strengthen driving forces** based on the analysis.
- For example: to provide students with computers in order to solve the accessibility barrier; to adjust contents to the students in order to turn efficacy from a resisting force into a driving force; to create a ‘mothers’ network’ to encourage mothers to support their children’s distance learning, etc.
- The analysis can be based on one child, but the school can also identify main resisting and driving forces for the entire school population, initiate steps that affect a large number of students and come up with solutions for personal needs.
- The analysis might change in accordance with the community, the conditions and the location.
- Usage of the SWOT analysis is similar (not specified here)

Analysis of Driving & Resisting Forces as an Educational Tool
The Goal: Reaching Personal Potential & a Wide Range of Choice Options

At any time, regardless of the COVID-19 crisis:

Resisting Forces

Low Expectations from the Environment

Lack of Opportunities for Personal Growth

Low Motivation

Learning Difficulties or other Disabilities

Energy Spent on other Family Issues

Difficulties in Funding Higher Education

Driving Forces

Familiarity with Inspirational Models

High Motivation to Succeed

Exposure to Enriching Stimuli

Enriching Discourse at Home

Availability of Equipment (computer, books, Science kits, etc.)

Analysis of Driving & Resisting Forces or SWOT as an Educational Tool

How will the School Act? (Outline)

1
Forces Analysis (or SWOT)

2
Identification of Resisting Forces Common in the Community

3
Developing a Plan that Provides Solutions or Creates Opportunities

4
Identification of the Next Resisting Forces & Providing Solutions

5
Identification of Students with Unique Resisting Forces

6
Search of Supportive Solutions

The Learning, Developing Child in Systematic Perception:
Two Important References

Science Capital Dimensions

1. Scientific literacy
2. Science-related attitudes, values and dispositions
3. Knowledge about the transferability of science skills
4. Science media consumption
5. Participation in out of school science learning contexts
6. Family science skills, knowledge and qualifications
7. Knowing people in science-related jobs
8. Talking to others about **science in everyday life**

For Further Reading: https://www.ucl.ac.uk/ioe/departments-and-centres/departments/education-practice-and-society/science-capital-research

Bronfenbrenner Ecological Model

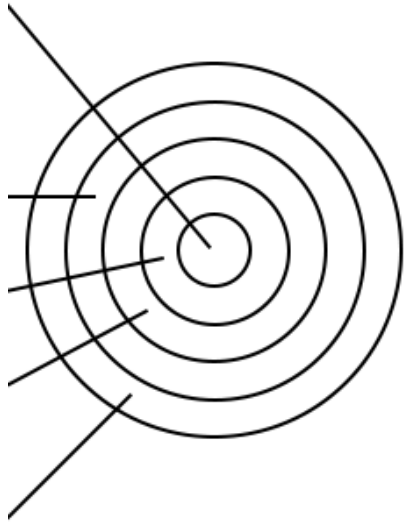
Personal Level: Commitment, motivation, interest, efficiency of Scientific teaching: Content knowledge, pedagogical knowledge and content-pedagogical knowledge, curricular knowledge and personal and professional priorities. Each teacher acts in different environments described by the model. They are divided into different levels of organization around teacher's personality.

Outer-Systematic Level: Parents, community & establishment's aspirations related to the teaching of Science.

The Micro Level: Colleagues' support, external, professional expectations and support from family.

Intermediate Level: Priorities based on Science in School curriculum, School's expectations regarding leadership, School willingness with regards to learning and change, school's decisions, timetable and internal assessment at the school level.

The Macro Level: Shaping the curriculum at the governmental level, priorities related to development of curricula, external assessment processes and salary components



For Further Reading:

https://rsc.yschool.co.il/articles/001700--1943241244.pdf

Important Terms to be Familiar with

When Analyzing an Educational Institution in Systematic Perception

- **Science Capital –** a pedagogical, perceptual approach according to which the exposure to an environment (both physical and virtual) in which scientific and technological literacy is developed, promotes the ability to act and to develop cognition accordingly
- **Social Capital –** The total of none-material resources a person (or a family, or a community) has to create an impact which enables them to obtain goals
- **Symbolic Capital –** The non-material resources (awareness, knowledge, language, social capital, etc.) that play a role in the creation of power and hierarchy

The terms – Science Capital, Social Capital and Symbolic Capital are important in **System Analysis** – The school can assess the community and students' 'capital' as a driving or resisting force (or as strengths, weaknesses, threats or opportunities) and **try to increase the capital through educational tools and plans.**

The Advantages of Online Learning & Distance Learning

As a Tool to Enhance Education in the Periphery

1

a tool to enhance the Science Capital & Symbolic Capital

2

a tool to enhance Self Learning Capabilities

Significant Insights from the COVID-19 Crisis
about Online Learning as a Tool to Enhance Education in the Periphery

- The most important element in Online Learning is **Learners' Motivation**
- Combining Online Learning in Junior-High is more effective **as part of a broader curriculum** (blended learning)
- Online Learning is more effective **where there is a mediator** (teacher, instructor and sometimes parent)
- Online Learning is more effective when it **answers short-term learners' needs** (just in time)

The constraints derived from the Ministry of Health's instructions required the use of a certain model which has changed along the way. This is not a pedagogical model; It's a model that derived from constraints!

If we wish to use online learning as an ongoing educational tool – it's important to create models with pedagogical rationale, and not just to continue using the models

Optional Pedagogical Models of Online Learning

- Reverse Classroom
- Independent Learning in an Adaptive System
- Remote Mentoring
- Elective Studies Center

Optional Pedagogical Models of Online Learning

Reverse Classroom

Independent Learning in an Adaptive System

Remote Mentoring

Elective Studies Center

- Weekly Time Units (2-4 hours)
- Each student selects an online course or a research topic – preferably ongoing
- While using the “center”, the students learn through the computer – each student studies the subject of his/her choice
- Each group of students has a teacher who serves as “remote learning coach” – the teacher knows what the students chose, helps them organize the learning process, helps them find materials, studies along with them in order to serve as “learning partner”, assesses their progress, gives feedback, etc.
- The students are expected to develop a certain product – a presentation, a lesson they’ll teach, demonstrate a skill

Optional Pedagogical Models of Online Learning

Reverse Classroom

Independent Learning in an Adaptive System

Remote Mentoring

Elective Studies Center

- Proposing research processes or field of expertise for students with the help of facilitators-experts
- The facilitators-experts work with a small group of students that may live everywhere in Israel
- The facilitation is around a personal learning objective, field of interest or project the student conducts as part of the mentoring; the learning process may include synchronized meetings, intermediate tasks, etc.
- The meetings will preferably take place during school hours
- The facilitators-experts may be teachers or experts from various fields (Science, business, economy, social entrepreneurship, arts, sports, etc.)
- The main value: the student will get a chance to work with people who are successful in their fields, to learn from them, to conduct a project under their guidance and to be inspired by them. The highest value is for weaker populations.

Optional Pedagogical Models of Online Learning

Reverse Classroom

Independent Learning in an Adaptive System

Remote Mentoring

Elective Studies Center

- The students work independently on learning systems which adjust themselves to the students (at least in terms of level)
- The systems are based on learning which combines game elements
- The systems can be used during school hours or after
- The systems will preferably be used during school hours, so that the subject teachers will be able to assess the students and provide some support.
- These systems have proven themselves as efficient with regards to rapid progress especially in relation to skills in core subjects (math, basic language skills, English, and to some extent – Science)
- The advantage – progress according to individual pace
- **The disadvantage: Almost no such systems in Hebrew**

Optional Pedagogical Models of Online Learning

Reverse Classroom

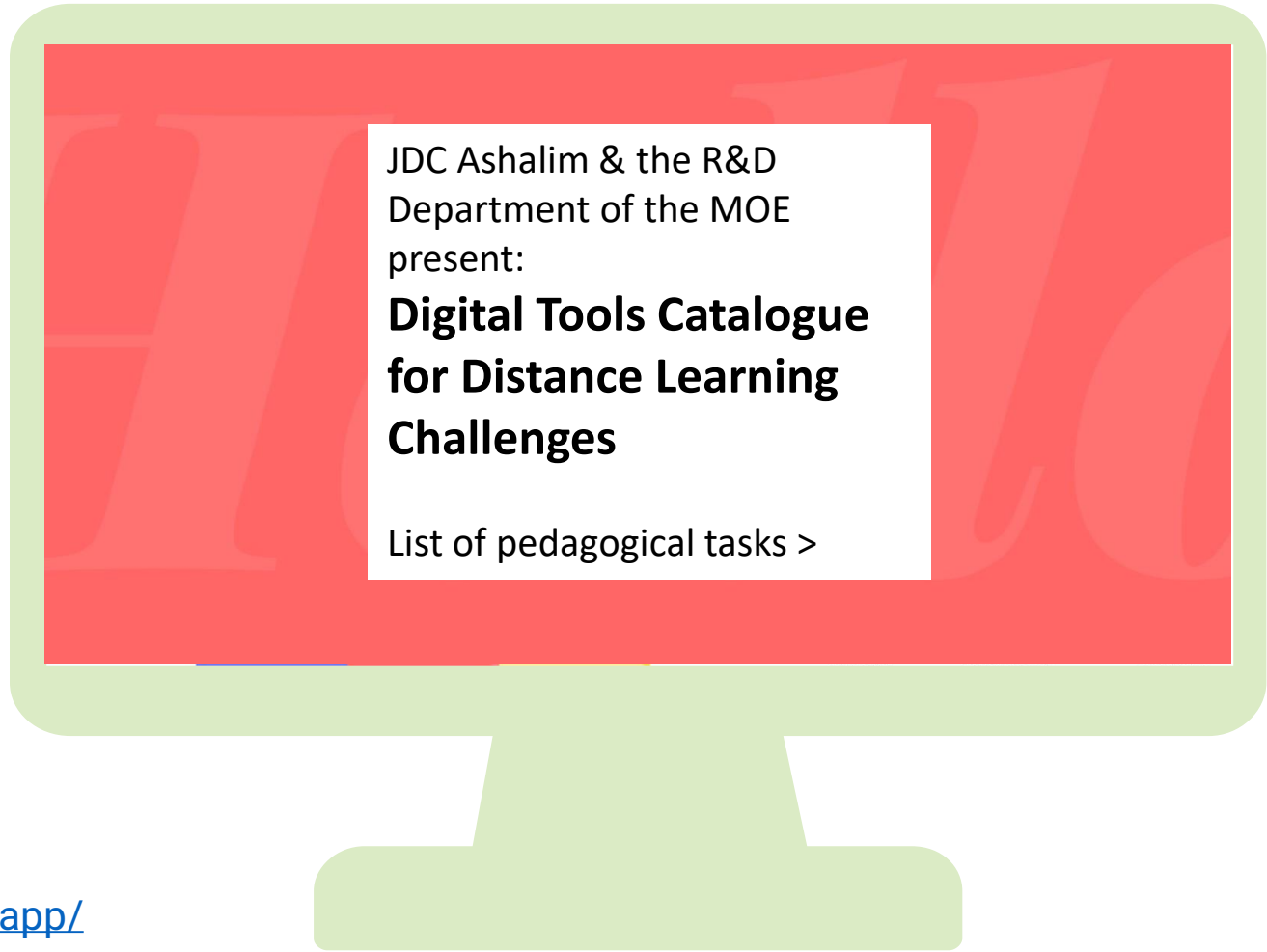
Independent Learning in an Adaptive System

Remote Mentoring

Elective Studies Center

- Prior to the lesson, the teacher provides the students with a learning resource which presents the main body of knowledge (a video, educational software, text)
- In addition, a short task is given in order to assess understanding
- The teacher provides short explanation in the beginning of the lesson
- Most of the lesson is devoted to a thorough discussion or practice

The Technogogoya Website:
Online Tools according to Pedagogical Challenges



https://technogogoya.ussl.app/

Updating & Clarification of Educational Goals

The distance learning period was full of constraints which required the establishment of different models and teaching and learning formats.

Nevertheless, during this period of time, students' resilience, functioning and independence were tested.

Based on the parents survey's results, the interviews and other sources of information – the students' experience, motivation to learn, independent learning ability, etc. were undermined during this time.

Thus, we would like to emphasize several educational goals that should be promoted and developed, with an emphasis on the periphery, not only as a preparation for a similar period of time, but also as valid educational goals at any time:

Agency

Social-Emotional Learning

Nurturing an Independent Learner

Updating & Clarification of Educational Goals: Nurturing an Independent Learner

- **Independent Learner:** a person who conducts a personal process designated to expand his/her knowledge and skills
- In order to nurture independent learners, **inner motivation for learning, learning skills and self organization** should be enhanced.
- Pedagogical practices which aspire to develop independent learners include project/problem-based learning, research, mediation for independent learning, development of fields of interests, etc.
- Schools that operated significant programs which aspire to develop independent learners managed to gain greater educational and developmental value during the COVID-19 crisis and to bring about greater students' engagement.

Updating & Clarification of Educational Goals: Social-Emotional Learning (SEL)

- **Social-Emotional Learning:** Explicit learning of tools which help people regulate emotions, act in social situations, deal with stressful situations, etc.
- For example: Coaching programs, leadership, values, tools for emotional coping, etc.
- One significant aspect of Social-Emotional Learning: Deepens the relations between students and teachers who become more significant for the students at the personal level.
- Social-Emotional Learning is valuable on its own and helps the students develop resilience but it also has a positive influential potential in terms of learning and adjustment.

Updating & Clarification of Educational Goals: Agency

- **Agency:** A proactive personal approach, taking responsibility for myself and the environment and a desire to make an impact
- Nurturing Agency as a personal trait relies on:
  - Challenge & getting out of one's comfort zone
  - Responsibility
  - The "Challengers" program
  - Reflection
  - Group
  - Supportive tools & skills
  - Learning environment which promotes choice, expression & influence

The document was written by Dr. Eran Barak-Medina & Orly Hazor for Joint-Ashalim, R&D, Experimentation & Entrepreneurship Department and the Primary Education Division in the Ministry of Education. The document was written with the help of the following: Michal Ettinger, Sarit Mezer, Nir Pal, Itay Opzaher (Joint-Ashalim), Rivka Grossman (R&D, Experimentation & Entrepreneurship Department), Etti Sassi (Head of Primary Education Division), Dorit Lahyani, Miriam Perry (Primary Education Division), Dassi Beeri (Head of Post-Primary Education Division), Havatzelet Lottan (Head of junior high schools - Post-Primary Education Division), Tomer Marshall. The staff and families participating in the Noshmim Lirvacha program of Otzma center and the staff and families participating in Bashvil HaMeitiv program of the Ministry of Labor, Social Affairs & Social Services contributed and helped.

In cooperation with the following schools: Amit Kennedy Acco High School (headed by Eti Zabari), Yesodi Gimel – Bi'ina (headed by Shadia Badran), Yigal Alon – Migdal HaEmek (headed by Einat Vaknin with the participation of Yafa Lazimi & Marina Glilov, Yoseftal – Migdal HaEmek (headed by Rinat Zamir with the participation of Amit, Yishay & Vered Ziv), Yeshurun Girls' High School – Petah Tiqwa (headed by Yaniv Cohen and with the participation of Eti Shamir & Rachel Malka), Eben Sna – Arraba (headed by Hitam Alian), Al Zahara - Arraba (headed by Abdallah Assalah), Eben Sna – Arara BaNegev (headed by Saliman Abu Gviad), Yitzhak Sadeh – Dimona (headed by Mina Ashtmaker, with the participation of Aliza Amichai), Begin – Dimona (headed by Reut Feldberg with the participation of Adi Levi), Arlozorov – Haifa (headed by Chani Savyon, with the participation of Hadas Naim), Abu Shahab High School – Shefaram (headed by Walid Hatib, with the participation of Samach Halila & Mirwat Zaharan), Makif He - Darca High School – Ashkelon (headed by Dalia Rahamim, with the participation of Anat Dabush & Orna Sulimani), Madai Technologi – Pisgat Zeev (headed by Tzvia Livshevski), Noam Banim Religious School– Pisgat Zeev (headed by Avishay Frientz).

Design: Studio Oso Bayo