Innovation & Entrepreneurship
Lessons for Maharashtra from Israel’s Education System

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Editors
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“Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model.”

Dr. A. P. J. Abdul Kalam
The foundations of a country’s future are only as strong as the investment made in its youth.

Education has always played a central role in Jewish culture. This principle was embraced and incorporated in the establishment of the State of Israel where educators played a major role in formalising the new culture and society. We dealt with major challenges of children from different backgrounds and cultures, different socio-economic levels.

It was understood already then, that in a country like Israel, the lack of natural resources must be supplemented by innovative and creative approaches to education of the young generations. Our school education system played an important role in shaping the generation that realised the dream of State of Israel.

Israel earned global recognition for its agricultural development shortly after its independence, which was not less than a miracle but that was not enough. Continuous wars and terrorist campaigns waged against our country, in addition to immigration manifolds the size of its population, put severe pressure on its economy and the sustainability to continue as a state. After the oil crisis of 1973, inflation in Israel started creeping up. It reached 400% in 1985 causing near zero growth, high unemployment, depleting foreign reserves and a looming threat of outbound immigration.

That was the time when our government decided to take a leap from agriculture to hi-tech. It was an endeavour aimed at getting recognition for our scientists, innovators and highly skilled technicians. The government liberalised the economy and undertook several reforms. Reforming our education system and the government’s priorities was at the heart of those reforms and many leading educational institutions and successful experiments have been initiated since then.
Due to the relatively small size and centralised education system in Israel, we have been able to continue adapting and altering the system throughout the years at a fairly rapid pace.

In response to a rapidly changing world and in order to enable the education system to give the pupils the right tools and capabilities to deal with the challenges we are facing, we have realised that we must seek educational approaches that are “outside-the-box”.

We strive today to create a generation of students that ask “why?” and query what they are told, a system that enables students to be creative in all fields of life, to initiate and lead, to bring out the best in each pupil.

Despite the differences in size there are similarities between India and Israel: thousands of years of oral and written traditions, cultures respecting scholarship, like the Sanskrit verse which says that comparison cannot be made between a King and a scholar. While a king is worshiped in his own country, a scholar is worshipped everywhere. Many of prominent freedom fighters and social reformers in India were also educationists.

The challenges faced by both the countries are enormous and similar: food, water, energy security, providing employment and social opportunity. A modern and invigorating education of our young generation is the key to finding solutions to these challenges.

This compilation is an excellent reference that showcases how Israel strives towards innovation and entrepreneurship.

We remain committed to seeking ways to cooperate with India, learn from each other for the benefit of the future of our two countries. The foundations of a country’s future are only as strong as the investment made in its youth.

12 June 2014
Foreword

Israel: a powerhouse in technological innovation and entrepreneurship

Geographically, India’s area is about 158 times that of Israel and her population is around 162 times that of Israel (8 million – that is, less than half of Mumbai’s). Yet, this small yet fascinating country has more accomplishments to its credit than many developed countries and has become an object of admiration for the world, including many Indians. To give you an idea of where Israel stands in the world, here are a few facts.

As many as eight Israelis have won Nobel Prizes in the past 12 years alone. Israel has more Nobel Prizes per capita than the United States, France and Germany. It has more laureates, in real numbers, than India and China. Israel produces more PhDs in a year than all Muslim countries in the world combined. Interestingly, women receive more doctorates than men, in Israel.

The country also is a hub for many innovative start-up companies and has come to be known as a “Start-up Nation”, which was indeed the title of a global bestseller (in 2011) authored by Dan Senor and Saul Singer. Israeli companies account for the third largest number of listings on New York’s tech-heavy NASDAQ stock exchange, after the United States and China. Many of the world’s technology giants – including Google, Apple, Hewlett-Packard and Intel – have R&D centres in Israel.

All these commendable achievements are owing to Israel’s school education system. It would have been unattainable to achieve what Israel has, if it had not been for her robust foundation in school education. Many of the facets of Israel’s school education system has aptly been described in my colleague, Aparna Sivakumar’s report titled, ‘THINKING OUT-OF-THE-BOX – What India can learn from Israel’. 

Sudheendra Kulkarni
Chairman,
Observer Research Foundation Mumbai
This was also the subject of a programme (Innovation and Entrepreneurship: Lessons for Maharashtra from Israel’s Education System) that ORF Mumbai and the Israeli Consulate in Mumbai jointly organised at Sathaye College, Vile Parle, on April 28, 2014. Apart from Aparna, there were three other speakers – Prof. Kavita Rege, Principal of Sathaye College; Ms. Suchita Deshpande, Editor of the education section in ‘Loksatta’ newspaper; and Ms. Gayatri Gadgil, Head of the Department of English at D.G. Ruparel College. Like Aparna, all three have recently visited Israel to study its school education system under the MASHAV programme. (Mashav is the Hebrew acronym for Israel’s Agency for International Development Cooperation). All the four presentations were so engrossing that Dr. Hemchandra Pradhan, eminent educationist and former Director of the Homi Bhabha Centre for Science Education, who chaired the programme, aptly described it as a “mehfil” (a concert of classical music). Dr. Pradhan’s own scholarly speech was like the “crescendo of the concert”.

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How Israel educates itself

In a nutshell, Israel’s achievement in being a powerhouse in technological innovation and entrepreneurship can be attributed to five major factors. Israel’s school education system lays the strong foundation for this and scores top marks on the following five counts:

1) It lays a strong emphasis on patriotism. One must acknowledge that a lot of effort has been directed to mobilising the patriotic energy of its people for achieving major successes in technology and development.

2) Unlike India, which has placed rote learning on a high pedestal, Israel believes in the principle of ‘Learning by Doing’. Failure in the course of doing is not stigmatised. Rather, it is viewed as a necessary step towards self-correction and improvement.

3) Unlike India, where students are discouraged from posing questions to teachers and elders, Israel’s school education system actively encourages children to develop a questioning attitude, which sharpens their ability to think independently.

4) Israel empowers its teachers to be innovative and to take initiative. Only 75% of the curriculum is decided by the government. The remaining 25% is left to the teachers and the school concerned in experimental schools. This enables teachers to design one-fourth of the curriculum based on their own innovative ideas, local needs and conditions, and suggestions made by the community, parents and students themselves. This flexibility encourages students to experiment and to develop problem-solving skills. Sadly in India, both teachers and students have very little freedom to go beyond text books, which are often outdated and not always written in the most creative ways.

5) Israel fosters very close ties between the school and the community. In Israel, the school goes to society, and society goes to the school. Here, society means agriculture, industries, military, universities, research institutions, museums, and so on. Because of this practical encounter with real-life problems at a young age, children do not enter an unfamiliar world
when they grow up. They are already prepared to take up life’s challenges with self-confidence and professional expertise.

What can the world learn from India in school education?

Much of what Israel is doing in school education rests on the principles that Mahatma Gandhi had enshrined in his Nayi Taleem or Buniyaadi Taleem (New Education or Basic Education) system. Gandhiji insisted that learning anything worthwhile in life must begin with doing. ‘Learning by Doing’ fosters awareness about dignity of labour, develops social responsibility, and also quickens cognitive and emotional abilities. Hence, he had conceptualised a system of education that called for a harmonious development of the powers of three ‘H’s – Hand, Heart and Head.

While it is heartening to see that Israel is implementing a system of school education based on Gandhian principles, it’s sad that we Indians seem to have forgotten him. There is an urgent need to rediscover and re-introduce Mahatma Gandhi in our education system.

ORF Mumbai’s initiative Change Agents for School Education and Research (CASER) is a step in that direction. It is a broad-based platform which aims to bring together passionate educationists, educators and teachers, education researchers, representatives from the Government, volunteers, parents, civil society organisations, technologists and service providers to connect excellence, strengthen the school education system and make it more holistic for millions of children, irrespective of their background.

I appeal to all those who are concerned about the state of school education in India to help strengthen this platform. It is only when like-minded people and organisations work together and also when we work closely with the government, that we can reform the education system in our country and ensure that every single child in India gets quality education.

Towards the end, it can be said that a lot of great work is happening in the area of school education in India as well. There are many inspiring change agents and many success stories. We should showcase these positive stories and bring them to the attention of the Indian people and government agencies. Israel undeniably offers to India, many useful lessons in our attempts to build a knowledge society.

I commend Prof. Kavita Rege, Ms. Suchita Deshpande and Ms. Gayatri Gadgil for sharing their wonderful experience in Israel with us. I would also like to acknowledge Aparna Sivakumar’s efforts in compiling and editing this well-woven report.

Your critical comments on the report are most welcome.

12 June 2014
Israel – A Study Tour

Israel is a very small country with a great history and is called the Holy Land. It is the birthplace of three major religions (Judaism, Islam and Christianity) which have major presence all over the world. It is a really a small country area-wise, just 22,145 sq. kilometres, but with a history of over 5,000 years which is well preserved, documented, and monumental. That is the reason why Jerusalem has a very special place in the hearts of millions of people worldwide.

I visited Israel as a student of the ‘A. Ofri International Organisation’ which was conducting a course in “Innovation and Entrepreneurship in the Education System” between 10th March to 3rd April 2014. We were a little apprehensive about the kind of stay we could expect in a country that has to be constantly prepared for war – the fact that attack from any neighbour is possible at any point in time and that everyday life could be stressful! Our worries were dispelled when we met our very pleasant and cordial co-ordinator, Ariel Cegla. We were a group of 22 people from 11 different countries, a great mix of teachers, principals, education researchers and government advisers attending the seminar. We were housed in a kibbutz1 hotel called Ramat Rachel on the outskirts of Jerusalem city.

1 The kibbutz (Hebrew word for “communal settlement”) is a unique rural community; a society dedicated to mutual aid and social justice; a socioeconomic system based on the principle of joint ownership of property, equality and cooperation of production, consumption and education; the fulfilment of the idea “from each according to his ability, to each according to his needs”; a home for those who have chosen it.. Read more at https://www.jewishvirtuallibrary.org/jsource/Society_Culture/kibbutz.html
Our first address by Ariel started with a very provocative statement of Heidi Hayes Jacobs, “We have students of the 21st century, studying the 20th century curricula in schools of the 19th century”. With this, he emphasised the importance of equity, quality and access to education and stressed that a paradigm shift is vitally needed if we wish to make education meaningful to the stakeholders.

We also got insights into mind-set of the Israeli society, the way Israel was born in 1948 and the enormous progress it has made in the last 65 years and how within 12 years of its birth, it was competing to be a developed country with Europe and America. Israel is a welfare state having 80% of population as middle class. Several innovations in agricultural technology helped Israel to become a developed country. Technological innovations, tourism, diamond cutting and polishing and manufacture of sophisticated defence equipment have been keeping Israel in the forefront of economy. Israel Parliament has 120 members coming from two major and a few minor political parties. Elections are held every four years. Israel surprisingly does not have a written Constitution, though! Her population is more than 8 million of which approximately 75% are Jews, 21% are Arabs and 4% is comprised of others. The official languages spoken are Hebrew, Arabic and English.

**Education is compulsory. If parents do not send their children to school, they are liable to be punished.** Every Israeli citizen, with the birth of a baby, is extended financial help by the Government – this assistance is continued till the child completes school education.

The statistics of 2012-13 show the enrolment at schools as below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Age</th>
<th>Enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-primary</td>
<td>Age 03 - 05 years</td>
<td>427,192</td>
</tr>
<tr>
<td>Primary</td>
<td>Age 06 - 11 years</td>
<td>931,970</td>
</tr>
<tr>
<td>Lower Secondary</td>
<td>Age 12 - 14 years</td>
<td>273,720</td>
</tr>
<tr>
<td>Higher Secondary</td>
<td>Age 14 - 17 years</td>
<td>383,619</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2,016,501</td>
</tr>
</tbody>
</table>

The schools are funded by the Government but students have to pay fees to the extent of $600 per year. However, the fees may be higher for experimental schools, and exemption in school fees is granted to the very poor. Many schools have a large area that provides open space for sports and other activities. Uniform appeared to be optional in most schools we visited.

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2 The concept of ‘experimental’ schools is elaborated in the coming pages of the article - they are given freedom to choose 25% of the curriculum as per their choice.
The teachers are employed through the Education Department with the final choice resting with authorities of the respective school where the teacher is hired. Teachers spend about 36-38 hours per week on school premises, of which, 23 hours are devoted to actual teaching, the rest being used for lecture preparation, giving extra coaching to students in need of additional assistance, preparation for examination, projects, assessment, etc. The teacher to student ratio is approximately 1:35.

The focus is more on **project-based learning, assignments and continuous evaluation.** The school curriculum is planned by the Government but progressive or experimental schools are given freedom to choose 25% of the curriculum as per their choice. Depending on the needs of society, expertise, interest and willingness of teachers and the Principal, new courses and curriculum are drawn up and implemented. This freedom empowers the teachers and Principals to enjoy partial autonomy. This kind of specialised training makes the process of learning more attractive and enjoyable to students as well.

Teachers are expected to constantly upgrade their knowledge. PISGA\(^3\) Centre is responsible for professional development of the teachers and there are 59 such PISGA centres all over Israel. Teachers when selected, have to undergo 75 hours of training in teaching methodology for two years. Once they become permanent, they need to keep upgrading their knowledge by learning at a PISGA centre, a minimum of 60 hours per year – they do so between 4 pm to 7 pm, on convenient days, so that it does not interfere with school hours. The 60 hours are typically split as 30 hours in their own field and 30 hours in general areas of professional development. They need to learn integration of ICT in their regular teaching. After completion of 3 years of such 60 hours of professional development courses every year, they receive a new degree and a raise in salary. Up to the 6\(^{th}\) degree, a teacher is attached to the PISGA Centre and thereafter, a teacher can complete further 3 degrees in a university. A teacher is trained and evaluated by evaluators of the Government for proficiency in ICT skills, leadership quality, communication skills, self-learning, entrepreneurship, and interpersonal skills. Professional development of teachers is carefully monitored and deserving teachers are well rewarded.

The dropout rate of students is closely monitored. About 93% of students complete high school education and are ready to go to university through entrance examinations.

Conscription is mandatory for all Israeli youth (although exempt for a few, like non-Druze Arab citizens of Israel) – after completing 18 years of age, girls for 2 years and boys for 3 years have to compulsorily serve in the military. Depending on their calibre and aptitude, they are absorbed in the army for combat training, social work, teaching, health service or any other service. Students are made aware of human rights and no violation of these rights is permitted. Majority of students commence their university education after their stint in the army so the students pursuing higher education, typically have a higher degree of maturity, having already been exposed to a variety of challenging situations which demand a lot of life-skills. Their school education, which is based on critical thinking, makes them capable of handling

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\(^3\) PISGA - 2003 saw the establishment of PISGA centers designed to provide instruction for practicing teachers, PISGA in Hebrew signifying mountain top or peak.
difficult situations at an early age. There are seven public universities and a few open universities. 70% of the colleges are public and the rest are private. Fees are regulated by the Government.

**Professional Inputs**

Talking about the paradigm shift in the education system, we need to move towards a more tangible, result-oriented, multidimensional and inclusive system which allows students to think out-of-the-box, to communicate, be flexible and also enables them to face challenges.

**Experimental Schools**

Israel is considered to be a start-up nation, but the path has not been extremely smooth for them. 70% of small- and medium-scale businesses have closed down in the last five years. Just in 2012, more than 12,000 businesses closed down. So 50% of youth prefer the ‘security’ of a service job and are not keen to get into business ventures. The education experts and Israel government decided that they need to address this challenge at the grass-root level itself, right in their education system, by cultivating innovation and entrepreneurial skills in young children, the future of the nation. As children are naturally inquisitive and creative, teachers only need to foster these traits and guide and encourage them towards entrepreneurship. Thus was born the concept of experimental schools. Over the years, many education experts and entrepreneurs have helped evolve this new system. We were fortunate to have some of these experts as resource persons for our course and we were enriched by their inputs.

Dr Shahaf Gal, Director of Education - Experimentation and Innovation, elaborated on the concrete measures taken by the Government. Interested schools are asked to send proposals detailing the changes they wish to bring about in their curriculum to the government. They were clear that the school teachers and principals should be passionate about the new idea, as there will be difficulties while implementing them. Once the proposal is submitted, a Government Committee goes through the proposals for academic scrutiny. Thereafter, the selected school is accepted for a one-year trial which is subsequently increased to 3 or 5 years, based on performance and impact. The progress is closely monitored and generally 2-3 creative ideas are promoted. If found successful, the school is granted some additional financial aid as a recognition of their good work. Dr Shahaf Gal illustrated concept of experimental schools by comparing them to the flower, ‘Savion’ (Senecio) which disseminates its seeds with the wind – instead of seeds, these schools spread their novel ideas and in the process, help many other schools and students to identity and
nurture talent of young, creative minds. He mentioned that over 100,000 students, 15,000 teachers and 1,000 school principals in 600 schools across 25 cities are currently participating in this programme.

Entrepreneurship in Education

“To inculcate entrepreneurial skills, to become an Entrepreneurship Educator, one has to have special skills”, said Ms. Galit Zamler. She, in her very engaging manner, expounded on the skills required of an entrepreneur. An entrepreneur who has to turn an idea or dream into reality requires skills such as leadership, ability to take decisions, determination, persistence, creativity, self-motivation, communication skills, high self-esteem, desire to learn and grow, focused efforts, risk-taking ability and listening skills.

According to her, we tend not to stretch our limits, though our capabilities are much more. Quite often we do not even realise our full potential. We fall prey to peer pressure and do not wish to go against it. She emphasised that we should maintain our individuality and that going against group or peer pressure makes us stronger. According to her, one should be a part of the group but reserve an independent opinion. Importance of team work cannot be overemphasised. While choosing other entrepreneur partners, care must be taken to ensure that each member brings in a different entrepreneurial skill so that skills of partners complement each other. Appreciation of other members is vitally important for the entrepreneurial venture to be successful. She further explained that entrepreneurship can be cultivated at a very young age, i.e., at 10-12 years of age, if the child is properly guided. The seeds of innovation have to be sown at an early age so that the children are made strong to accept challenges, failures and still have the tenacity to put in hard work on the road to success.

Dr. Ms. Shulamit Fisher from the Ministry of Education, Israel, spoke about sharing of ideas and inspiring teachers to give their best to their vocation. She underlined the fact that for change to happen, the real need for change should be felt and various ideas for experimentation in school education have to be pooled in. These ideas can then be shared and improved upon.
The cycle of innovation goes through various processes such as defining vision and the real need for change, collaboration, information collection, outlining measurable and specific goals, analysing outcomes, identifying the areas that need improvement and reworking on them through team effort. The school education should prepare students’ mind-set for such challenges. She also explained the idea of ‘Twinning schools’ where teachers spend time in another school (the twin) taking classes and students also have the opportunity to learn in a new environment.

Ms. Yoel Sade of the Ministry of Education enumerated seven principles of creative educational entrepreneurship as:

- Every successful entrepreneurial venture has an implicit educational principle;
- Human problem is an opportunity to invent new pedagogy;
- Good education is the basis for entrepreneurship;
- Experiencing ambiguity is learning opportunity;
- Any initiative has a context and it has to be executed and proven in different places;
- Every initiative has a character and ambience of its own;
- One’s own educational principle.

She further said that aim of education should be to make students empathetic, sensitive, curious, happy, observant, analytical, and involved citizens of this world.

Dr Gila Yakov and Gili Pinchassi of “Mifras” Educational Entrepreneurship Incubator, spoke about creation of a harmonious environment for entrepreneurship. They defined the qualities of an entrepreneur – he has to chase opportunities, must have passion to define goals and execute, must be proactive and a team builder, must be optimistic and open to new ideas, be ready to experiment and avoid being judgemental.

We were encouraged to identify our problems, find solutions to them and generate support from colleagues and stakeholders. They emphasised that a person’s passion can be the driving force. Pushing the boundaries should be the motto of an entrepreneur. To discover self, one must start dreaming, adapting, innovating and being creative in the process.

Ms Diti Virdi spoke about volunteering. She explained in detail how to identity, recruit, train the volunteers and guide them to become motivated about the cause. Mr Zvi Liraz discussed about the development of educational leaders. He talked about project-based learning, being student-centric and illustrated with examples on how a conducive and encouraging environment nurtures entrepreneurship and risk taking ability. He also underscored the importance of sustainable development.

All these professional inputs were topped by the lecture by Mr Lior Shoam of Barry Katz Ltd who talked to us about making an effective presentation. He was impressively eloquent in his delivery. He told us to understand what the audience wants, what message you want them to

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4 Barry Katz Ltd ([http://www.katzu.com/](http://www.katzu.com/)), Israel’s leading professional communication training and services company.
carry home and how to make an effective presentation and use of body language. Eye contact, pauses, smile, voice modulation and taking a power pose make the speech effective, he said. He also said that ICT helps make presentations better but that is not the one and only way.

In short, the inputs by professionals were so well organised and so generous that we felt overwhelmed. It was indeed a very enriching experience. Beyond this, we were asked to make presentations, create mind-maps, write articles and engage in group activities which made this learning experience even more well-rounded and enjoyable. It was definitely hard work, but there was also a lot of learning and global interaction, which made everything completely worthwhile.

**School Visits**

We visited experimental schools during our course. They had 25% of curriculum specific to some special activity such as science experimentation, music, environment, vocational courses, entrepreneurship development, public speaking, military education, etc. These schools had people from the industry giving their time, expertise and helping students in their projects.

**Ein Karem School** had an expert in essential oils who guided students to extract essential oil from aromatic plants and convert them into useful products like soaps, creams, massage bars etc. It was almost like an industry. Students were taking up social service projects as well. School projects comprised of conflict resolution, mediation, understanding cultures, communication skills, etc.

**Yadlin Elementary School** specialised in innovative science projects. Students were trying to develop high protein food from seaweed, studying growth of different plants in different environments, in some projects combining science and astronomy with art. These innovations
were well supported by school authorities and students confidently presented their ideas. The school was also educating children about their rights as per U.N. Convention.

Kaplan School had a Walt Disney theme – “If you can dream something, you can do it” was the tagline and Mickey Mouse, their mascot. The school had identified the traits essential for an entrepreneur and was inculcating those in 5th and 6th grade students. Children were being exposed to business and social entrepreneurship – they would visit companies, hospitals, courts, offices and observe the working; they were taught to identify needs, problems and also find solutions.

Huberman\textsuperscript{5} Elementary School, as the name suggests is dedicated to music. Here public speaking and music is given a lot of importance. Students learn all kinds of musical instruments as per their choice and interest. A professional singer and her assistants help students nurture talent and exhibit the same, sharing stage with them. Also, they are encouraged to do public speaking from their in-house radio station, writing blogs, making websites, talking impromptu from a podium as if in Hyde Park, London, discuss and debate issues relevant to their lifestyle (like whether only branded goods should be used – pros and cons of it). It was quite interesting to see students putting across their views in a matured manner.

\textsuperscript{5} Bronislaw Huberman (1882-1947) was a Jewish Polish violinist. He founded the Israel Philharmonic Orchestra in 1936.
**Kadoorie Multicultural School** has a huge campus. This multicultural school, in true sense of its name, teaches a variety of subjects from hard-core science to mechanics, robotics, biology, to farming and agriculture, tending a sheep yard or cowshed, running a film studio, arts, photo-shop and even military training. They also have created a Visitor Centre pertaining to historical events. There was a very nice memorial for dead soldiers who were alumni of the school. It is an inclusive school taking in children with special needs as well, with a very active Parent-Teachers-Association and enthusiastic teachers.

**Mordey Hagetaot School** had theme as Leadership, Entrepreneurship and Business Management. They teach students to identify business opportunities, run small business ventures, nurture and incubate business ideas. They believe in the butterfly effect - *that a flutter of a butterfly’s wings on one side of the world can cause a storm on the other side.* They imbibe in students the importance of ethics, morals, power to influence the world, citizens’ rights, comparative justice, etc and help them develop analytical mind so that they acquire the qualities essential to become global entrepreneur. Experts like Galit Zamler guide the students here. She helps provide a conducive atmosphere for entrepreneurship by encouraging students in innovative business plans.

**Afek Experimental School** is dedicated to sustainable development. Students were seen taking care of animals, birds, harvesting rainwater, studying weather from their weather station and creating an artificial pond to study life cycles of aquatic creatures. This school makes students understand their social responsibility, teaches them to excel in their chosen field, to have focus on goals and progress in life with values, respect and an inclusive mindset. Their motto was “Think Global, Act Local’.

The 25 days experience in Israel was a life time experience. It made us look at education through a new perspective and reinforce the belief that ‘**Children are our future and we must invest in their education**’.
प्रयोगशीलतेतून विकास पावलेला देश - इस्रायल

प्रयोगशीलतेतून आणि सामाजिक योगदानाद्वारे राष्ट्राचा विकास करताना आहे. याचे इस्रायल ते उत्तम उदाहरण आहे. आगामी काळ शिक्षण, गुणांगूणी आणि सामाजिक विकास असणाऱ्या अर्थात इस्रायल हे उत्तम उदाहरण आहे. नवीनता व विकासाच्या अर्थात सामाजिक सुधाराच्या लागत्यात विकासाच्या प्राथमिक कार्यानि आहेत. त्यामुळे इस्रायल हे उत्तम उदाहरण आहे.

25 दिवसांच्या विविधता एखाद्या रास्त्याविषयी, तिथिला सामाजिक विविधता विकास करताना असणाऱ्यांना हक्क दाखवून दिला जातो. मात्र, गेल्या 25 दिवसांत आलेल्या अनुभवाला आणि तिथिला वाकरातून समाजाच्या विविधत्वाची प्रमुखता नजरसोप असताना, ते मांडण्याचा प्रयत्न करतात.

एक लहानसा देश... ज्याच्या सीमा रंगामाळीने नेहमी अस्तित्वाच्या असताना... हा देश इस्रायलची की... याची दक्षिणेकडून उत्तरेकडून तीन माहीत नावे गडांनी सहा ते आढ़त तस्तांत पोहोचता येते. आणि पूर्वेकडून पश्चिमेकडून टोकरात दोकांकडून दिच्या दक्षिणेकडून तीन माहीत नावे गडांनी सहा ते आढ़त तस्तांत पोहोचता येते.

हां, देश इस्रायल... जितका समजून द्वारा, तितका प्रेमात पडवून असताना हा देश. इस्रायलची आपल्यांच्या विचारांमध्ये वैश्विकताच्या अवसराची माहिती आढ़त तस्तांत पोहोचता येते. आपल्यांच्या विचारांमध्ये वैश्विकताची माहिती आढ़त तस्तांत पोहोचता येते.

हा देश इस्रायल... पहाटे तीन माहीत नावे गडांनी सहा ते आढ़त तस्तांत पोहोचता येते. आपल्यांच्या विचारांमध्ये वैश्विकताची माहिती आढ़त तस्तांत पोहोचता येते. आपल्यांच्या विचारांमध्ये वैश्विकताची माहिती आढ़त तस्तांत पोहोचता येते.
कुत्र्याच्या छत्रीसारखे उगवलेले आहे. त्याला शॉदपांग दिवसांत रस्त्यात टाइमपास करतो. इस्रायलमध्ये झोपडपट्टी आहे. त्यामध्ये लहान मुलांचे भीक मागतात. इतकांच्या प्रदशिण दिलां जातात. त्यांतरच्या काळावधीत वेगवेगळ्या दवषयांवर अथवा प्रकल्पांमध्ये काम करतात. सैन्य प्रदशिणामुळे दृष्टकोण इस्रायलमध्ये अिुषांगात दमळणारे सारे अदधकार त्यांच्याच्या आहेत. अदलयाचा अथवा कदमांग व्यक्तीला गळत्याच दमळू शकतात. इस्रायलमध्ये जन्मलेल्या व्यक्तींसारखेच त्यांच्याचे गळत्याचे आहेत. त्यांच्यातून तसेच सुर्वीत्वाच्या मुळ्यातून त्यांच्याचे आहेत. ज्युडाइझम हा व्यवसायातून पुरुषांच्या तीन वषांच्या आदण मुलींच्याचे तीन वषांसह सैन्य दशिण सकतीचे आहे. मात्र, अरब दवद्यार्थयांच्या वयाच्या तक्केच्या ज्यु आहेत. वयाच्या प्रमाणात ज्यू धमीय, भारतांतर त्याचा आदण दत्तकव्यात होतात. याचे विविध प्रयोग या त्यांत होतात. आदण उद्योजकतेचा प्रत्येक तश्शेच्या के लेला समावेश. दकत्येक क्षेत्रातून क्षेत्रातून क्रमेकी क्षेत्रातून तफ्फ़ाल आहेत. पैलू पाडणे या व्यवसायांमध्ये इस्रायलचे स्थान अव्वल आहे. ज्यू सुरदितता पैलू पाडण्याचे व्यवसाय सुरदितता आहे.
शाबाध्या दिवशी (शनिवार – त्याचा पवित्र दिवस – ज्या दिवशी सार्वजनिक सूटी असते) सारं कुठले एकत्र येत आणि मजेत दिवस एकमेकासोबत व्यतीत करत, ही त्याची सूटीची आणि मजेची कल्पना असते.

इस्रायली लोकशाही आपल्याशी नात सांगणारी. त्याची संसद 920 सदस्यांची आहे. गेल्या 66 वर्षांच्या इस्रायलमध्ये एकदमाची कोणत्या एका पश्चात पूर्ण ब्रह्मत मिळाल नाही. भारताने मागणाऱ्या जिथे आपल्याचे सरकारी पत्रांना आहे. इस्रायलमध्ये मिळाल्या दर 4 वर्षांनी होतात. राष्ट्रपतीराहीत होतात. नाममात्र सरकार आणि मजेची कल्पना असते.

इस्रायल हा ज्याचा राज्याचा व्यावसायिक शाळा आहे, ज्यासाठी 120 लोकसंख्या सांगणारी. इस्रायलमध्ये एकचंही कमत्र उद्योजकता (इनोवेशन) शाळेच्या द्वारे रुजू होता. इस्रायलची लोकशाही आपल्याशी सांगणारी. त्याची सांस किलोमीटर आहे.

गेल्या 66 वर्षांत इस्रायलमध्ये एकचंही कमत्र उद्योजकता (इनोवेशन) शाळेच्या द्वारे रुजू होता. भारताची सरकार आपल्याशी सांगणारी. त्याची सांस किलोमीटर आहे.

इस्रायलमधील विविध प्रकारच्या शाळा पादहल्यावर त्याचं एक गोष्ट सामादखून आणि त्याची सांस किलोमीटर आहे.

इस्रायलमध्ये दिवडणुका असले आहे. राष्ट्रपतीच्या हातात सत्ता असते आणि खालील सत्ता ही पांतप्रधानांच्या हातात असते.

इस्रायल हा ज्याचा राज्याचा व्यावसायिक शाळा आहे, ज्यासाठी 120 लोकसंख्या सांगणारी. इस्रायलमध्ये एकचंही कमत्र उद्योजकता (इनोवेशन) शाळेच्या द्वारे रुजू होता. इस्रायलमध्ये एकचंही कमत्र उद्योजकता (इनोवेशन) शाळेच्या द्वारे रुजू होता.

इस्रायलची लोकशाही आपल्याशी सांगणारी. त्याची सांस किलोमीटर आहे.
इस्रायलमध्ये ज्या नागरिकांना व्यापार सुरु करावा आहे, त्याच्या साहित्यात Meetup.org ही एक साइट आहे, ही साइट उपयोगी आहे. त्यात बैठकाचा घेतल्या जातात. बैठकासंबंधी भाष्यकारांची सदस्यता दिली जाते आणि त्यात मौत्त्या उद्योजकांची भाषण आयोजित केली जातात, ही व्यास्यांना विनामूल्य असतात. व्यवसाय करताना तुम्हाला येणायला समस्यांच्या चर्चा केली जाते. उपयोग केल्यास त्यात आपला व्यवसाय वाढू शकत आहे. तुमच्या सुचवलेल्या समस्यांवर चर्चा केलेल्या प्रश्नांवर उत्तर दिल्यास, हे लक्षात घेत प्रस्तुत जण त्यात जमेल तसे योगदान देण्याचा प्रयत्न करत असतो.

प्रयोगशीलतेचा विकास कृत्यांच्या राष्ट्राच्या प्रगतीसाठी किती आवश्यक ठरतो हे सांगताना आमच्या प्रशिक्षक डॉ. शुल्मिन फिल्सार म्हणाला होता, ‘कार्य शिक्षणारा शिक्षक हा अपूर्व मोठा बदल घडू शकतो. मात्र सरकारी धोरणातील तुरंत पाठवा वाच्यापेक्षा आपल्या पातळीवर शक्य तितके प्रयत्न केल्याने बरेच काही साध्य होते, हे लक्षात घ्यावा हवे. आणि म्हणूनच भोवताल्याचे वातावरण पूर्ण नसले तरी आपण आपल्या कृतीच्या सांगू इच्छितो, अजूनही बरेच काही बदलणार आहे...’

या राष्ट्राकडून जितके शिकवे, तितके कमीच. आमच्या एक प्रशिक्षकांना शिक्षणाचा एक संशोधनाचा निष्कर्ष सांगितला होता. जो जगभरातील प्रत्येकाला पट्टी. त्याच्याच्या राष्ट्रावर लेखांचे सांगता करावीली वाटते- ते वाक्य होते – ‘जेवढा तुमचा पगार जास्त, तितकी हे आपल्या काम करण्याची प्रेरणा कमी असते. जेवढा तुम्हाला जास्त पगार असतो. तितकी हे आपल्या कामाची बांधील्या कमी असते...’ प्रत्येकाला आपल्या वेतन हे कमीच भासत असते. अशा वेळी काम करण्याची प्रेरणा आणि कामाची... आणि त्यांनी राष्ट्राची बांधील्या जपतोय का, हे आपण पडताळून पाहूया का?
जिथे बदल हाच शिक्षणाचा स्थायीभाव आहे...

इथायलत्या परराज्य विभागांतर्गत कार्यान संशोधन 'मशाव' या संस्थेत राष्ट्रीय राजकीय विभागाच्या आयोजन केले जाते. त्यांतर्गत मार्च २०१४ ते एप्रिल २०१४ इतर इनोवेटिव एजुकेशन ऑंड आंत्रप्रेक्षणिक विभाग शिक्षणाच्या अधोरेदखत झाली. जेरूसलेममध्ये अनेक रस्तेंत्यात आधोजित करण्यात आलेल्या अथवा अथवा अद्यावधीत भारतासह धानात, केंद्र, इथेवरु, युक्रेन, चीन, म्यानमार, नेपाल, कजाकिस्तान, फिर्स्टेनाम या देशांत २०२२ साह्याबांधी झाले होते. या प्रश्नशिक्षणकाळ आहारी काय शिकतो... एका वाक्यात संगमाचं तर स्वतःला प्रश्र विचारावायुला शिकतो...

सभोवताली चालूत, ते काय आहे - आपल्याचा, आपल्या मुलांचा, आपल्या शिक्षण संस्थांचा, आपल्या व्यवसायाचा, आपल्या देशासाठी आपा आपल्या सांबंधांचा... या घडणार्या बदलाची आपल्या शिक्षणाचा काही संबंध असतो का, हा मूल्यमूळ प्रश्र आता अनेकदा पद्यातर लागला आहे...

कसं आपले दहा वर्षांतर्गत शिक्षण, हा प्रश्र आपल्याचा आपल्याचा एका प्रश्नशिक्षण विचारपत्र तेखा आपल्या विधिव्यवस्थिती आपल्यांना भूतकाळातील जमानातील जमानातील आधाराची नाही सोडून शकत, याची हाती पत्त गेली आपण अतयंत वेगाने बदलणारा जगात शाळा हा विघट्याचा विधायचा कण बतावा, याच्याच संवीतीने भूतकाळातील काहीकाही वावणीचा गरज प्रश्नशिक्षणकाळातम्यात अधोरेदखत झाला...

आपण मग बदल गेलं.. आपण सारखं मोबाइल फोनसारखं अनेक एंडर्सन्स क्षीशह सहज बिलत असतो... त्यांतील अद्यावधीत दर्शन वापरपणाचा आपल्या कोशावते उच्च स्तराचा काम. बंधन तर अवकाश काही दिवसांत इतिहासमुळ प्रवेश होतो. अशा वेवेन्स आपल्या आपल्या शिक्षणाच्या पद्धतीत शेव्हेचा बदल कठी केला होता, आहे?

इथायलत्या प्रश्नशिक्षणाच्या या २५ दिवसांत दिवसांगणक शिक्षणविषयक प्रश्नाची यादी लांबत गेली...

★ वर्गांत संबंधाना आपण मुलांना नेत्रव्य व्यक्त करण्याचे स्वातंत्र्य देतो का?
★ इतरांपेक्षा वेळं विचार करण्याचा आपण मुलांना शक्तीत करतो का?
★ धोरणाची बुद्धीचा पाठथाच्यापेक्षा वर्गांत शिक्षणाचा शिक्षक हा खूप मोठा बदल घडूनूळ शकत, यावर आपलेच विश्वास आहे का?
★ अथवासंशोधकाच्या काही भागाची अगदी १० ते २५ तऱ्के भागाची रचना करण्यास त्या त्या शाळा, शिक्षकांचा वाव का नसावा?
★ मुलांना शिक्षांचं, त्यांचं अध्यापन कौशल्यांचं मूल्यमापन करण्याची संदीपी आपण देतो का?
★ आणखी किंवा काळ अपलेच विद्यापीठ केवळ परीक्षा घोषणाची तेज बनून राहणार आणि आपलेच शिक्षण विभाग शिक्षणविषयक केवळ प्रश्नात्मक कामकाजाचं अडकणारा?
★ आपण आपलेच शिक्षणविषयक अनेक उत्तम प्रकल्पांचं डॉक्युमेंटेशन करतो का?
★ गुणवान मुलांचा पुढील वातचीतेची रॅकेटेस शाळा, महत्त्वाच्यांच्या का नसावें?
दगफ्टेड दचल्ड्रि अथामत हुशार मुलां यांची बुद्धमत्ता परजण्यासाठी आपण अधिक काय करतो?

खरां तर वगात शिकवणारा शिकक हा मोठे बदल घडू शकतो. मात्र सरकारी धोरणातील कुटीचा पाठा वाचण्यापूर्वी सर्वसामान्यत: शाळांमध्ये नंतर काही... अभिनव प्रकल्प शाळविभाषी सकारात्मकता का दिसत नाही?

बदल्या वातावरणात शिक्षकाची भूमिका नेमकी कोणती, हे जाणून घेणाऱ्याची आज वेळ येऊले ठेवली आहेत. उपलब्ध असलेल्या अद्भुत तंत्रज्ञानायुक्त शिकक हा माहितीचा स्रोत नसून त्याची भूमिका समन्वयकाची असणार आहे. मन खुलून ठेवून त्याने शिकवण, संभाव्यता पद्धतावृपन अत्यावश्यक आहे. प्रश्न कसे विवारायचे ते मुलांना शिकवले पाहिजे. अभ्यासक्रमाला आहान देण्याची क्षमता शिककांकडे हवी. समाजातील यशस्वी व्यक्तीही, प्रकल्पांबद्दल शिक्षकांनी मुलांची आवडली हवा. वगात शिकवकाताना मुलांना त्यांच्या बदल व्यक्तीसाठी स्ववात भावांचे म्हणून घेणे हवा आहे. सरकारी धोरणातील त्रुटींचा पाठा वाचण्यापली कसे दिसत अंत्यामत प्रकल्प हाते ठेववण्याची सकारात्मकता का दिसत. तर तो आपल्या शिक्षकांना त्यांसाठी ज्ञान सांपाद त्यासाठी राखाव असता असता. इतर अभ्यासांसोबत त्यांचा त्यांच्या आवडीच्या दिवड सांपाद असले इतके असता.

या प्रश्नातील आव्हान शाळांमध्ये नंतर काही... अभ्यासिमांची सकारात्मकता का दिसत, तर तो अभ्यासांच्या बदलावांचा स्वायत्त दिसत. तर तो अभ्यासिमांच्या बदलावांचा स्वायत्त दिसत.

या प्रवेशघेतल्या त्यानंतर सुरुवातीचा मद्दत - मीड मद्दत मुलां सारां काही दिवडतात. त्यानंतर त्यांना जे विषय अभ्यासायचे आहे, त्याची निवड करते. पहिली - दुसरीत मुलं अभ्यासक्रमाची मूलभूत माहिती करून धेंगान. तिसरी - चौथीत तेच विषय अधिक खोलवर शिकवता आणि पाचवी - सुरुवातीच्या विषयापूर्वी खोलवर संशोधन करता. संबंधित विषयांचा परिसंवाद आयोजित करता. या इत्यादीमध्ये असलेल्या विविधांतांची संबंधित विषयांतील ज्ञान आणि त्यांनी केल्या संशोधन हे एखाद्या मुरब्बी व्यवसायिकात असले इतके असता.

या शाळेत सांयुक्तपणे अभ्यासक्रम उपलब्ध असतात. त्यात विवाचन-तंत्रज्ञान, कला, भाषा कौशल्य यासाठी अभ्यासक्रम निवडता येतात. आदर्शवाचनांची अमूक एक तात्त्विक त्यासाठी राजीवी असतात. इतर अभ्यासक्रमातील त्यांच्या विषयांच्या विषयात अधिक ज्ञान सांपादन करता येते.
या शाळेत प्रवेशाकर्षण प्रयोगात शीर्षकांत व्याख्या प्रवेश, त्याप्रमाणे फोटो लावलेला - मेमोरियल स्टँड आफ सोल्जर्स.

शाळेतील दशिकांमधील रोपणी तुमच्यासाठी ही शाळा आज शाळेतील दशिकाच्या प्रदशिणावर शेती वाटचाल सुरू केली. त्या सवामदधक भर दवज्ञात दशिकाच्या अध्यापित शेती सांबंधित काम करणारे शिक्षणतज्ज्ञ ही शाळा सुरूवात आली आहे. १९४२ साली होलोकास्ट इस्रायली सैदिकांद्वारे मुलांसोबत रेब्लेंका येथील छळछावणीत दजवादिशी मारण्यासाठी त्या मुलांसोबत जाणांपसांत, असा हा थोर दशिणतज्ञ.

ही शाळा आज शालेय शिक्षणातील डिस्ट्रिक्शन सेंटरचे एक युनिक मंडळ बनली आहे. आठव्या दशकांच्या प्रमुखांच्या हिताने प्रत्येक वयोगटात शाळेत प्रवेश केलेल्या वयस्कांनी त्यांच्यासारख्या स्वतःच्या चांगल्या आधाराने दाखवले आहेत.

वैज्ञानिक आणि विज्ञानीय प्रयोगाच्या उपरांत तात्काळीन संस्थांनी शिक्षणाच्या स्वतंत्रतेला ध्येयमय दिले आहेत.

या शाळेतील कला तात्काळीन समाजाच्या महत्त्वाच्या भूमीपर्यंत शिक्षणाच्या भागातील प्रमुख व्यवस्थापिक अंतर्गत. उदा. कला पत्रिकेचे वेगवेगळ्या सांकल्पिकांच्या आधाराने कलेचा तंत्रवार झालेले दवद्याथी.
शाळेचे जे चार सम्यक असतात, ते प्रत्येक आठवड्यात म्हणून विषयासंबंधी, अध्ययनासंदर्भात सतत चर्चा करतात. गणित, विज्ञान, इँग्रजी, हिंदू या च्या परीक्षा होते. त्या निकालावर रुळील वर्ण्याच्या अभ्यासमाधी रचना केली जाते. प्रत्येक मुलाच्या निकालावर त्याच्या प्रातीच्या आलेख काढला जातो. त्यात काही विषयाची विद्याध्यायाने उच्च किंवा असतील, काही विषयाची व्याख्या कमी गुण असतील, तसेच बांधू म्हणून काही विद्याध्यायाने उच्च गुण तर काही विद्याध्यायाने कमी, असे का, हे शोधले जाते. कमी गुण भांजलेल्या मुलांकडे व अध्ययन भांजलेल्या मुलांकडे वैचित्र्यशील लक्ष पुढे जाते. त्याच्यासाठी खास अध्ययन उपक्रमाने रचना केली जाते आणि त्यात अशा विद्याध्यायाना सहभागी करून पेठले जाते. १९९१ या संस्थेच्या शाळेवर दिलेल्या शाळेशी संगीताच्या बांधकामातील विद्याध्यायाने दिले जाते. १९९१ या संस्थेच्या शाळेवर दिलेल्या शाळेशी संगीताच्या बांधकामातील विद्याध्यायाने दिले जाते.
कापलान इनोवेटिव्ह स्कूल

वॉल्ट डिस्ने एक चूप सुंदर वाक्य आहे - *If you can dream something, you can do it.* या वाक्याला अनुसरण कापलान प्रयोगिक शाळेची स्थान 52 वर्षांनी करण्यात आली. आज या शाळेत ४०३ विद्यार्थ्यांच्या शैक्षणिक वेळा प्राप्त करता आहेत. १४ वर्ष आहेत.
प्रत्येक वर्गात 30 विद्यार्थी आहेत. एक भिन्नभिन्न मुलांची तुकडी आहे.

जग बदलपणासाठी उद्देश्याकृत आहे महत्त्वाचे साधन आहे आणि त्याने विद्याध्यायाना शिकवणा अत्यावश्यक आहे, यावर शाळेचा विशेष अस्तित्त्व आहे. मुलांमध्ये उद्देश्यासाठी रुजवण, वाढत्या यासाठी या शाळेत जपानीपूर्वक प्रयत्न केलेला जातात. भीव्यावहारास संग्रह विशेष अत्यावश्यक आहे, त्यासाठी किती वेळ बदलतं, बहुआंगाची होतं, अशा वेळी शाळेत विद्याध्यायाला व्यवस्थित शिकत यावा, या दृष्टीने शाळेत विशेष प्रयत्न केलेला जातात. वूल्यां, कोशिष्ठ, स्वाभाविक आणि आपण नवीन विस्तरण घडवू शकतो, हा आत्मविश्वास विद्याध्यायामध्ये विषयाच्या हृदयात शाळेत शाळेत आपल्यांना आहे, असे ही शाळा मानते.

चाकोरीबाहेरचा विचार करण्यास मुलांना प्रवृत्त करणे, त्याच्या भोवतांच्या यासाठी पूर्ण वातावरण तयार करणे, विद्याध्यायाच्या नेतृत्वाच्या रुजवण या दृष्टीने शाळेत अभ्यासक्रमाचे दर्शन आहे, या शाळेत विद्याध्यायाला नामांकित इसायली व्यक्तिनिवाची ओळख करून दिली जाते. इतरकांनी त्या वाढत्या लाभाकरण कस्तो रोज ते ते, ते तेही काही काय वर्त्यावे, त्याच्या शाळेत गुणांचे वापर तयार करत यें, हा सारी प्रक्रिया विद्याध्यायाचा समजावून दिली जाते.

शिक्षकांमध्ये प्रेरणा नसेल तर त्यांशी शिकवलं जाण आणि विद्याध्यायांनी हे शिकण्य करतील आहे. नवे शिक्षकांना या शाळेत विशेष शिकणीय प्रारंभ दिलं जातं. ते कृतीला नवा अभ्यासक्रम करत येतं, त्याच्या अधीक्षक अधिक तत्त्व, किंतु अशिक्षित, हा मुलांना व्यक्तिकृत वातावरण तयार करत येते.

मुळ्यां, कौशल्यां, स्वादभमान आणि आपण क्षमता वेकरून शाळेत आहे, हा आत्मविश्वास दवद्यार्थीमध्ये आपल्याच्या वेळाएवढ लोकांच्या ज्ञानाची असते. त्या शाळेत त्याच्या भोवतांच्या यासाठी उद्योजकता हे महत्त्वाचे साधित आहे. त्याच्या प्रत्येक दवद्यार्थीमध्ये विषयाची दृष्टी आहे. त्याच्या वेळेच्या वेळेच्या सांवािकौशल्य दवकदसत करण्याच्या दृष्टीने शाळेत प्रकल्प करत असतात. संवेदनशील मुलांच्या जाऊण भेटता. त्याचा कामकाजाचा वेळ, कामाची पद्धत, त्याचा जवाबदायी याची कल्पना या भेटीतून मुलाना येते. 'लाइफ इं लाइफ' हा शाळेचा मंत्र आहे.
आम्ही ही शाळा बघायला गेलो तेव्हा या भागातील रहिवासी पर्यावरणीय अभ्यासात कुटले योगदान देऊ शकतात. पाविष्यत्वचा प्रकल्पापासून काही मुंब खाल करत होती तर काही पाचवी-पाचवी मुंब अमेरिकन क्लास्टरस्टडीजे सोसेव्हचा ऑनलाइन अभ्यासक्रम करण्यात गूंज गेली होती.

प्रेडेंटेशन कसून बनवाव आणि त्यांच्या सार्वजनिक कसून असावे, या विषयावर प्रश्नायित्वाची तिसरीपासून शाळेत दिलं जातं. विद्याधर्मान्त अंतिम प्रोजेक्टपासून वापरकरी निष्ठुर कराची लागते. त्यांनी संघीत करून त्यांच्या सार्वजनिक करण्यास मुंबाला शिकवलं जातं. प्रकल्प आश्विनिधाताने कसा सादर करण्याचा, यासाठी कसं बोलावं, देहकाळी कसी असावी हे शिक्षक मुंबाला शिकवलात.

एका चौथीच्या मुंबाला त्यांचा उद्योगकर्त्यांचा प्रकल्प आलं त्यांच्या समजावून सांगितला. इयाचेची आरोग्य विषयक आर्थिकता ३४ दानात डोंला ते तकी आहे. आरोग्य विभागाने अखाडे करा कमी करण्याचा दृष्टीने आणि बेडक्रिय उपचार घेतली तर त्याकाळील लोकांना भरायला लागणाऱ्या करारी मुंब नोंद आहे. हे करण्याचा आरोग्याची दिगा राखणारे प्रदत्तांतर अशा सावसेमारसाठी वारा रुग्णाचे रुग्णवाद आवाज येईल, यासाठी प्रवेशितेच हेल्थ वेकल्याचे प्रिय कार्यक्रम येण्याचा प्रेझेन्टेशन याच्यात आमच्या वाहनाची कमी संचालितता. याचा आधीत्व शेतक्काच्याच आईपीस्टेक्च चलनाच्या आहे. आपल्या विविधकृत अंदाज्यांमधून साधठी हे खाच करा कमी होणाऱ्या करण्याचा दृष्टीने आणि बेडक्रिय उपचार घेतली तर त्याकाळील लोकांना भरायला लागणाऱ्या करारी मुंब नोंद आहे. हे करण्याचा आरोग्याची दिगा राखणारे प्रदत्तांतर अशा सावसेमारसाठी वारा रुग्णाचे रुग्णवाद आवाज येईल, यासाठी प्रवेशितेच हेल्थ वेकल्याचे प्रिय कार्यक्रम येण्याचा प्रेझेन्टेशन याच्यात आमच्या वाहनाची कमी संचालितता. याचा आधीत्व शेतक्काच्याच आईपीस्टेक्च चलनाच्या आहे. आपण जसे वाचू शकू, अशी त्यांना फाँसी होती. यामुळे नागरिकांना आरोग्य नीट रहील आणि वारा लागणाऱ्या कर घेऊन नागरिकांच्या उपचार कसं बोलावे हे हे यांनी आपल्या आपल्या अस्पतालात आहे. यामुळे हे परिस्थिती नेहमीचे येना-जा करणार्या रुग्णवाहिकांचे आवाज येत आसतात. त्यानुसार मला या विषयावर प्रकल्प करावा, असे वाहले.

चौथीच्या विधायकाच्या अपग मुंबाला डिझायन वेळेतील सार्वजनिक उपयोगाचे मोडल.

सहायीच्या विधायकाच्या अपग मुंबाला डिझायन केलेली सार्वजनिक उपयोगाचे मोडल.
याखात सर्वेक्षण केलं. त्यानंतर प्रक्तप संवाद योजना बनवली. प्रक्तपाचं डिझाईन केलं आणि त्याची अभ्यासासाठी मॉडेल्स त्यांनी बनवली. विद्याध्यायींनी जी मॉडेल्स बनवली आहेत, ती पालिकेच्या अधिकारानांना दाखवणावर आली आणि या मॉडेल्सबरून आता खरोखरी आणि विद्याध्यायीसाठी मनोरंजनाची क्रिया साधने तसेच पालिका बनवत आहे.

ज्याचे लोकप्रिय गाथिक इथे संगीत शिक्षक म्हणून आठवड्यापूर्वी एकदा येते. सध्या इथे विद्यार्थींच्या ‘पेमोडियल डे’साठी गाथ्यांचा संयोजन करत होते. या लहानच्या मुलांच्या गाण्यांच्या इथे त्यांनी आयुष्यावर आणि अध्यावत तंत्रावर असतेच शुद्धलयाच्या रेकॉर्ड केलं जाणार आहे. अभ्यासासाठी मुलांनी त्यांनी लिहिलेली, त्यांनी संगीत दिलेली जिगल्स सावर केली. रेकॉर्ड केलं जाणारं गाणं म्हणून दाखवलं. त्यांना या जिगल्सच्या संगीत म्हणजेक दोन भागांत आणली एक वेळियात म्हणजेच ही खोली मुलांनी निधी गाजा करून बांधलेली आहे.

उद्योक्त म्हणून मुलांनी विकसित करणार आणि त्यांचे संवाचकरण करणार हे या शाळेच्या उद्देश्याचे. उद्योगकर्ता कौशल्यसाधीत अनुभूत व्यवस्था उभारणार्धे आणि मुलांच्या अभ्यासासाठी पूर्वांकींची शिक्षण आवर्ती यासारख्या यासारख्या वार्ता करत आहे. ज्या मुलांच्या उध्यानाच्या उद्देश्याचे आणि त्यांच्या ही जीवनाने आपल्यांच्या ही वेळी म्हणून मुलांनी अभ्यासात अभ्यासाच्या ज्या आहेत. 

हयुबरमन स्कूल

या शाळेत अभ्यासासऱ्या आणि उद्योगांना पाहिलं जातं. एका दा खेळ मुलं पाणी आणि उत्साहांना जशी खेळवत, त्याच पद्धतीने त्यांनी अभ्यासासऱ्या पाहवं. त्यांनी शिक्षक प्रमाणपत्र असतात. त्यांना पहिल्यांपासून संगीत शिकवलं जातं. त्यांना ५४० मिण्डल्स आहेत. १६ वर्ष आहेत. तीन भिन्नभिन्न मुलांचे वर्ष आहेत. ४० शिक्षक आहेत. ५५ भिन्नभिन्न मुलांसाठी खास शिक्षक आहेत. इथिहोपिया, रशिया, आर्यावत देशांनून इतरलिंगमध्ये स्थायिक बालेली मुलांना त्यांनी विज्ञान सांस्कृतिक, वादशंकात, नागामी कोष्ठक, नागतिक्यांची आणि त्यांच्यावर भाषिले रूमच्या आणि त्या अशी आहेत.

हजतील मॉडल्या भाषामाणवर मुलं स्टॅंडर्ड फोनोथेय आहारी गेल्यांच्या संरक्षणात ते तीनसे कमी पडतात. हे लक्षात घेत मुलांमध्ये संवाच काळशृंखला वाचवण्यासाठी गेल्यांना पृथ्वीपासून संवाच विश्वव्यापी अभ्यासक्रम या शाळेत राहून जातो. संवाच कसा साधारण, आपले म्हणणे कसे मांडलेल्या, तुमच्यांच्या कसे तुमच्यात भेट साठा त्यांनी दुसऱ्यांना तुमच्यात भेट साठा त्यांनी दुसऱ्यांना. मुलांना बोलायला, आपलेला म्हणणे मध्यवर्ती ते मत लागू केलेला त्रित्यंतरावर वाचवणार म्हणजे ह्या शेल्याच्या रेडिझवर त्यांच्यात त्यांच्यात म्हणून. हे सगळ्यांना अभ्यास सांबऱ्यांना, खास वेळ काहांना करतात.
शाळेच्या अत्यंत सुप्राकाज ग्रंथालयात मुलांना इंटरनेट सुविधा आहे. आम्ही गेलो तेथेच दसरी-तिसरीतील ताजगीली मुलं ब्लॉग लिहिल होती. 'यामुळे आम्ही अत्यंत संयंतरपणे 'रिस्पॉन्ड' करून करावा, हे आम्ही शिकलो. त्यासाठी लक्षपूर्वक वाचावया, समावेशात म्हणजे संज्ञान ध्यानपणे आम्ही शिकलो... अत्यंत नयांपणे आपण सकारात्मक पद्धतीने प्रतिसाद दायला आम्ही शिकलो...' असं तिथिल्या विवाहायंनी सांगितल.

त्यांतर आपण सहायीतील मुलांच्या वादसंवेद सत्रात उपस्थित राहता आलं. सहायीत्वात मुलांना पुढे मुख्य विषय निवडणाऱ्या संस्थी असारी का, यासंबंधी ही मुलं आपलं म्हणणं अत्यंत आमच्यासारखांनं मांडत होती. अशा पद्धतीनं आपलं म्हणणं मांडताना देखीला कसी असावी, बोलण्याच्या टोन कसा असावा, यासंबंधींच प्रश्नशेषकरण शाळेत दिलं जातं.

या शाळेत नोबेल पुरस्कार विजेत्यांची माहिती असेली पोस्टर्स लावली होती. ती सारी माहिती मुलांनी गोळ केली होती...

शाळेच्या म्युझिक रुममध्ये बाहिरे ते सहायीतील मुलं होती. अत्यंत युनेस्को पद्धतीने त्यांनी आमच्यासाठी धैर्य आसार केली.

या शाळेत संवादीचा तासिका मुलं चालवतात. एखादा विवाहाची प्रश्न विचारात, त्याना प्रतिसाद देणार्‍यांनं मुलं उलं उभी राहतात, तो एकेकाला बोलण्याची पश्चातची देतो, तेथेच इतर मुलं खाली बसतत्त आणि निवड्देला विवाहांची आपलं म्हणणं मांडतो. आम्ही त्या वर्गात गेलो, तेथेच त्यांची विषय होता – 'ब्रॉडचे कंपडे विकत ध्येयवेळ की घेऊनं नयेतं?' या शाळेत पहिलीपासून मुलांना आपल्यांनी चर्चा संपूर्ण खराबसमोर मांडण्यासाठी उत्तेजन दिले जाते. शाळेत हाइड पकर्त्यांचां आध्यात्मिक बाबतीच्या स्वास्थ्यसाठी उत्तेजन देतं. या शाळेतला विवाहांची कम्युनिटी प्रोजेक्टाची शंकण उत्तेजन. उत्तर: बुद्धावधानाच्या जाकण्याकडून विवाहामध्ये वोल्टचा काही ना काही मदत करणे, त्याना पुनरांदृष्ट काही दाखवणे... या शाळेत विवाहांचा संबंध दिलं जातं.

कदुरी प्रायोगिक शाळा आणि प्रश्नशेषकरण मॉडेल संदर्भ

'जीवनशिक्षणासाठी शाळा' या तत्त्वात शाळा आपल्यासाठी आहे. बहुसंस्कृतीक विवाहांची हे या शाळेचे वैशिष्ट्य. आज या शाळेत १६३० विवाहांचा संख्यांना भेट. प्रश्नशेषकरण शंकण दिलं जातं.
सातवी ते चौदावीपद्विंत शिक्षण उपलब्ध असणार्या या शाळेत- महाविद्यालयात शेती, तात्तिक महाविद्यालय आणि बोर्डिंग स्कूल आहे. चार पालिकेची विद्यार्थी या शाळेत शिकतात. ज्युईश, धार्मिक आणि धार्मिक नसलेल्या पंढरी स्वायत्त, मुस्लिम, खिच्छन, दुसा, कार्केस्टन अशा बोगवेगव्या संस्कृतीची विद्यार्थी हे या शाळेत शिकतात. ज्युआय्या बोर्डिंग स्कूलमध्ये २५० विद्यार्थी आहेत.

सुदान आणि इजिप्तमधील निर्वाचित मुलांच्या या शाळेच्या विद्याधारीचे समावेश आहे. संस्कृती, वर्ण आणि वातावरण हा समावेश ही शाळेत बहुआांगी म्हणून या शाळेत काम करणे हे म्हणून पाठविला जाते. खुप ह्या विद्याधारीप्राप्त स्पेशल एजुकेशनची आवश्यकता असणारा भिन्नता मुलांपासून या शाळेच्या विद्याधारीचे विचार आहे. ज्या विद्याधारीच्या क्रृषी खर्च त्याचे कुंठक पेलू शकत नाही, त्याची भांडक-शिक्षक संस्थंत्र भरते. जे विद्यार्थी शिकणारी कमी पडतात, त्या प्रारंभी विद्याधारीकडे शिक्षक विश्वेस लक्ष पुरुसल. शिक्षक त्याच्या शिकणार्या अधिक पर देतात. ज्या शाळेची सांस्थेची आणि भांडक-शिक्षक समान सारखा असतो. विद्याधारी दरासारी विश्व निवडत रेल्या भांड. त्याचे पदार्थविज्ञानशास्त्र, रसायनशास्त्र, जीवशास्त्र, संगणकशास्त्र, पूर्णशास्त्र, कला, आर्थिक, सोबोटिस्ट्स अशा विद्यासाठी संसाधन असतो.

सर ऐला कुदी यांनी १९३४ मध्ये हंगकाउनमध्ये स्थापन केलेल्या प्रमुखस्थानी शाळेची ही शाळा आहे. शेती, तात्तिक, भांडक-शिक्षक, अभियांत्रिक अर्थ विद्यासाठी शिकणार्या अर्थात शाळेच्या आजार नावलंकार असतात. ज्या शाळेतून मॉडल जातांची संस्कृती आणि प्रत्येक असलेल्या म्हणून च्या भरते. या शाळेच्या आपल्या लोकांनी क्रृषी सांस्थेची सांस्थेच आज इसायलमध्ये स्वार्थ्य आहे. मूल्यदारित मुलांना दिलं जात. ज्या शाळेच्या संस्थेनकडे कलांव, यासाठी शाळेत संस्थेन केंद्र आहे. शाळेच्या आपल्यांनी किल्ले फारए फारनला तांत्रिक शेतकरी आहे. त्याचें शेतकरी लांबील राहण्यासाठी आहे. ज्याच्या आपल्यांनी किल्ल्याचे फारए फारले असल्याचे "बर्निकस, ऑर्टोमोबाईल" केंद्रही त्याच्या आपल्यांनी किल्ल्याचे फारए फारते. त्यात त्याच्या आपल्यांनी किल्ल्याचे फारए फारते. ज्याच्या आपल्यांनी किल्ल्याचे फारए फारले असल्याचे शेतकरी आहे.
मोदाय स्कूल

या शाळेच्या मुख्यायांमध्ये साधनांशी एका गोष्टी आहेत. या गोष्टी आहेत आमच्या संवादाता सुरुवात झाली. गोष्टी अशी दोन इतरांतील व्यक्ती एका आप्रवाशिक जातात. तिथे प्रत्येक गर्दी असते. 

मोदाय स्कूल

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पहिली व्यक्ती लिखते व्यापार करादला पुरेशी संधी नाही, म्हणून मायदेशात पसते. वर्षभरानंतर त्या व्यक्तिता कृतप्रभावात आफ्रिकेतील मोठे व्यापारी म्हणून आपल्यासोबत गेलेल्या व्यक्तींचे छायाचित्र झळकलेले दिसतात. हे कसा शक्य आहे, असा विचार त्या पहिल्या व्यक्तिकेच्या मायात येतो. वषमभरांतर त्या व्यक्तीला वृत्तपत्रात आदेशाचे व्यावसाय येतो, तील मोठे व्यापारी म्हणून आपल्या दिगंबराच्या व्यक्तींच्या छायादचत्र झळकलेल्यां दिसतात. हे कसा शक्य आहे, असा विचार त्या व्यक्तीच्या मायात येतो.

इतरांपेक्षा वेगळा दवचार कराला विवाहाना शिक्षण आणि त्याकसला वेगळी कृती करण्यात हा शाळेचा प्राधान्यकम आहे. प्रत्येक विवाहाच्या क्षेत्रात विवाह ठेवला जातो, विवाहाची प्रक्रिया अणि संबंधात युगलमधील माध्यम वाढवण्याचा प्रयत्न केला जातो. ८०० विवाहां अपसर्या या शाळेत त्यांना ५० शिक्षक आहेत. ज्ञान अणि कौशल्य मुलांच्या अभ्यासकेल्यास शाळेत प्राधान्यिम आहे. प्रत्येक दवद्यार्थयामच्या इमतेवर दवश्वास ठेवला जातो. दशकण्याची प्रदिया आणि सांवाणी मुलांमधील इमता वाढवण्याची कृती करणार या शाळेचा प्राधान्यशीतोऱ आहे.
शेवटमध्ये दसर अडकायला हूक लावले होते, डेस्क बंद करताना त्यात बोट सचिवून दुखापत होऊ नये, म्हणून डेस्कच्या झाकणाच्या कडेला फोम लावलेला होता।

विद्यार्थ्यांच्या चाकूसारख्या दृष्टिकोण वृद्धिमान कारण, इतरांनून वेगळा विचार करायला त्यांना शिक्षण, संघभावना, समाजाच्या सबूतकरणासाठी प्रयत्न करणे, इतर साधनांसोबत जुळून घेणे, सामाजिक - आर्थिक समस्या लक्षात घेणे हे मुलांना नीतीसाठी या शाखेने खालील जातां. नेतृत्व गुण कसे वाढवावे, स्वतःता नेत्रा म्हणून समूहात ठेक असे विचारले जातां.

यासोबत उपर्युक्त असलेल्या शैक्षणिक या पालनांमध्ये सांगितल्या की, तिची तीन मूल या शाखेत आहेत. सुदीत या मुलांनी 'पराज ले अभ्योजन केले आणि त्यांच्या हृदयाच्या सर्व काम मूलांच्या पूर्ण केली आणि सुदीत उत्तम कमाई केली.

'केवळ पैसा देऊन मदत करण्याच्या स्वतंत्र काय करावा येईल हे जाणून घेतल्याने त्यातुन तुम्ही अनुभव मिळवू शकता,' या दृष्टीने मुलांना शाखेत प्रोजेक्टस दिली जातात. त्यात स्वस्थता गोष्टीमुळे राहण्यासाठी, प्रौद्योगिकी राहण्यासाठी काम करणे, अपने विद्यार्थ्यांना मदत करणे या मोठी मूल करतात. जर प्रीस्थानीच्या पायथे भक्तम बनते, तर त्यांच्याच्या भविष्य उत्तम घडते. तुमच्या विचारपद्धतीवर आणुविकी उंच अवलंबून असतात. तुम्ही कसा मार्ग स्वतःकारा यावर तुमच्या भविष्य अवलंबून असतात. यावर शाखेचा विचारास आहे.

या या शाखेत मूलांनी काय करावं हे शिक्षक शिकवत माहीत, तर ते कसं करावं हे ते दाखवतात. तत्कालीन गरजेच्या परीक्षेकडे पाहायला मुलांना या शाखेत शिकवलं जातं. शाखेचं परिणामकारक आणि सकारात्मक पद्धतीने स्पर्धेत ठेवलेल्या जातात.

आइन करेम रिजनल इनोवेटिव्ह स्कूल

‘अबेआर्सेस टु ऑन्लाइंन’ हे शाखेचं घोषप्रकरण आहे. शिकल्याचा जगत सकारात्मक बदल घडवायचा आहे, हा शिक्षणसंबंधीचा हेतू ही शाखा बाळांना. त्या शाखेची काही विद्यार्थी निवासी आहेत तर काही शाखेचं घरी परतणारे ही आहेत. शाखेचं एकूण...
७०० विद्यार्थीं असून त्यापैकी २० निवासी विद्यार्थीं आहेत. इस्लाइलच्या अनेक भागात हे विद्यार्थी शिकण्यासाठी या शाळेत येतात.

आम्ही या शाळेला भेट दिली तेव्हा दिसून आलं की, या शाळेच्या विद्याध्यायी आतापर्यंत ६०० वेगवेगळी उत्पादन बनवली आहेत. ऑलिव्ह ऑइल, व्हाक्सिन इसेम्स आणि इतर बरेच अर्थ काहीं, तसेच त्यापून साबण, परफ्युम, कोस्मेटिक्स यासारखी उत्पादन या विद्याध्यायी बनवली होती. त्या उत्पादनांचं आणखी एक वेष्टिंग घण्यं ती सारी नैसर्गिक होती. ही सर्व उत्पादन विकली जातात. अनेक देशांत ती नियंत्र होतात. तसेच अनेक वनोषधींची शेती मुलं करतात.

यामागची प्रक्रिया सांगून झाली या शाळेच्या प्रयोगशाळेतील शिक्षक जे गेली २५ वर्षांनाच्या अनुसार अंतर्दिनीतील कंपनीमध्ये मोठ्या हद्दाख्याय होती, समाजसाठी काम करतं. त्याच्या माध्यमे ते मोठ्या प्रकारं येता, त्यानंतर ते विद्युतीय साधनाचे इच्छापूर्ती करण्यासाठी उत्पादनची आर्थिक कार्यक्रम आणि उत्पादनाच्या आयुक्ती चालवावी येशी. हे आदर्श सामाजिक सर्वेक्षणाद्वारे अनेक उत्पादन नैसर्गिक असतात. त्याच्या साहय्याने ते उत्पादन ऑलिव्ह ऑइल, व्हाक्सिन इसेम्स या विद्युतीय साधनाचे उत्पादन चालवावी येशी. हे आदर्श सामाजिक सर्वेक्षणाद्वारे अनेक उत्पादन नैसर्गिक असतात.

या सर्व प्रक्रियातील प्रथम टप्प्यावर शिक्षक मुलांच्या मदत करतात. मुलं उत्पादनांमध्ये भाग भाग असतात. नैसर्गिक प्रक्रिया आणि उत्पादनात त्याच्या विद्या उत्पादनाची आयुक्ती करतात. नैसर्गिक असतात. विद्यार्थ्यांनंतर ते उत्पादन युनिवर्सल ह्यावही एड्यूकेशन देतात. त्याच्या प्रदतदिया अजमावतात. ते उत्पादन आणि त्याचा वेष्टिंग करता येईल, याचा विचार मुलं शिक्षकांच्या सहाय्याने करतात. हे प्रोजेक्ट पूर्ण वर्षभर चालणारे असते. यात १० टासे मुलं काढी ना काढी नवी नैसर्गिक करतात. हा अनुभव त्यांना बरंच काढी शिकण्यासाठी अनुभव होतो.

दवद्यार्थ्यांनी केलं नसाव. उदा. विद्याध्याय प्रकारचे साबण, अतररेआणि शाळेतील विचार करतात.

विद्याध्यायी बनवलेले विचार प्रकारचे साबण, अतररेआणि शाळेतील विचार करतात.

या सर्व प्रक्रियेतील प्रथम टप्प्यावर शिक्षक मुलांच्या मदत करतात. मुलं उत्पादनांसाठी प्रत्येक गोष्ट करतात. नैसर्गिक ऊर्जा रस्त्याच्या वाहतूकाच्या बांधने करतात. मुलं उत्पादनांची आयुक्ती करतात. हे प्रोजेक्ट पूर्ण वर्षभर चालणारे असते. यात १० टासे मुलं काढी ना काढी नवी नैसर्गिक करतात. हा अनुभव त्यांना बरंच काढी शिकण्यासाठी अनुभव होतो. हा सर्व प्रक्रिया प्रथम टप्प्यावर मुलांसाठी आप्ल्याच्या निर्माण करतो त्यात १०० मुलांच्या आप्ल्याच्या निर्माणासाठी अनुभव होतो.
या सर्व प्रक्रियेत मुलांना मन खुलून करून विचार करण्यासाठी उत्सजन दिलं जातं. अतीतकडेच शाळेतून उत्सवेच्या विद्यार्थ्यांनी पैसे कमावण्यासाठी सांगण तयार केले आहेत. त्रेन्यबांध दाखल होण्यावरील पैसे कमनूनाच, या विचाराने त्यांनी हा व्यवसाय केला.

जेथे प्रकल्पावर व्यापार केले जातं, त्यावेळी 'आपणास किंवा मार्क निवडला हवेत आपण का,' असा प्रम शिक्षकांकडे विद्यार्थ्यांनी विचारला जातो. विद्यार्थ्यांचं मंत्र, व्यावहार्यांचं अजमावल्या जातं.

मुलांना प्रकल्पाचा प्रक्रियेत सादरीकरण विद्यार्थ्यांना करावं लागतं. प्रकल्पाच्या या सर्व प्रक्रियेमधून शिक्षण, नागरिकीयितेन (इनोवेशन), सामाजिक संक्रमण आणि उधोजकता हे सर्वच साधळे जाते.

विद्यार्थ्यांसाठी शाळा ही अशी जगणा असावी, जिथे मुलं मोठी शाळावर ज्ञानार्थ आहेत, तरी ती आता असावी. यसलं योग्यता शाळा साधारण असावी. स्वत:चां पोट भरताना समाजसादृश्याचा काय करता येईल, हे त्याने पाहायला हवं, त्याच्या शिक्षण बेतलेलं असावं, अशी या शाळेची धारणा आहे.

या शाळेत असे शिकवले जाते, जे वास्तवातील जगण्यावर निघेत आहेत. ही शाळा किंवा इंडियन सामुदायिक ग्रामीण/ कृषी वसाहत आहे. तिथिल्या लोकांच्या विकाससादृश्यात अनेक उपक्रम शाळेतील तसे राबवलेल. इथे मुलं इंटिहास, विज्ञान, तप्यांनाशी शिकतात. पुरुषांनी प्रकाशित करतात. दूर गाईडसाठी साहित्य तयार करतात.

सातवी आणि आठवी सामाजिक प्रकल्प, प्रकल्पावर इंटर्नशिप स्कूल अशा वेगवेगळ्या उपक्रमांमध्ये मुलं सहभागी होतात, त्यांनांनी सामाजिक दृष्टीकोण निघतात. दहावी इंटर्नीशनल मुलं इतिहास आणि व्यावसायिक सामाजिक समस्या साहित्य विचार करतात. सामाजिक शास्त्रांनी आणि अंग्रेजी साहित्याची विचार करतात. सामाजिक मुलं सामाजिक उधोजकतेरसादृश्याचा पाया उभारला जातो.

या शाळेतील नवीनता काळी विद्यार्थ्यांनी त्यांनी थेतलेल्या सामाजिक प्रकल्पांची माहिती आम्हाला दिली. यात हा विद्यार्थी गट मूळबाची अशा विद्यार्थीसोबत काम
करत असून या मूकबधीर मुलांना हे विद्यार्थी बेकरी प्रशिक्षण देणार आहेत. या मुलांसोबत काम करायचं म्हणून या शाळेतील मुलं 'साइंस लंबेिा' शिकत. वर्षभर या मुलांसोबत काम केल्यानात तर या प्रकल्पात खडं पडू नये, म्हणून ही मुलं शाळेतील पुढील वर्षात नवीनत प्रश्न करावणारी विद्यार्थ्यांनाही मूकबधीर मुलांना कसं शिकवायचं, याच प्रशिक्षण देणार आहेत. जेणे काळन कामाची ही सारखी सुरु राहिल. एका विद्यार्थी गटात अर्थे मुलांसाठी पारीही आहेत. या शाळेत प्रकल्पाधारित प्रशिक्षण होते. अर्थपूर्ण शिक्षणाला वाच दिला जातो. जीवनशैली मंत्रीराय शिरीरसंबंधी संबंधित प्रशिक्षण देताना मुलांना अवधारण स्वस्थ्यात फार्मेसी कामकाज ठरले प्रकल्पात पडूत नसतील संगण्यापद्धत वेळात या शिकवले जाते. कुट्ट्या अवभोवता कुट्ट्या रोग कसां घडून होतो, हे संगण्यापद्धत धुम्रपापणे, मांजरी पिता आरोग्यावर कसेल होतो, अशा तरली शिक्षकांची सांगितलं.

या शाळेतील विद्याययाना वर्षकाळी तीन ते पाच प्रकल्प करायचे असतात. व्यातील एक प्रकल्प हा विद्याचा असतो आणि दोन सत्रांत उपरले चार प्रकल्प करायचे असतात.

विद्यार्थीकडे शिक्षक मांजरी उष्णाने 'लेटस् टॉक अबाउट इट' या कार्यक्रमासाठी लंबेि संबंध, यथानाथीत याबाबत बरेच काही मुलांना शिकते. 'कुंकी फॉर थॉट' या उपक्रमांसाठी कॉफी टेबलवर असताने इतरांशी चाांगल कसां वागता वेळेल आणि त्या भव्य उपलब्ध करता येईल, याच विद्याच्या प्रशिक्षण दिलं जातं.

आफे स्कूल

1992 साली सुरु झालेल्या आफे स्कूल नावाच्या या शाळेत आपल्या आणि आपल्या भोवताच्या पर्यावरणाचा संबंध नेमका कसा असतो, हे शिकवलं जातं. वर्तमान आणि भविष्यातील पर्यावरण यासंबंधी मुलांसध्यात जगभरकृत मानणे केलेले जातं. लहान मुलं - असमी पहिलीतली मुलं शाळेत नेमान बाणकाम करतर शेतीची बारीकासारी काम करतं. रोपं लावणारे, लावणारा पाणी, धालांना, लावणारा विद्यार्थी आभारांची नियमितपणे करतर. मुलं हा सारं आदर्शवत करतर दिसत होते.

आपण आदर्शवत निहितार्थ लेखकांना असतं, चारवार्ती भव्य प्रकल्पांत स्वरूपात डाळता चा वेळेल शाळेच्या मुख्याध्यापकांनी आचरणाच्या कसा असतात याची मानणे आपणांक फार्मेसी करत होती. या प्रकल्पात शाळेतील पजमन्य जलसांधारण प्रकल्प आहे. त्या प्रकल्पाची कार्यवाही विद्याययाने आपणांना कथन केली. आपणांनी भविष्यातील अपारम्परिक घडांमध्ये एकत्र मुलं ठेवलं तर नेतृत्वांनी ते आपणांना करतर. हवामानसंबंधीचा, पावसाचा रूढीचा सत्ता अभ्यास चौथी-पाचवीची मुलं करतर दिसत होती. जगभरात पर्यावरण विषयक कुट्ट्या अभ्यास संशोधन होत होतं. याची माहिती
शाळेचे विद्यार्थी करून घेतात. या समव्याचा संदर्भ आपल्या देशातील समस्यांशी पढलाचून पाहतात.
ही शाळा ज्या भागात होती, त्या भागात येमेनहून इथायला आलेली जुनीजाणती येमेनी वंशावय लोकांची संख्या अधिक आहे. या समाजाचा इतिहास समजून घेणाऱ्या, त्याचा बालीरीत समजून घेणाऱ्या, त्याच्याच डॉक्युमेंटेशन करण्यास काम मुलांनी केलं आहे. शाळेच्या एका भागात व्यासंबंधीचे वस्तुसांग्रहालय आहे. या शाळेच्या विद्यार्थींच्या प्रकल्प काम समाजाच्या गरजांशी सुसंगत असतात.

शाळेच्या आवारातील नैसर्गिक घडामोडीची नोंद देवणारे विद्यार्थी.

विद्यार्थ्यांनी बांधलेले कृत्रिम डबके.

शाळेच्या अनिमल फार्म.
'वहा वर्षांनंतर शिक्षण करते असलेले... याचे कल्पना करा बरे,' हा प्रश्न आमच्या एके प्रशिक्षकांंना आम्हाला विचारला आले मग एकाहून एके गमतीदार (आबाचे कार्यकारण स्विस्न मानली जातील अशी) उत्तर देऊ लागली... '10 वर्षांची कदाचिच शांता नाही...', 'मूळ दरी समाजाच्या आधारे शिक्षण...' कुणी म्हणून, 'त्रिवर्गांना वातावरणजीवन समावेश शिक्षणात केलेला असल.' कुणी म्हणाले, 'पुल्ल महत्त्वाचे अथवा ज्ञानासती शिक्षणकार अवलंबून नसलील, कारण अध्यायवत गेंदेस त्याच्या हातातील असतील, त्यामुळे शिक्षकांची भूमिका आणि त्याचे महत्त्व परिस्थिती काढून कमी होईल...' या चर्चेतून असे अनेक मुळे पुढे आले. त्यातून एके महत्त्वाची मुद्दा असे, महत्त्व नसोबे तसेच प्राप्ती केलीत वा वातावरणातील भूमिका आणि त्याचे उपलब्ध करणे असततात.
या सामाजिक माझते दिले किंवा सांशोधन इस्रायलच्या झोपेत तयार करायचा ज्ञातच्या सवाांच्या सामांजस्यासो सांणाऱ्या प्रामाण्याके प्रोजेक्टच्या नावानामे पालकानांने इंस्टेंटेच्या मदतीने पाल्याचा प्रक्ष्ण करण्याचा योग्य प्रक्रिया असते. आफ्ने के प्रोजेक्टी प्रमाणीव्य प्रयोगशीलता असते त्यातून असते उद्देश्याची उत्पादन प्रोजेक्टचा असते. उत्पादन असू शकते आणि लातून प्रक्ष्ण उद्योजकले बीज करे पसरले जाते, हे या शाखाची ठीकता झाले.

प्रा. तेडीची याची ही संकल्पना उल्लेखनीय न्याय. उत्पादन प्रक्रियेच्या नया कल्पना माझे, मतभेद करण्यासाठी तोड देणे, सामाजिकाच्या कारण किंवा या रवं गोशी अंतर्भूत असतात. बाजारपेट, मार्केटपेट, कल्पना, यसकी प्रक्रियेच डाव्योनेस्ट्या या सर्वांच्या त्याच्या समाधानात असतात. या रवं गोशी किंशाल्या कारण लागू होतील, या बाजारपेट किंशाल्या किंकड लायाच्या व्यक्त केलेला आणि त्यासारखा मूल्यशिक्षक असतो असांत आहे की, याची विद्याधारीचा थथम प्र प्रचारातील उत्पादन असते. त्याच्या बाजारच्या ठीकता झाले. नवीन व्यक्तीत आणि प्रतिपदान बालकांचे अद्यतन, व्यक्तीमध्ये योग्य भेटींमध्ये विविध सांगतीतील घाताशीलता आहे.

इस्यायलच्या शिक्षणसंबंधी उद्देश्यांच्या म्हणून सारा प्रतिपच्या जातो तर त्याच्याची उपयोगकरण आणि प्रक्रियेचा यशस्वी म्हणजे केलेला अयोग्य किंवा कम्फोट यांमध्ये पनात विचार करत आणि शाळेचा प्रगतीच्या वेळेस ग्राहक करते, कृतीभूत शिक्षण दिले जाते.

इस्यायलच्या प्रामाणीव्य शाळांमध्ये विद्यार्थींने प्रक्रियत करतात, त्याप्रत्येकास विषय हा अभिनव (आजूबाजू शाळेचे कुणीही न केलेला) असा असाय लागतो. सदा गरजानून मिळतातुका असा तो प्रक्रियत असाय असित असते. त्याच्या विद्याधरांनी वृती संशोधन करते अपेक्षित असते. विद्याधारीनी त्याच्या कल्पना प्रक्ष्ण आणि त्याच्या सादरीकरण करे हात, याचे मूळ्यांकन शिक्षक त्याच्या विद्याधरीची वृती करत करतात.

इस्यायलच्या शिक्षण विकासात इस्यायलच्यासंबंधी व्यवस्था विभाग आहे. त्या विभागात शांतत्व निरोध वाइनहाबांना यांची माहिती दिली की. आतापर्यंत इस्यायलच्या वाइनहाबांचा एक लाक्षणून अधिक विद्याधारी आणि प्रक्रियत केले आहे. १५ हजार शिक्षक, एक हजार मुद्याघापक आणि इस्यायलच्या २५ हजारीने ६०० शाळा यांच्या सहभागी यासा आहे. यातील शिकल्याचा साधन शिक्षक आणि करिअरशिप कारकिरङ्गांनी लख ठेवले जाते. आयोगिक क्षेत्र, सामाजिक क्षेत्र, कॉलेज, वेदान्त, सामाजिक जागरूकता, संस्थानात, व्यावसायिक मध्ये विचारसर्वसाधन आणि नया संकल्पना या शाळा मुलांच्या रूपांतर.

क्लिनिकल साधारण जिंक्ट डी. शाळेच्या गाल दिले, शिक्षणाचा खरा अर्थ घटते पोकली शोधून सूती भरून काढो.

इस्यायलच्या शिक्षणप्रतिक्रियेत नवे शोध, आढळाने आणि बदलाच्या परिस्थितीतीला मेळ धाल्याच्या प्रयोग केले जातो. प्रत्येक शाळेच्या भेटीत विद्यार्थी शिक्षक, मुद्याघापक आवेदनांना संगत होते, पुढील क्षीर जर उसी साधन बाध्यता लाल, तर हे उपक्रम दिसायला नाहीत. आणणी काहीही बदले, सादि तुलनात्मक सततता दिले जाते. सतत बदल करण आणि विकास साधत राहण, हे वायक शिक्षकव्याची जोडणाऱ्या इस्यायलसारखा दुसरा देश व्यावहारिक असेल.
Education in Israel - Preparing for the Future

The International Conference on Innovation and Entrepreneurship in Education organised by MASHAV at the A. Ofri International Training Centre gave valuable insights into the positive changes in the education system in Israel. The resource persons comprised officials from the Ministry of Education, teacher educators and entrepreneurs. The school visits provided interaction with the real stakeholders - the Principals, teachers, students and parents.

The course underscored the importance of integrating innovation and entrepreneurship skills into formal education at the school level itself. Some of the initiatives we were privileged to observe are very successful and can serve as models for Indian schools. The themes and methodologies however will need to be adapted to suit the Indian context. The philosophy of innovation and entrepreneurship, if integrated into the Indian education system will surely lead to quality improvement.

The course gave a detailed and comprehensive knowledge of innovation and entrepreneurship in education in Israel. The Indian education system is currently facing various challenges. The most prominent challenge is the gap between the syllabi and the demands of the industry. Indian students have a strong theoretical academic basis; however they fall short when it comes to practical application of knowledge. Schools focus on achieving high grades through examination-oriented teaching. There is a need to re-evaluate the educational philosophy and to integrate innovation and entrepreneurship into education.

The approach and processes adopted by the Ministry of Education in Israel offer possible solutions to the challenges faced in India. Introducing entrepreneurship at the school level itself will foster creativity and problem-solving skills among students. Equipping students with tools for self-learning will make them more effective professionals.

The following aspects of education in Israel draw attention in terms of applicability in the Indian context:

Understanding of Innovation and Entrepreneurship

Traditionally, innovation and entrepreneurship are perceived as innate abilities – something that people are born with. The education system in Israel looks at innovation and entrepreneurship as skills – as sets of behaviours that can be learned and even improved with
practice. *The syllabi, therefore, do not focus exclusively on theoretical learning but also aim at encouraging creativity, innovation, problem-solving and calculated risk-taking.*

In Israel, innovation and entrepreneurship are viewed as crucial skills in preparing students to succeed in the world of the future. They aim at building highly motivated creative individuals who can give innovative solutions to problems.

The process of innovation is understood systematically through various models, thereby making it possible to replicate successful innovative methodologies. The complex nature of intelligence, for example, is understood through the i5 model proposed by Penza\(^6\). They identified *five aspects of intelligence viz.* cognitive, creative, social, ethical and emotional intelligence. Some of these models can be adopted in India in order to encourage innovation. Through such projects, students learn to apply their skills rather than gaining high grades through rote learning.

**Experimental Schools**

The concept of *experimental schools* is very important as these schools serve as *seed beds for change.* They are important agents in ensuring constant innovation and evolution in teaching-learning.

Some schools in Israel voluntarily apply to the Ministry of Education for selection as experimental schools. Selected schools are given extensive training after which they present proposals for innovative methods of teaching-learning. They receive funding for implementing their projects over a period of five years. Throughout this period, the schools receive continuous support from the Ministry of Education in the form of teacher training, guidance, documentation, mentoring and troubleshooting. At the end of the experiment, the schools create their own model of innovation and then become centres for the dissemination of this innovative model.

This *process of welcoming, supporting and eventually spreading innovation leads to constant updation of the education system.*

**Democratic Approach**

The State’s approach to experimentation in education is fairly democratic. Only 75% of the syllabus is defined by the State; schools can decide what they want to teach under the remaining 25%.

The schools willingly apply for experimental status. The theme of the innovation is selected by the students and teachers after detailed discussions. This *bottom-up approach to change is more likely to yield positive results because the change is from within the organisation.* The innovation is not defined or imposed by the Ministry of Education, instead it is chosen by the school with reference to their own needs and their unique context. This makes the education more student-centric by addressing their needs and interests.

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\(^6\) PenZA specializes in designing comprehensive strategies together with national and corporate leaders, focusing on innovation, sustainability and education - [http://www.penzagroup.net/](http://www.penzagroup.net/)
At M. Yadlin School, there are over 70 courses offered, some of which are designed as per needs and suggestions voiced by students. Kadoorie Agricultural School which teaches students from starkly different cultures has chosen the theme Multi-cultural Education aimed at better understanding of other communities, ultimately promoting social harmony.

**Role of the teacher**

Introducing innovation and entrepreneurship requires a paradigm shift in the role and functions of the teacher. The teacher is no longer the traditional source of information and knowledge to be followed unquestioningly. The teacher functions as a facilitator in the learning process, helping students ask questions and providing them tools to discover the answers to their questions.

In the experimental schools, teachers themselves become innovators and entrepreneurs. The teachers identify the needs of their students and develop courses to cater to these needs. They create innovative teaching-learning strategies for each course. The innovations need to be successful and eventually self-sustaining.

Most of the experimental methodologies we observed had a multi-disciplinary approach. Teachers are therefore required to take a holistic approach towards education and to study other subjects related to their area of specialisation. They can no longer teach one subject in isolation; collaboration with other teachers becomes a necessity. M. Yadlin School, for example, has developed a course that combines astronomy with art.

An additional positive effect of the multi-disciplinary approach is that more and more teachers opt for further education leading to individual progress as well as quality enhancement in teaching.

**Mechanisms of Change**

The Ministry of Education in Israel has defined a process for bringing change into an organisation which already has systems of functioning in place. The perspective is very practical taking into account the fact that people are naturally resistant to change.

An experimental school first identifies the need for change and convinces all the stakeholders that such a need exists. The next step is coming up with an innovative teaching-learning methodology to answer that need. The practical viability of the proposed solution is ascertained. Motivation and training of teachers is taken up next.

The innovation is introduced in a gradual manner, first identifying the focal points within the school. Once the change is successfully implemented, it is replicated in other departments and eventually spreads throughout the school. There are special training programmes that help teachers to overcome their resistance to change and to adopt new methodologies.

These *models of organisational change and teacher training* are valuable because they provide solutions to actual practical problems that arise during the execution of innovative programmes.
Focus on Skill Development

The experimental schools adopt different methodologies, what is common to them is that they aim at developing skills among students. Knowledge of theory is a basis but in order to apply this knowledge, problem-solving, presentation skills, debating ability, teamwork, leadership skills and so on are necessary.

The experimental schools focus on **going beyond theory for providing tools of practical application.** In the schools we visited, students showed better retention and greater involvement in the learning process. Principals and teachers reported fewer discipline issues among students.

This approach also ensures that students get the opportunity to hone their unique skills in the best possible manner. They can be *guided to take up projects that help them discover their talents and abilities.*

Project-based and Real-life learning

Project-based learning involves learning through hands-on experience. This methodology is being implemented in Ein Kerem High School and Huberman School. The students learn by doing. They undertake real projects with real outcomes thereby applying the theory they learn in the classroom. One of the interesting projects we viewed was the Aromatherapy Cosmetic Centre run by Ein Kerem School. The students of Ein Kerem grow herbs in a herb garden and manufacture cosmetics using these herbs. They learn chemistry while producing soaps, lotions, essential oils and so on. They also learn packaging and marketing as their products are actually sold in the market.

This approach can be adapted to the Indian education system which is heavily theory-oriented. High school and college students can be encouraged to take up such practical innovative projects for some credits.

Social Entrepreneurship

Entrepreneurship is usually understood to mean profit-making. Our visits to Kaplan School and Afek School changed this perception. These schools encourage social entrepreneurship that moves beyond monetary gain in order to benefit the community. The students employ innovation to fulfil social needs or address a social issue. A Dog Adoption Campaign in Kaplan School (Petah Tikwa) would be a case in point. This also fosters a spirit of volunteerism among students.

Link between schools and the community

The experimental schools recognise the need to build a closer relationship between the school and the community. This prevents schools from becoming sheltered, artificial environments where the students are not in touch with reality.

Students are encouraged to *take up projects that involve community interaction.* At Afek School for example, students interviewed residents of the community and collected artefacts
from them to create a small community museum inside the schools. Ongoing interaction with the community makes students aware of their history, culture, strengths as well as the unique problems they are faced with.

Another important link between the school and community in Israel is the voluntary sharing of expertise. At Kaplan and Mordei Hagetot Schools, entrepreneur Galit Zamler runs entrepreneurship programmes for students. The cosmetics laboratory in Ein Kerem School is supervised by a retired professional from the industry.

Such sharing of professional experience and expertise can be easily possible in India as well, all the more because the age of retirement in India is 60 years, on an average. Retired professionals from different fields can contribute their skills to guide and supervise actual projects by students.

**Education for Sustainable Development**

Education for Sustainable Development which is now being advocated by the UN is already being implemented in some schools in Israel. The projects are aimed at creating ecological awareness and responsibility among students. The petting zoo at M. Yadlin School (Rishon LeZiyyon) and the rain-water harvesting plant at Afek School are excellent examples of education for sustainable development.

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All these innovative educational models and methodologies being employed in Israel, if adapted suitably, can bring a definite value addition to the Indian education system. However the Indian context poses some unique challenges which would need to be addressed. They are as follows:

- The existence of private schools alongside State-run schools, making it difficult to implement policies in a consistent manner.
- The vast population resulting in a student-teacher ratio of approximately 60:1, in many cases.
- The focus on scoring high grades rather than on acquiring practical skills.
- Training teachers to teach with a multi-disciplinary approach.
- Restructuring the system of assessment.

These challenges can be overcome by introducing gradual changes in the existing system. Initially, project-based learning can be offered as an extra component by schools in addition to the syllabi prescribed by the State. Innovative teaching-learning methods may be difficult to implement in large classes, however, they can be used to teach selected groups of students on a pilot basis.

Integrating innovation and entrepreneurship into education will definitely yield dividends in the form of improved teaching-learning methodology and more practically competent students.
Innovation & Entrepreneurship in Education – even we can do it!

The MASHAV course on Innovation and Entrepreneurship in Education at the Aharon Ofri Training Centre, Israel gave us an opportunity to learn about different theories and models of innovation and entrepreneurship. In this article, I will give a general overview of how innovation and entrepreneurship can be integrated into the education system.

What is innovation and entrepreneurship?

Put in the simplest of words, innovation refers to new ideas while entrepreneurship means developing, organising and managing a new business venture. An interesting insight – innovation and entrepreneurship are skills that can be learned and developed. Contrary to popular belief, these are not innate qualities that individuals are gifted with. They are attitudes and behaviours that can be consciously developed. One can learn to become an entrepreneur.

The nurturing of entrepreneurship is a gradual, systematic process. For this, we could learn from Prof. Ezri Terzi’s 7D model. Prof. Terzi draws a parallel with the process of germination of a seed, something that we are all familiar with. He identifies each stage of the process with a step in the development of entrepreneurship.

1. Plowing – Foundations
2. Sowing – Multidimensional research
3. Germinating – Five-dimensional ideation
4. Budding – Conceptual modelling
5. Flowering – Detailed design
6. Ripening – Designing application
7. Harvesting – Design distribution

If we follow these steps, we can learn to think like entrepreneurs. This is probably the most important insight I got during the course on Innovation and Entrepreneurship at the Aharon Ofrí International Training Centre. And what could be a better place to learn about innovation than Israel? This hub of technological development and business ventures proudly describes itself as a Start-Up Nation. It provides many successful models of entrepreneurship. To know more about them, I recommend reading this excellent book called START-UP NATION BY DAN SENOR AND SAUL SINGER.

Need for entrepreneurship in education

**HERE IS A STARTLING FACT:**

The top 25% of India’s population is more than the entire population of the USA.

Which means that we have more smart people than the USA has people, and hence we should be doing better!

I used to think – innovation and entrepreneurship belong in the arena of business. Why do we need them in education? All of us would agree that today there is a gap between the syllabi that our students learn and the skills required by the industry. Our students are knowledgeable but not easily employable. To bridge this gap, we require a paradigm shift. **Students should be trained not only to know but also to apply that knowledge in real-life situations.** We must **prepare students to deal with the future which is largely unknown. For this, we need to focus on capacity-building and skill development.**

Our schools are often isolated from social reality. As the Principal of En Kerem High School told us, we need to train students for life. On stepping out from school, students should not encounter an unfamiliar world. Education is not just about passing on existing knowledge; it should empower students to create and

**WHY DO WE NEED INNOVATION & ENTREPRENEURSHIP IN EDUCATION?**

- Employability
- Preparing for the future
- Capacity-building and skill development
- Preparing for real life situations
- Empowering future entrepreneurs
- Nation - building
add to the knowledge bank.

Last but not the least, innovation and entrepreneurship are tools for nation-building. Our large young population is our biggest resource; in order to maximise it, we must offer them the best tools. This all sounds good, yes, but how can this can be implemented. According to Dr. Shahaf Gal from Israel’s Department of Experimental Education, what we need is a practical and actionable educational model.

**Tools for nurturing innovation and entrepreneurship**

I will share here, a few practical models for nurturing innovation and entrepreneurship that I learnt during our course.

The first is the **5iN model developed by the people at PENZA**. PENZA is an organisation that mentors budding entrepreneurs and guides them along every step of their venture. According to PENZA, there are five different kinds of intelligence that we need to foster in order to ensure holistic development. They are:

- **Cognitive intelligence** – relates to absorbing and processing knowledge;
- **Creative intelligence** – the ability to bring out innovative ideas;
- **Practical intelligence** – implementing plans in real life;
- **Ethical intelligence** – which ensures that the venture does not cross any ethical boundaries;
- **Emotional intelligence** – which is about managing one’s emotions and relationships with others.

I have been teaching for the past ten years, during which I have observed that the Indian education system focuses on cognitive intelligence; to some extent on practical and ethical intelligence while the other two kinds are mostly side-lined. We should think about teaching-learning methods that allow scope for development of each of these kinds of intelligence.

The second model created by PENZA is called **Fostering Goods**. It borrows from the field of design to offer these steps for the development of an idea:

1. Design briefing;
2. User observation;
3. Divergent idea;
4. Concept generation;
5. Constant prototyping;
6. Application through iterations;

I would like to focus on steps 5, 6 and 7.

5. While implementing new ideas, it is important to have a prototype, a small-scale experiment for testing and fine-tuning the methodology. Rather than attempting to change everything at once, it is better to start small and then broaden the change.

6. When applying a method, you must make small but significant improvements every time you apply it. This flexible approach will ensure constant upgradation of the methodology.

7. Multi-disciplinary approach – We can no longer rely on the clearly demarcated boundaries between subjects. If we want to make learning more meaningful and effective, we must combine different subjects in creative ways.

Let me give you an example from Kaplan School. We observed a teacher teaching students to draw bar graphs. The students were drawing graphs based on data that they had collected from their neighbourhood. They had statistics regarding the amount and frequency of garbage disposal in every family. A creative combination of Mathematics and Environmental Studies; students learned to draw graphs and also became aware of the garbage generation in their locality.

Such methods will make learning more meaningful and will also ensure better retention.

I have outlined briefly three different models for fostering entrepreneurship in education – Prof. Terzi’s 7 D model which compares entrepreneurship to germination, the 5iN model of the 5 kinds of intelligence and the Fostering Goods model. What we need to remember is that no model can be adopted – i.e. implemented as it is. Models should be adapted i.e. modified to suit the unique socio-economic and cultural context.
It is important to agree that change is necessary. The next big challenge is implementing the change. Schools already have well-established systems and the teachers are unwilling to accept any drastic change.

Israel’s Department of Experimental Education has developed a practical and effective method of bringing about change. The agents of this change are the experimental schools. What is remarkable about this method is its bottom-up approach. The Department of Education does not provide fixed models for experimental schools to implement. Instead they allow the change to happen from within the school itself.

Schools in Israel voluntarily apply to become experimental schools. The Principal and teachers receive intensive training. The theme of the innovation they want to implement is decided by the teachers and students themselves in consultation with the parents. The methodology is then sent for approval to the Ministry.

This ensures that the project taken up by the school meets the unique needs of its students and learning becomes more student-centric. Also, the involvement of teachers and students is much higher because they are implementing a project that they have themselves chosen.

Such internal motivation yields excellent results. We visited two schools – Kaplan School and Mordechay Hagetot School. These two schools had applied for experimental status but they were not selected by the Ministry. Being very keen to implement their projects, these schools took up the task independently. Convincing the parents, arranging for funds, getting children and teachers to spend extra hours in school – all this became possible even without Ministry support. That is because the teachers were highly motivated and wanted to see their project become a reality.

Even when an experimental school project is accepted by the Ministry, there is a systematic method towards implementing it. Three focus areas in the school are identified and the change is implemented in these three areas. Gradually, the change spreads to other departments and eventually to the entire school.

At the end of the experimental process, the school develops its own model of innovation. It then becomes a centre for dissemination of innovation – meaning that it can train teachers from other schools to apply the same method.

Experimental schools are thus nothing but prototypes for innovation. If the innovation is successful, they become models. Other schools can bring in innovation by replicating these successful models.

Paradoxically, the projects that do not succeed are equally valuable. Replicating success is one of the best ways to learn; at the same time it is also necessary to analyse and learn from failed projects. This unusual yet important fact was pointed out by Prof. Zvi Liraz, one of the experts who taught the course. He
shared with us his own personal experience. He had started a school but his school had to be shut down. Learning from this failure, he has today become a teacher educator – one of the best in his field.

**The teacher as entrepreneur**

From all these examples, it is clear that to inculcate entrepreneurship in students, the teacher must himself/herself be an entrepreneur. A new educational methodology is very similar to a business venture. It identifies a need among students and offers a new method for fulfilling the need. Educational experiments can be described in terms of the **Innovation Triangle**. They consist of three important factors:

- The need;
- A solution for the need;
- The stakeholders – in this case students, parents, the school and the community.

The teacher should convince the stakeholders that there is a need and that his/her project is a viable solution for this need. This process is similar to a product presentation made before investors.

**Innovation can be kickstarted when teachers begin to think like entrepreneurs.** In order to become an entrepreneur, what qualities should a teacher possess?

It is not sufficient to only have practical tools of entrepreneurship like the models we discussed before. An entrepreneur needs to develop a specific emotional attitude, specific ways of thinking and behaviour.

**The most important tool for teachers is creativity or thinking out-of-the-box.** Again it is important to note that creativity is a learned skill which is improved by practice. A creative idea is one that is:

- **Original** – something that did not exist before;
- **Improvement** – a significant improvement to an existing idea;
- **Flexible** – can be adapted to other fields;
- **Open to possibilities** – of future development.

In the experimental schools, we observed programmes specifically designed to boost the students’ creativity. E.g. in Afek School, students had created artwork with papier mache and recycled waste. In Kaplan School, the students were
designing playgrounds with suitable games for their disabled classmates. Such projects inculcate in students the ability to think outside-the-box.

Creativity can be simply explained in two steps:

- Identifying a need or a problem
- Using imagination to find a solution for the problem.

For enhancing creative thinking, we were given another practical tool called Mind-Mapping. Here is an example of a mind-map. A mind-map is a visual representation of all our ideas on a subject. We can list down the thoughts in the form of key words or images. Then, we can draw lines to connect related ideas.

Mindmapping is useful for clarifying our thoughts about a complex problem. I teach English language and literature and I have observed that students enjoy writing essays and character analyses if they have created a mind-map first.

The biggest advantage of the mindmap is that it frees our ideas from linear thinking patterns. While drawing the map, we discover relations between ideas that previously appeared unrelated. This can often spark off creative possibilities.

Besides being creative, an entrepreneur is also:

- Self-motivated;
A calculated risk-taker;
Pro-active;
Sees problems as opportunities;
Team player;
Good communicator.

Let us focus on the last two skills which can really benefit Indian students.

**Teamwork** means co-ordinating with a group of people who have diverse skills and interests. Students can be assigned group projects to give them experience of teamwork.

In Kaplan school, we observed a rather daring experiment where students of different grades were allowed to work together on a project. Their ages and knowledge levels were different and yet the experiment was a success. The older students were learning leadership skills while the younger ones were getting information from their seniors. The team was actually benefiting from its diversity.

The other crucial skill for our students is **effective communication**. An entrepreneur can sell an idea only if he/she is a good communicator. Most experimental schools we visited had put a strong emphasis on speaking and writing skills. Huberman School has several interesting projects – they run a debate club where students learn rhetorical skills; they have their own small radio station run by the students; their students also write blogs to improve their English. Yadlin Academy publishes the writings of its students in the form of a book. The core aim is to equip students with the skills to convey their ideas and convince the audience.

Teachers often have creative ideas and an entrepreneurial attitude. What they need in addition, is a favourable social climate. **Schools should become more open to considering new ideas.** They should encourage teachers to interact with experts to develop their ideas. **Creating a network of peers for sharing projects and experiences is very important.** It works as a support system for teacher entrepreneurs. Lastly, **we must all learn to accept and learn from failure.** Fear of failure is what prevents most teachers from implementing their creative ideas.

This brings me to the last aspect of entrepreneurship that I would like to share with you all i.e. **Social Entrepreneurship.** During the course, I learned that entrepreneurship is not always aimed at making profits. Social business ventures are launched with the aim of helping society. One
example would be Dog Adoption Day organised by the students of Kaplan School where they encouraged their classmates to adopt dogs from a shelter.

The most important resource for social business ventures is volunteers. We observed schools making creative use of volunteers to help in their experiments. The students of Ein Karem School run a herbal cosmetic manufacturing laboratory. The laboratory is managed by a retired professional from the industry. Another example was a popular rock singer who volunteers to teach music to children in the local school.

This model can be easily adapted to the Indian context. We have a large population; also the age of retirement at 60 is lower than that of Israel at 65. Schools can thus find a huge pool of professional talent to help in training students and teachers.

Our centre Director, Ms Yudith Rosenthal gave us a useful system for attracting volunteers for a project.

- The first step is to speak with a large group of people who can contribute to the project.
- Second, from this group, a small number of really interested volunteers is targeted. These volunteers are trained and they start working on the project.
- In the third step, these volunteers are asked to bring in one or two interested friends who can then be trained. More and more volunteers can thus be brought in by moving outward in concentric social circles.

She identified 5 important aspects for attracting volunteers

- Show the benefit;
- Offer specific, meaningful work;
- Realistic commitments;
- Flexibility;
- Motivation.

The course on innovation and entrepreneurship at the Aharon Ofri Centre exposed me to many such practical models. To sum up the most important learnings from the course

- Creativity and entrepreneurship are skills that can be developed;
- Effective change is possible through internal motivation and the bottom-up approach;
- In order to train students, teachers must themselves think like entrepreneurs.

Adapting these models to the Indian context brings us face-to-face with many challenges:

- Lack of funding;
- Lack of infrastructure;
Disparate student-teacher ratio, one teacher being responsible for several students;
- Economic disparity;
- Socio-cultural diversity.

However, entrepreneurship focuses on finding creative solutions to problems. I believe that we, as educators can, in our own small ways, integrate innovation and entrepreneurship into education. Small steps in this direction have already begun – for instance, the University Grants Commission recognised 13 new subjects to be taught at college level, and Entrepreneurship is one of them.

By bringing innovation and entrepreneurship skills at school level itself, we can better equip our students for the future.
About the Authors

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Dr Rege, has close to 30 years of experience in education, 13 years as the Principal. She also has industrial research experience in multinational companies.

As a Member Coordinator of the Peer Team of NAAC, Dr. Kavita has been involved with assessments of colleges in Kerala, Karnataka, AP, Bihar, Jharkhand, UP, Gujarat, Rajasthan, Himachal Pradesh & Assam. In 2004, the College won the Best Institution Award of NCERT for its +2 level vocational course. Dr. Kavita was also responsible for starting a Centre for the Institute of Distance Education of the University of Mumbai at Sathaye College.

Suchita Deshpande  
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Suchita has been working for over 15 years with Loksatta. Education and Defence are her specific subjects of writing. She has even covered war-like situations at our Kashmir Border twice, once at the time of Kargil war, and another time in 2001. Presently, she coordinates Loksatta's Career and Education supplement.

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Gayatri has visited Israel twice to understand their education system, once prior to attend a training session on Holocaust education.
About ORF Mumbai

Observer Research Foundation is a multidisciplinary public policy think tank started in Delhi in 1990 by the late Shri R K Mishra, a widely respected public figure, who envisaged it to be a broad-based intellectual platform pulsating with ideas for nation-building. In its journey of over twenty years, ORF has brought together leading Indian policymakers, academics, public figures, social activists and business leaders to discuss many issues of national importance. ORF scholars have made significant contributions towards improving government policies, and have produced a large body of critically acclaimed publications.

Beginning 2010, ORF Mumbai has been re-activated to pursue the foundation’s vision in India’s financial and business capital. It has started research and advocacy in six broad areas: Education, Public Health, Urban Renewal, Inclusive and Sustainable Development, Youth Development and Promotion of India’s Priceless Artistic and Cultural Heritage. It is headed by Shri Sudheendra Kulkarni, a social activist and public intellectual who worked as an aide to former Prime Minister Shri Atal Bihari Vajpayee in the PMO. ORF Mumbai’s mission statement is: Ideas and Action for a Better India.

ORF Mumbai’s ongoing initiatives:

- ORF Mumbai is soon going to launch the Mahatma Gandhi Centre for SanitationNow, dedicated to research, advocacy and leadership training in sanitation in particular, and in general, to eco-friendly and holistic development of slum communities in urban India.

- ORF Mumbai has facilitated the creation of the Mumbai Transport Forum, a broad-based platform of transport experts, academics and advocacy groups working towards improving the public transport systems of Mumbai.

- ORF Mumbai has collaborated with Ratan J. Batliboi Consultants Private Limited (RJBCPL), one of India’s top architects and town planners, to initiate projects for the revitalisation of Mumbai’s freedom movement heritage. The project is based on the tenets of ‘Placemaking’ – a term for creative redevelopment of multi-use public places.

- In the area of public health, ORF Mumbai is working for a sustained campaign for TB control in Mumbai through public-private-people partnership.

ORF Mumbai’s India-Israel Innovation Initiative

Israel has emerged as a powerhouse in innovation and hi-tech industries in the recent past. India, on the other hand, together with China, has become an engine for global economic growth. India and Israel share common values of democracy and entrepreneurship. Both are knowledge-driven societies. The economies of both are complementary to each other. In the last decades, Indo-Israel cooperation has grown exponentially, with bilateral trade expected to soon cross USD 5 million. This special relationship has a long way to go, particularly in the
field of joint R&D and innovation. Against this backdrop, ORF Mumbai has established the India-Israel Innovation Initiative. This is an alliance comprising academia, public and private sector companies, and think tanks from India and Israel, for a deeper engagement with the subject of innovation-led cooperation between the two countries.

ORF Mumbai’s Initiatives in Education

CHANGE AGENTS FOR SCHOOL EDUCATION AND RESEARCH (CASER)

ORF Mumbai has launched a neutral, broad-based platform called Change Agents for School Education and Research (CASER) for working towards connecting excellence, research and advocacy to strengthen the school education system, making it more holistic and positively affect millions of school children, irrespective of their background or constraints.

CASER is a platform that brings together several passionate educationists, educators and teachers, education researchers, representatives from the Government, civil society organisations, service providers, technologists, students, parents and volunteers to connect excellence and research, provide inputs on policy, implementation, conduct roundtables, expert talks, seminars and workshops to contribute towards strengthening the school education system and making it more child-centric and holistic for the millions of children in the state of Maharashtra.

https://www.facebook.com/ORF.CASER

CHANGE AGENTS FOR HIGHER EDUCATION AND RESEARCH (CAHER)

Change Agents for Higher Education and Research is ORF Mumbai’s new and novel initiative in the space of higher education in India. As the Government prepares to work towards improvement in the quality of higher education delivery, as part of the new National Higher Education Mission (RUSA), we suggest how this can be achieved in a structured and scalable way through engaging ‘Change Agents for Higher Education and Research (CAHER)’.

There are two levels at which ORF Mumbai will try to bring about transformation - institutional and individual. We will document and showcase widely the work of individual change agents who are hitherto unsung, such as faculty, principals, and other educators and also the achievements of autonomous institutions such as College of Engineering Pune (CoEP).

CAHER, anchored at ORF Mumbai, which will enable change agents to come together to create a multiplicative effect in the impact of their work. The focus of CAHER will be on quality academics, on capacity building among all stakeholders, and on creating an inclusive and participative movement. CAHER will engage deeply with State governments and with managements and faculty from universities and colleges to stimulate discussion and debate on innovations in higher education delivery.

https://www.facebook.com/ORF.CAHER
ORF Mumbai’s Publications on Education

1. Thinking Out of the Box in Education
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“Education is not the learning of facts, but the training of the mind to think.”

- Albert Einstein
THINK OUTSIDE THE BOX

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