Dayalbagh Educational Institute (Deemed-to-be-University) Distance Education Programme

DEI-DEP MAGAZINE 2022-23

DAYALBAGH EDUCATIONAL INSTITUTE
(DEEMED-TO-BE-UNIVERSITY)
DAYALBAGH, AGRA-282005

DEI – DEP MAGAZINE COMMITTEE

●

Patrons

Prof. C. Patvardhan

Prof. V.B. Gupta

●

Editorial Advisors

Prof. S.K. Chauhan

Prof. J.K. Verma

●

Editorial Board

Prof. V. Prem Lata

Dr. Shashi Srivastava

Dr. Bani Dayal Dhir

Mrs. Reena Ahuja

●

Design & Layout

Dayalbagh Press, Dayalbagh, Agra

●

Publisher

Centre for Online & Distance Education, DEI

Dayalbagh, Agra

Note: The Views expressed in the contributions appearing in this Annual Magazine are those of the authors. **-- Editorial Board**

CONTENTS

Title/Author Page No.

AGROECOLOGY AND PRECISION FARMING

Sant Saran Bhojwani
TFA, R.S.S Sabha, Department of Agroecology-cum-Precision Farming,
Dayalbagh, Agra- 282005, India

1. Introduction

Agriculture is the art, science and business of growing crops and rearing animals for food, feed, fuel, fibre and raw materials for agro-industries, including pharmacy. It is a vital activity for the survival of life on this planet. Agriculture is also a large employment sector.

During early history humans survived as forager or food hunter-gatherer. The nomad lifestyle of man is said to have changed about 12,000 years ago in the Neolithic era when he spotted sites where food plants were growing and settled around them at many places in different parts of the globe and started protecting these plants from animals. However, it was around 10,000 years back that agriculture started with the domestication of useful plants and animals. With the passage of time the cultivation practices improved, and new crops were introduced to meet the food and other requirements of the society. This article describes the evolution of farming practices according to the need of the time and its relevance to agriculture in Dayalbagh, Agra. It would be pertinent to describe the status of Agriculture in Dayalbagh before discussing technical aspects of Agroecology and Precision Farming.

2. Agriculture in Dayalbagh

Foreseeing shortage and soaring prices of food commodities in the country due to the Second World War that broke out in 1939 and the 'Quit India' movement in 1942, Revered Mehtaji Maharaj, the sixth Spiritual Leader of Radhasoami Faith, launched "Grow More Food" campaign in Dayalbagh.

The first task to start agriculture in Dayalbagh was to convert the hostile terrain of Dayalbagh land, full of ravines, mounds, and thick thorny bushes and sarkanda into arable land. One morning, in 1943, Revered Mehtaji Maharaj took with Him a few dozen men to an undulated piece of Land, full of shrubs and began a vast exercise to clear and level the land with spades and make it cultivable. As a result of sustained hard work by the residents of Dayalbagh and the pilgrims visiting Dayalbagh, there is a lush green farm of 1250 acres yielding various cereals (wheat, rice, barley, maize, bajra), pulses (chickpea, lentil, pigeon pea, mung bean), oil crop (mustard), seasonal vegetables, and green fodders for the Gaushala of Dayalbagh. In addition, Dayalbagh has Fruit Orchards with banana, mango, guava, orange and amla plantations. The herbal party grows some herbs useful to the Dayalbagh Pharmacy. The horticulture party looks after the beautification of the colony. From 1955 ladies are also

participating in daily farm operations. On the Dayalbagh Agricultural Farm, called Agroecology-cum-Precision Farm (DoA-cum-PF), cultivation is purely organic, and crops are raised in all the three seasons (Rabi, Kharif, and Zaid).

Branches of Amla at fruiting stage from Dayalbagh orchard at Chandmari-ka-Tila

Mustard field of Dayalbagh with heavy bearing

A unique feature of Dayalbagh agriculture is that most of the operations here are performed by the residents of Dayalbagh as selfless service (Seva). The daily field work has become a way of life for Dayalbagh residents and the devotees living in colonies around Dayalbagh. They daily put in hard work in two shifts of 4 hrs each, throughout the year, be it scorching summers, severe winters, or monsoon rains. In return, food grains are provided to them at almost the cost price and, to the needy, even below the cost price. Besides a large General Party, which participates in activities such as transplantation of paddy seedlings, weeding, harvesting, and threshing, there are smaller well-organized groups for specified works, such as Composting party, Fodder party, Gull party (Water channels party), Herbal party, Horticulture party, Wood Chopping party and Special Field security Group. Every Sunday hundreds of students come to the fields and actively participate in the work.

Harvesting of wheat by the members of the Dayalbagh community

The Revered Leaders of the Radhasoami Faith have attached great importance to Agriculture as it serves to achieve multiple objectives. It instills virtues of hard physical work, teaches Satsangis (devotees of Radhasoami Faith) and the students to till and toil with their own hands, and eat only that they grow and earn by the sweat of their brows. In Dayalbagh philosophy, field work is seva (selfless service) of the highest order as it includes seva of Tan (Body), Man (Mind), Dhan (Monetary) and Surat (Spirit) and is the easiest way in kalyug, period of stress and turbulence, to achieve the ultimate goal of Parmarath, that is to shed the load of karmas leading to freedom of spirit from the cycle of birth, death and rebirth. The serene ambience of the farm with the presence of the Waqt / Present Sant Satguru, and audio playing the chanting of Holy Name, verses from Holy books, prayers in Hindi, English or Sanskrit throughout the field work provides perfect environment for raising one's level of consciousness. During the Relative March-past, after field work, everyone is showered with His Grace and Mercy and is blessed with Darshan of the spiritual leader from close quarters besides deriving immense internal benefits accruing from Eye-to-eye contact with their All Gracious and Ever Merciful "Acclaimed" Waqt Sant Satguru.

It is a sight for a visitor to Dayalbagh to watch hundreds of young and old , men and women, and now even infants and toddlers of the age group of 3 weeks to 8 years working together irrespective of their , social or financial status, class or caste, with singular objective of earning the pleasure of their spiritual master.

In 1990, under the Guidance of the seventh Spiritual Leader of Dayalbagh, Revered M.B. Lal Sahab, an intensive drive was undertaken for planting trees,

beautifying, and improving the environment in the colony, and making it pollution-free. R. S. Sabha undertakes extensive Tree Plantation programme every year in monsoon season to raise the forest cover of Dayalbagh and has prepared a proposal to develop Dayalbagh and its surrounding areas as an Eco-village. In 2014 the Ministry of New and Renewable Energy approved and financially supported the project to develop Dayalbagh as Green Campus. In 1993-94, a beautiful park with a waterfall was developed in Phalbagh (a fruit orchard). Recently, Biodiversity Parks, called Anupam Upvan, have been established for beautification, recreation, education and reclamation of poor lands.

In the regime of the "Acclaimed" 8th Waqt / Present Sant Satguru of the Radhasoami faith, Dayalbagh, Revered Prem Saran Satsangi Sahab, Dayalbagh agriculture has gained a scientific base, and the Dayalbagh Agroecology-cum-Precision Farm has acquired the status of Karmabhumi (Land of Actions) of Dayalbagh. Besides agriculture operations, several Social, Cultural, Educational, and Spiritual activities are organized on the farm in the presence of the Spiritual Leader so that all the Satsangis, while working in the field, can enjoy these activities. Even during COVID19 farm activities continued normally, with the residents strictly following the recommended precautions.

In 2017, Superman Evolutionary Scheme of Satsang was launched, under which the infants and toddlers of the age group of 3 weeks to 8 years come to the fields very early in the morning and in the evening, with their mother or father, and attend all spiritual activities of the faith including Satsang and Seva and enjoy the bliss of fresh air. That helps to acclimatize them to the rigours of life from the early age and imbibe the values and sanskara of Dayalbagh community.

3. Agroecology

As the technical base of Agroecology is organic farming, it is considered pertinent to describe organic farming and its evolution from Green Revolution before considering the principles and aims of Agroecology.

3.1. Green Revolution

Until mid-1960s the agriculture in India was based on natural inputs. In 1942-1943 Bengal famine occurred due to shortage of food, which saw the death of 2-3 million people. After independence organic farming with use of organic fertilizers, manual operations, low-yielding local varieties, and indigenous knowledge (organic farming) could not meet the food requirement of growing

population of India. Loss of west Punjab (wheat granary) and East Pakistan areas (rice bowl) during partition of India further aggravated the problem of food shortage. By mid 1960s the population growth outstripped food production. The problem was compounded by the droughts during 1964-1970, and the condition became precarious, compelling India to import food grains. In 1966 10 million tons of wheat was imported from USA under the PL480 (Public Law 480) programme (Kumar, 2016). The crisis was so severe that the then Prime Minister of India appealed to the public to miss a meal every week.

To preserve our self-esteem and avoid political pressures from other countries, Green Revolution was invented by efficient research of our scientists, co-operation and hard work of the farmers and friendly government policies. The scientists developed dwarf high yielding varieties (HYV) of wheat and rice, and the Indian farmers were provided seeds of HYV, adequate irrigation facilities and fertilizers. With the commencement of Green Revolution there was a quantum jump in wheat production from 10 m tons in 1962 to 17 m tons in 1968. India became self-sufficient for food grain in 1971, and now it is the second largest wheat producing country in the world, with 2023 production of 113 Mt (Economic times).

Green revolution of mid-sixties was a scientific achievement as well as survival strategy. It changed the status of India from food deficient to food surplus country. However, intensive agriculture with Green Revolution tools destroyed the fertility of the soil and polluted water with toxic chemicals causing serious ailments, and many birds and insects became endangered. The root cause of damage to the soil is the greed of man that motivated him to apply excess fertilizer and generous use of water to boost production. Wanton use of water depleted underground water. In this context the book “Silent Spring” by Rachel Carson (1962), a biologist turned science writer, is worth reading. After enormous resistance from agrochemical industrial giants and their powerful lobby, she succeeded, before dying of cancer, to get nation-wide ban imposed in USA on the use of DDT (non-biodegradable) as a pesticide in agriculture.

M.S. Swaminathan, regarded as father of Green Revolution in India, had foreseen the possible risks from indiscriminate use of chemicals, unscientific tapping of groundwater and warned against it as early as 1968 in his Presidential address to the Agriculture Section of the Indian Science Congress in Varanasi. A relevant part of his address is reproduced here for the benefit of the readers.

'Exploitive agriculture offers great dangers if carried out with only an immediate profit or production motive.”----“Intensive cultivation of land without conservation of soil fertility and soil structure would lead, ultimately,

to the springing up of deserts. Irrigation without arrangements for drainage would result in soils getting alkaline or saline. Indiscriminate use of pesticides, fungicides and herbicides could cause adverse changes in biological balance as well as lead to an increase in the incidence of cancer and other diseases, through the toxic residues present in the grains or other edible parts. Unscientific tapping of underground water will lead to the rapid exhaustion of this wonderful capital resource left to us through ages of natural farming."---"Therefore,the initiation of exploitive agriculture without a proper understanding of the various consequences of the changes introduced into traditional agriculture, and without first building up a proper scientific and training base to sustain it, may only lead us, in the long run, into an era of agricultural disaster rather than one of agricultural prosperity."

3.2. Organic Farming

For sustainable agriculture it has become essential to arrest further deterioration of the physical, chemical, and biological condition of the soil and pollution of environment by refraining from the use of synthetic agrochemicals. Governments and Scientists, are, therefore, promoting natural or organic farming. In 2004 the Government of India launched the "National Project on Organic Farming" co-ordinated by the National Centre for Organic Farming, Ghaziabad. The allocation for organic farming in the Union budget for 2020-2021 was raised to Rs 687.50 crores from Rs 461.35 crores provided in the previous year budget (Kumar, 2019; cited by Yadav et al., 2020).

Northbourne (1940) coined the term Organic Farming and defined it as ecological production management system that promotes and enhances biodiversity, biological cycle, and biological activity. Das et al. (2020) defined it as socially, ecologically, and sustainable food production system. In practice, organic farming prohibits the use of industrial chemicals as fertilizers, pesticides, herbicides, and growth regulators, and Genetically Modified (GM) and fungicide treated seeds and aims at restoring and preserving the fertility of soil for sustainable agriculture.

Organic farming is eco-friendly and sustainable, and, therefore, also termed Ever Green Revolution. Organic food is not only safe for human consumption but also superior to the conventional food in terms of its nutritional and organoleptic qualities (Barik, 2017; Theuer, 2006) and longer shelf-life (Das et al., 2020).The organic produce can fetch premium price in the market.

Nitrogen, phosphate and potash (NPK) are essential elements for plant growth and development, which in GR system are supplied in the form of industrial inorganic salts. In organic farming the basic nutrients are provided by

application of sufficient quantities (2.0-2.5 tons per acre) of quality compost and introducing in the soil some useful native microorganisms as biofertilizers. The natural populations of these microbes have drastically declined by liberal use of toxic agrochemicals over the past many decades. Therefore, when shifting to organic farming it is essential to introduce effective strains of these microbes into the soil (Rhizosphere Engineering). These rhizobacteria and mycorrhiza provide nutrients to the plants by fixing atmospheric nitrogen, solubilising bound phosphate, Zinc and calcium in the soil and facilitate their availability to the plants. The microbes also secrete plant growth hormones (Pseudomonas) for increased sustainable production in an eco-friendly pollution-free environment. Some of these microbes (Trichoderma) also protect the crops from seed and soil borne diseases (Krishnaprabu, 2019). It takes at least 3 years of continuous organic farming to transform a traditionally cultivated farm into an organic farm (Azam and Shaheen, 2019).

3.2.1 **Rhizosphere Engineering:** Many systems of organic farming are described in the literature, such as (1) Zero Budget Natural Farming (ZBNF), promoted by Shri Subhash Palekar (Palekar, 2016, Dev Vrat, A. 2018; Bishnoi and Bhati, 2017), (2) Application of Waste-decomposer/ Biofertilizer developed and promoted by the National Centre for Organic Farming (NCOF), Ghaziabad (Chandra et al., 2004, Chandra, 2005), and (3) Inhana Rational Farming Technology (IRFT), promoted by Inhana Organic Research Foundation, Kolkata (Barik et al., 2015; Barik, 2017). Some of these systems suggest that the introduction of microbes in the rhizosphere is sufficient for raising the crops while others recommend application of compost/Farmyard Manure/vermicompost in addition to the microbes. Oil cakes (mustard, castor bean etc), rich in nutrients, are also good biofertilizer.

In Dayalbagh, farming is 100% organic. Compost/vermicompost, in addition to microbes in the form jeevamrit, Beejamrit and Bio-decomposer (commercial consortium of some useful microbes) are applied to make the soil fertile. Bio-slurry, a by-product of Biogas plant and rich in Nitrogen (1.4-1.8%), Phosphate (1-1.2%) and Potash (0.89-1.2% %) (Kumar, 2004; Kumar et. al., 2015; Ganvir and Deshmukh, 2022) promotes plant growth. Green maturing is another way used to enrich soil.

The basic principle of all the three systems of organic farming described above is revival of useful native microflora of the soil, which supports plant

growth and development and protects it from many soil born pests and diseases.It is worth comparing the three systems described above for their effectiveness, convenience, economy and hygeine before adopting one for large scale use.

Constraints. Despite the distinct advantages of organic farming (quality of food, feed, and environment), there is apprehension among the scientists that organic farming, with yield reduction in the range of 25-40% and, in some cases even more (Ganesan and Nair 2018; Taneja, 2017, 1999), lack of effective biopesticides and bio-fungicide, and the problem of weed management, may lead to starvation (Sabhlok, 2022, Saufert et al., 2012, Aulakh and Ravishankar, 2017). Another constrain with organic farming is that it is labour – Intensive. It is, therefore, suggested that the transition from conventional to organic farming should be gradual and well planned, taking into consideration the lessons from Sikkim (Das and Bhattacharya, 2018) and, more recent, Sri Lanka (Ravichandran, 2022) experiments. Mandatory 100% organic farming in Sri Lanka reduced the yield to 60% and caused famine-like situation in the country. The economic turmoil in the country caused public protests and the Government had to clamp emergency (Ravindran, 2022).

Prospects. The agriculture scientists should gear up their research to develop and make available to the farmers comprehensive agronomic packages for organic farming that are safe, complete, convenient, and economical and are farmer friendly. The available crop varieties are genetically designed to respond to chemical fertilizers for higher yields. It is, therefore, essential to breed varieties suitable for organic farming. The scientists should also work to invent effective and reliable bio-pesticides and bio-fungicides.

To reduce the shortfall due to pure organic farming possibility of developing an integrated system should be examined. In such a system use of Toxic agrochemicals like pesticides and herbicides should be excluded and the quantities of inorganic fertilizers (NPK) reduced to 50% or 25% of the recommended amount and the balance nutrient requirement of the crop met by supplementing it with compost/FYM. Such an integrated system of farming, recommended in the Inhana Green Farming system, has been successfully used for potato (Rahman et al, 2020) and rice (Seal et al., 2017). At lower levels, the fertilizers may improve yield without causing degradation of soil. However, this proposition requires scientific scrutiny.

For organic farming to be successful, the mindset of the consumers has also

to be changed. They were used to looking for fruits and vegetables that are cheaper and attractive. In contrast, the organic food, at present is expensive and not so attractive. Simply labelling organic food will not change human mindset which needs to be educated on the environmental and health benefits of consuming organic food.

3.3. Principles of Agroecology

There is general opinion that the global food system is not delivering good nutrition for all and is causing environmental degradation and loss of biodiversity, such that a profound transformation is needed to meet the challenges of persistent malnutrition and rural poverty, aggravated by the growing consequences of climate change. With this background and several meetings with different groups in different countries, Food & Agriculture Organisation (2018) developed 10 interlinked and interdependent elements of Agroecology. The European Agroecology has suggested 13 elements, which are aligned and complementary to the 10 elements developed by FAO (Wenzel et al., 2020).

Agroecology is more of a concept than a new farming practice. It takes into consideration ecological, economic, and social aspects of agriculture. Organic farming is at the heart of Agroecology. In Europe most of the agroecology practitioners are organic farmers in the first place. Organic agriculture is a production system that sustains the health of the soil, ecosystems, and people. According to the concept of agroecology farming system should not only be yield-centric but also lay equal importance on food consumption (quality and nutrition) and welfare of the farmers and should have built in resilience. Agroecology also lays emphasis on innovation, and generation and sharing of knowledge, making education and research an essential component of this system. Local knowledge of the farmers and the educated technocrats who have ventured into organic farming after giving up their highly paid jobs should be a valuable contribution in achieving the objectives of Agroecology. The Agroecology principles may also help to achieve many of the 17 SDGs, especially SDG 2 on zero hunger.

Principles of Agroecology (after Wenzel et al., 2000)

1. **Recycling:** Preferentially use local renewable resources and close, as far as possible, resource cycles of nutrients and biomass.
2. **Input Reduction:** Reduce or eliminate dependency on purchased inputs.
3. **Soil heath:** Secure and enhance soil health and functioning for improved plant growth, particularly by managing organic matter and by enhancing soil biological activity.

4. **Animal Health:** Ensure animal health and welfare.
5. **Biodiversity:** Maintain and enhance diversity of species, functional diversity and genetic resources and maintain biodiversity in the agroecosystem over time and space at field, farm, and landscape scales.
6. **Synergy:** Enhance positive ecological interaction, synergy, integration, and complementarity amongst the elements of agroecosystems (plants, animals, trees, soil, and water).
7. **Economic Diversification**. Diversify on-farm incomes by ensuring small-scale farmers have greater financial independence and value addition opportunities while enabling them to respond to demand from consumers.
8. **Co-creation of Knowledge.** Enhance co-creation and horizontal sharing of knowledge including local and scientific innovation, especially through farmer-to-farmer exchange.
9. **Social Values and Diets.** Build food systems based on the culture, identity, tradition, social and gender equity of local communities that provide healthy, diversified, seasonally and culturally appropriate diets.
10. **Fairness.** Support dignified and robust livelihoods for all actors engaged in food systems, especially small-scale food producers, based on fair trade, fair employment, and fair treatment of intellectual property rights.
11. **Connectivity.** Ensure proximity and confidence between producers and consumers through promotion of fair and short distribution networks and by re-embedding food systems into local economies.
12. **Land and natural resource governance.** Recognize and support the needs and interests of family farmers, smallholders and peasant food producers as sustainable managers and guardians of natural and genetic resources.
13. **Participation.** Encourage social organization and greater participation in decision-making by food producers and consumers to support decentralized governance and local adaptive management of agricultural and food systems.

The aims of these principles are to: (1) improve efficiency in the use of resources; (2) conserve, protect and enhance natural ecosystems; (3) Minimum reliance on external inputs, (4) protect and improve rural livelihoods, equity and social well-being; (5) enhance the resilience of people, communities and ecosystems; (6) recognize and foster the multi functionality of farms, namely nutritional, economic, social, and cultural and (7) promote good governance of both natural and human systems.

The organic farming of Dayalbagh meets most of the principles of Agroecology. It is sustainable, ecofriendly, farmer friendly, consumer friendly, involving the participation of the residents of the colony and runs on the philosophy of waste

nothing. The quality food, produced in the spiritually charged environment, is provided to the residents, raw or cooked, at almost the cost price and, in some cases, below the cost price in line with the principles of Agroecology. The inputs are derived from the cow dung and urine from the cattle sheds of our own Gaushala and crop residues are ploughed into the soil instead of burning them to avoid pollution. Green manuring is done to improve soil fertility.

4. Precision Farming

The latest buzzword in agriculture is Precision farming (PF), also called Smart Farming (SF; Mondal et al., 2011; Liu et al., 2020; Hakkim et al., 2016). Global population is estimated to reach 9.6 billion by 2050 (Department of Economics and Social Welfare, U.N.). To feed them, food production needs to be increased about 70% of the present level from the area already under cultivation because additional land for cultivation may not be possible due to rapid urbanization. The only way to avoid starvation then is to increase productivity of our lands, PF is regarded as the future of agriculture management which aims to make the operation more economical and efficient while increasing productivity. It is sustainable under sudden change in climatic factors, like unpredictable rains, drought, floods, and temperature fluctuations (McFadden et al., 2023). Whereas during Green Revolution progress in agriculture was by genetic improvement of crops, use of agrochemicals and improved mechanization, in Precision Farming it is by digital devices and automation.

PF is technology-enabled, data driven approach to farming management. It is characterized by precise application of traditional inputs with respect to soil, crop and weather needs to improve productivity, quality, and profitability in agriculture.

GPS, remote sensing technologies, unmanned aerial vehicles (UAV) and satellite images are employed to gather information about all important issues, like weather forecast, environment change, soil condition, fertilizer and water requirements of different fields, pest infestation and disease, if any, and plant health. The information is subjected to analysis using suitable crop management software and, accordingly, precise and variable actions (VRT; Variable Rate Technology) are taken using modern tools with remote controls. Application of fertilizers and irrigation is according to the requirement of the soil, nature of the plant and the weather conditions rather than uniformly to all fields as done in traditional farming (Ahmad and Mahdi, 2018). PF devices also provide alerts on pest attack and disease incidences and their precise locations so that appropriate treatments are applied timely only to the affected areas of the fields. Precise and

controlled application of inputs and taking timely measures to combat pest and disease attack result in considerable savings on the inputs and losses of the crop. VRT is a special feature of PF. Agriculture robots, also termed Agrobots, are being introduced to replace human labour for irrigation, application of fertilizers, pesticides, and fungicides, and harvesting with precision, reducing the costs on human resource (Rajmane et al., 2020; Bechar, 2021). Self-driven tractors, provided with RTK (Real Time Kinematic) and GPS (Global Positioning System) technologies can do automatic sowing at desired density, distance, and depth without a man. The robots are also trained for automatic weeding (Kise et al., 2001). Thus, the main objective of PF is to improve yields, optimize the use of inputs and reduce labour costs using high tech devices and automation and, thus, make agriculture operation economical and an attractive profession.

In developed countries PF is being practiced for long, and it is a rapidly expanding system of agriculture management. However, there are many challenges in adopting the PF system in developing countries. The PF set-up is very costly, and it requires expertise with knowledge about the tools and technology. It would also require creating awareness among the farmers about the long-term benefits of the system. Since a large majority of our farmers are poor with small holdings, the role of state and central government becomes critical in harnessing the benefits of this revolution.

It is encouraging that Indian Agricultural Research Institute, New Delhi has come up with a network project on PF. Some research institutes, like ISRO, (Ahmedabad), M.S. Swaminathan Institute (Chennai), and IARI (New Delhi) are working towards creating awareness about PF among the farmers through workshops and training programmes and are testing various devises for adoption under the India conditions. In India attempts have been made to develop some software platforms, such as CROPIN, and mobile Apps to predict and monitor agriculture fields, and automation of temperature and irrigation control in glasshouse cultivation is common.

Dayalbagh is practicing PF in natural way, without disturbing the ecology to achieve high yields, using own seeds, inputs prepared locally with cow dung and urine from own gaushala. To maintain soil quality, manure from the biomass of the animal (compost, FYM, and vermicompost), Green manuring, Bio-slurry, and crop rotation between non-leguminous and leguminous crops, are in practice.

Basic philosophy of Dayalbagh agriculture is to generate Seva opportunities for the community and employment for the needy. Therefore, automation that would cause unemployment of agriculture labour, and implementation of some other elements of PF are avoided. However, soil testing is undertaken periodically to

determine the nutritional and water requirement of different fields, and fertilization, and irrigation are done according to the need of the crop, nature of soil and weather conditions. Treated wastewater from STP is used for irrigation of agronomic crops, and pressurized sprinklers and drip irrigation for fruit crops and indoor cultivation are in practice to economies on the use of precious water.

Shift from water gulping crops like wheat and rice, to crops that require less water, such as millets, oats, and barley, should also help in conserving water. Direct sowing of paddy is another approach being tried to reduce water consumption. Introduction of aerial surveillance of the standing crops by unmanned drones for periodic assessment of growth of the plants, their maturation status, any abnormalities or incidence of pest's infestation or disease outbreaks for timely localized appropriate action is being explored. Air quality of the farm is maintained by avoiding burning of crop residues.

Dayalbagh fields of wheat and Paddy at the fruiting stage

5. Concluding Remarks

Agriculture has undergone three revolutions, Green Revolution (GR) of late 1960s, Evergreen Revolution (Organic farming) of 2000, and Precision Farming (PF). With GR India turned from a deficient to a surplus country in food grains. However, to offset the ill effects of GR on ecology and human health, Organic Farming gained importance. Agroecology is a concept based on organic farming and ecological, economic, and social considerations. An important element of Dayalbagh agriculture is Waste Nothing. If, Avoid Food Wastage, is added as the 14th element of agroecology and adopted by developed countries, 33% of the food that is lost from farm to the dining table (FAO) can be saved and food scarcity could be considerably reduced without doing anything else.

Precision farming, based on high-tech devices to gather information on all key aspects of agriculture, their analysis and timely appropriate and site-specific action with remote controls, coupled with automation, can enhance the efficiency of the inputs, and improve yields without adversely affecting the ecology. However, there are many challenges in adopting this system in developing countries. The initial investment in this system being very high, limited automation and use of sensing and analytical tools have been introduced. PF tools also require expertise for using and maintaining the devices. Moreover, so far, the focus of PF is on development of techniques that primarily aid the conventional farming system (heavy reliance on agrochemical inputs, like fertilizers and pesticides).

In Dayalbagh one of the main objectives of farming is to create opportunities of Seva (selfless service) for the devotees of Ra-Dha-Sva-Aa-Mi faith. Therefore, automation and mechanization are kept to minimum as necessary. Drone technology is being explored for air surveillance of the fields to get information on soil and crop conditions so that timely temporal and spatial actions can be taken.

The Dayalbagh agriculture, with a history of about 8 decades, has made the colony self-sufficient for food. A unique feature of Dayalbagh agriculture is that most of the operations here are performed by the residents of Dayalbagh as selfless service (Seva). On the farm there is no distinction based on caste, gender, or social or financial status of the persons. All work together with the singular objective to earn the pleasure of their Spiritual Master who Himself works full time besides offering Guidance.

Dietary habits have direct effect on global warming. Non-vegetarian food

production generates almost twice as much of Green House Gases as vegetarian food (Mesquita and Carvalho, 2023). Therefore, shift to vegetarian dietary habit in developed countries has the potential to protect the environment (Lune et al., 2017; Poore and Nemecek 2018; Sun et al., 2022.). The residents of Dayalbagh and all other adherents of Ra-Dha-Sva-Aa-Mi faith are lacto-vegetarians.

6. Suggested Readings

Aulakh, C.S. and Ravishankar, N. 2017. Organic farming in Indian context: A perspective. Agric. Res. J. 54: 149-164.

Bhojwani, S. S. 2016-17. Agricultural operations in Dayalbagh. DEI-DEP Magazine. Pages 1-10.

Chandra, K., Kumar, V.P., Singh, R. and Knnojia, P. 2004. Waste Decomposer (A Way of Farmers' Income Doubling). National Centre of Organic Farming, Ghaziabad, 13 pp.

FAO. 2018. The 10 elements of agroecology: Guiding the transition to sustainable food and agricultural systems. http://www.fao.org/3/i9037en/i9037en.pdf

Ganesan, S. and Nair, A. 2018. Sikkim's organic farming delusions. Sunday Guardian Vol. 9, 24th June issue.

Mondal, P., Basu, M. and Bhadoria, P.B.S. 2011. Critical review of precision agriculture technologies and its scope of adoption in India. Am. J. Exp. Agric. 1:49-68.

Ravindran, V. 2022. The man made disaster in Sri Lanka could have been avoided. Farm J. July 31, 2022.

Smith, J., Yeluripati, J, Smith, P. and Nayak, R. 2020. Potential yield challenges to scale-up of zero budget natural farming. Nature Sustainability 3: 342-352.

Wei, T.K. (Editor) 2010. Science and Sustainable Food Security, vol. 3. Selected Papers of M. S. Swaminathan (IISc Centenary Lecture Series). World Scientific Publishing Co., U.S. 436 pp.

Wezel, A., Herren, B.G., Kerr, R.B., Barrios, E., Gonclaves, A.L.R. and Sinclair, F. 2020. Agroecological principles and elements and their implications for transitioning to sustainable food systems. A review. Agron. Sustain. Dev. **40**, 40 (2020). https://doi.org/10.1007/s13593-020-00646-z

Changing Facets and Interrelations of Industry and Education

Y V Subrahmanyam, Center-in-Charge
DEI Information Center, Secunderabad

"If we educate today's students as if they were living yesterday, we'd steal their tomorrow."— John Dewey

A country's growth is mainly measured through contribution made by industry. Each industry with dynamically changing needs due to market conditions, consumer behaviour and technological advancements from research and development, needs differently talented professionals with competencies to support administrative, technical, managerial roles, performing various tasks like planning, managing, marketing, R and D, Globalization activities, etc. Thus, education methodology, changing technical content, learner – centric pedagogy to build supportive talent force is crucial. In fact, one can visualise that, industry and education need to continuously complement each other for country's image.

Introduction: The present industrial revolution is referred to as Industry 5.0, while Educational revolution is referred to as Education 5.0. Let us understand their changing facets, and growth with more focus on the dependency and relationship between them.

I. Industry [6]

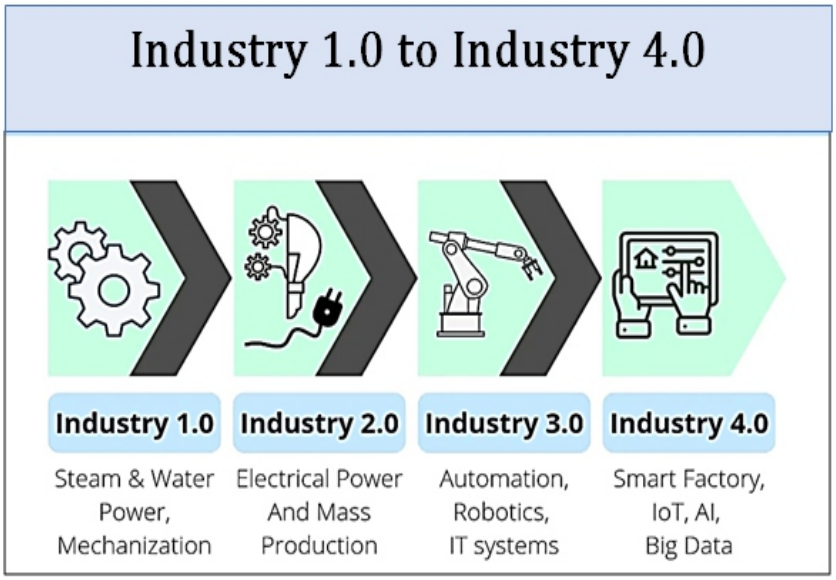
I.1 Industry 1.0 started its journey in the mid-18th century (1750–1850). The textile, manufacturing, transportation and agriculture industry saw significant innovations and growth during this period.

I.2 Industry 2.0 (1850- 1940) was referred to as "The Technological Revolution". Superior electrical technology allowing greater production and more sophisticated machines, were introduced

I.3 The third industrial revolution began around the 1970s moving to digitalization, exposed industry to transistors, microelectronics, high-level automation in production and two major noticeable inventions: Programmable Logic Controller and Robotics.

I.4 The end of the 20th century marked the beginning of Industry 4.0, originating with the computerization of manufacturing in 2011. Industry 4.0 brought in many disruptive changes in scientific and technological development. It was characterized by the convergence of digital, physical and biological technologies. The notable technologies emerging in this era include: **Internet of Things (IoT), cloud computing, big data analytics, robotics, additive manufacturing (3d printing), simulation, system integration, augmented reality** and **cyber security.**

Industry 1.0 To Industry 4.0 [2]



I.5 Industry 5.0 is known as the Fifth Industrial Revolution, and is a new and emerging phase of industrialisation that sees humans working alongside advanced technology and A.I. powered robots to enhance workplace processes. Encompassing more than just manufacturing, this new phase builds upon the fourth industrial revolution (Industry 4.0)[4] and is enabled by developments in I.T. that include technologies such as artificial intelligence, automation, big data analytics, the Internet of Things (IoT), machine learning, robotics, smart systems, and virtualisation.

Industry 5.0 has three key pillars: human-centric, resilient and sustainable. All three have significant implications for business strategy.

A human-centric strategy is one that, "promotes talents, diversity and empowerment." The most important shift this suggests is one from seeing people as means. A resilient strategy is "agile and resilient with flexible and adaptable technologies." If we are to realize that resilience will truly become one of the three pillars of Industry 5.0, it means that strategy's primary focus will no longer be on growth, profit, and efficiency, but on creating organizations that are "anti-fragile," meaning that they are able to anticipate, react and learn timely and systematically from any crisis and thereby ensure stable and sustainable performance. A sustainable strategy "leads action on sustainability and respects planetary boundaries."

Key enabling Technologies of Industry 5.0 [7]

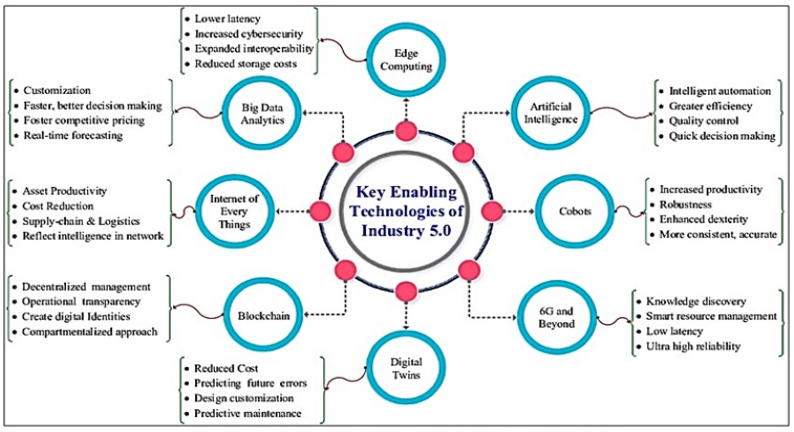


Figure 4: Key enabling Technologies of Industry 5.0

Challenges of industry 5.0 with reference to workforce

1. People are required to develop competency skills, as working with the advanced robots, the human workers are required to get knowledge about collaboration with the smart machine and robot manufacturer. Programming to the industrial robot and managing translation, machine learning, AI, big data analytics, Nano technology, etc. are the new jobs and difficult tasks requiring a high level of technical skills.
2. Adoption of advanced technology requires more time and effort from the side of the human workers. Customized software-connected factories, collaborative robotics, artificial intelligence, real-time information, and the internet of things must be adopted for industry 5.0.
3. Advanced technologies investments. Training the human workers for new jobs is bringing extra costs. The companies are found it difficult to upgrade the production lines for industry 5.0. Adopting Industry 5.0 is expensive as it requires smart machines and highly skilled employees to increase productivity and efficiency.
4. Security is a challenge for Industry 5.0 as it is critical to establish trust in ecosystems. The authentication is used in the industry is the scale to interact with various devices, to stand against the future quantum computing applications to deploy nodes of IoT. Usage of artificial intelligence and automation in industry 5.0 are threats for the business, and therefore it is required to have trusted security for it. The applications of Industry 5.0 are focused on the ICT systems, and therefore it leads to strict security requirements to prevent the security challenges.

II. Education

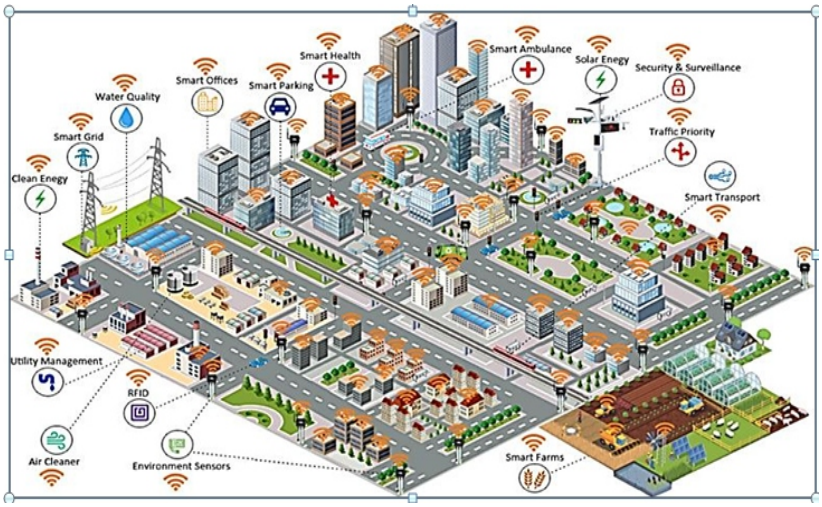
As industry is changing with advanced research and allied technology, it needed the workforce to deliver the services in research, manufacturing, and services of products as well highly innovative methods of doing business which includes Marketing, customer relations, sales, new methods of sales and services, new methods of commerce etc. Thus, the education and allied methodologies also are suitably geared up to fulfil this need through the education framework.

Framework as highlighted by the Canadian Oxford Dictionary is a guide, where it builds the basic supporting structure and is the foundation for the design and development of curriculum and pedagogy. Education evolved to meet the needs of industry and to generate the right quality of student experience.

Frameworks[3] contribute to a cohesive structure with multiple components, adaptable to work with different teaching patterns, subject content areas, and to required changing needs of students. These cover mainly three main categories: Curriculum Framework, Lesson Planning Framework, and Program Framework.

- Curriculum Framework: A set of different standards, helping and specifying the apt content that is need to be learned by students at different levels.
- Lesson Planning Framework: helps teaching communities to organize, plan, and reflect their teaching approaches, ideas, methods. While it helps to explore diverse contents, it lacks evidence-based practices, towards executing the ideas.
- Program Framework: Focuses on what needs to be taught and the manner of teaching in which the same need to be taught to the desired students.

Education 1.0 to Education 5.0 is covered by Prof VB Gupta in this Journal in another article.



Cloud eco systems in critical sectors reflecting on needed professionals[7]

In order to adopt industry 5.0 for the companies, the personnel required proper interaction among the machines as well as operators. It is knowledge in the fields like robotics as well as artificial intelligence. Collaborative robots are being designed for intuitive interaction with humans. Expansion of the digital twins is required technology in industry 5.0. Visual models of the products, processes, and generation will allow better understanding and testing. The Nexus Integra platform is the software required to drive the transformation of the industrial business in industry 5.0

III. Navigating the Future

The Industrial Revolution brought several important changes to the field of education by making education accessible for children of all socioeconomic backgrounds and setting laws making education a requirement. Prior to the 1800s, the accessibility of education to children was spotty. Children born into wealthy families often had access to education, while children from impoverished families did not have the same.[5]

In the ever-evolving landscape of education and industry, the emergence of Education 5.0 and Industry 5.0 represents a pivotal moment in shaping the future. These two paradigms are not isolated concepts but intricately linked, creating a symbiotic relationship that seeks to prepare individuals for the challenges and opportunities of the fourth industrial revolution.

III.a The Fusion of Humans and Technology

While Education 5.0 reshapes the learning landscape, Industry 5.0 transforms the industrial realm by emphasizing human-machine collaboration. The fourth industrial revolution marked the rise of automation and smart technologies; Industry 5.0 takes this a step further by focusing on the integration of human skills with advanced technologies. It represents a shift from merely automating processes to enhancing them through the synergy of human intelligence and technological capabilities.

In Industry 5.0, smart technologies collaborate with human workers to create more flexible, adaptive, and efficient production processes. The factory floor becomes a space where machines and humans work in tandem, each leveraging their unique strengths. This shift demands a workforce equipped not only with technical skills but also with critical thinking, creativity, and adaptability – skills that align closely with the principles of Education 5.0.

III.b The Interconnectedness of Education 5.0 and Industry 5.0

The relationship between Education 5.0 and Industry 5.0 is profound and reciprocal. As Industry 5.0 seeks a workforce adept at human-machine collaboration, Education 5.0 provides the framework for cultivating these skills. The personalized and technology-enhanced learning environments of Education 5.0 prepare individuals to

navigate the complex, interconnected systems of Industry 5.0. Especially the New Education Policy lays lot of emphasis on this.

One crucial aspect of this interconnection is the alignment of skills. Industry 5.0 demands a workforce with a unique skill set – a combination of technical prowess, problem-solving abilities, and effective communication. Education 5.0, with its emphasis on cultivating critical thinking, creativity, and adaptability, serves as the breeding ground for individuals equipped with these sought-after skills. Institutions embracing Education 5.0 methodologies find their graduates not only well-versed in technical knowledge but also agile in applying this knowledge to real-world scenarios.

The collaborative nature of Industry 5.0 extends beyond the factory floor. It permeates various sectors, from healthcare to finance, necessitating a workforce capable of interdisciplinary collaboration and problem-solving. Education 5.0, by fostering a holistic and interconnected approach to learning, ensures that graduates are not confined within the boundaries of their specialized fields but can navigate the complex web of interdisciplinary challenges posed by Industry 5.0.

III.c Challenges and Opportunities

While the interconnection between Education 5.0 and Industry 5.0 opens doors to unprecedented opportunities, it also presents challenges. The rapid pace of technological advancements requires continuous adaptation from both educational institutions and industries. There is a pressing need for curricula that remain agile and responsive to the evolving demands of the workforce.

Moreover, bridging the gap between education and industry requires collaboration and communication between stakeholders. Educational institutions need to actively engage with industry leaders to understand current and future skill requirements. Likewise, industries must participate in shaping educational curricula to ensure that graduates are adequately prepared for the demands of Industry 5.0.

III.d Strategies for Integration

To foster a seamless transition from Education 5.0 to Industry 5.0, strategic integration is paramount. Educational institutions should adopt a forward-thinking approach to curriculum design, incorporating emerging technologies and emphasizing practical, hands-on experiences. Internships, industry partnerships, and experiential learning opportunities play a crucial role in exposing students to real-world applications of their knowledge.

Industry, on the other hand, should actively participate in the education ecosystem. Establishing mentorship programs, offering internships, and providing input on curriculum development contribute to the creation of a workforce that aligns with the dynamic needs of Industry 5.0. This collaborative approach not only benefits

individual students but also ensures that industries receive graduates equipped with the skills essential for success in the evolving landscape.

III.e Case Studies and Success Stories

Numerous case studies attest to the successful integration of Education 5.0 principles preparing students for Industry 5.0. Institutions that have embraced technology-enhanced learning, interdisciplinary approaches, and industry collaborations report graduates seamlessly adapting to the challenges of the workforce.

DEI definitely stands top in these activities. One such approach is the collaboration between a leading technical university and a cutting-edge manufacturing company. Another feather is the University adopting Education 5.0 methodologies, integrated practical, hands-on projects and industry internships into its engineering curriculum. Graduates from this programme would not only possess strong technical skills with the development of well-rounded individual with cognitive skills, emotional intelligence social awareness and ethical values but would also demonstrate a deep understanding of the collaborative nature of Industry 5.0. The result is a cohort of professionals who seamlessly integrate into the company's innovative production processes.

IV. Conclusion

In conclusion, the interconnection between Education 5.0 and Industry 5.0 represents a transformative force shaping the future of education and industry. As technology continues to advance, the collaborative efforts between educators, industry leaders, and policymakers become increasingly vital. By embracing the principles of Education 5.0, educational institutions can prepare individuals not just for jobs but for dynamic, collaborative roles in Industry 5.0. The journey toward a harmonious relationship between education and industry is ongoing, but with a proactive collaboration and strategic integration, we can navigate the future with confidence and competence.

V. References

1. https://www.7generationgames.com/differences-between-education-1-0-to-4-0/
2. https://sustainability-success.com/industry-1-0-to-4-0-2-3-revolution/
3. https://www.globsyn.edu.in/blog/the-evolution-of-education-framework-from-classroom-1-0-to-classroom-4-0
4. https://www.forbes.com/sites/naveenjoshi/2022/03/31/understanding-education-40-the-machine-learning-driven-future-of-learning/?sh=69daae665bc2
5. https://www.reference.com/history-geography/did-industrial-revolution-affect-education-c9526d4fda18c1bb
6. https://bootcamp.uxdesign.cc/inventions-during-the-industrial-revolutions-industry-1-0-4-0-73a0cb148a0f
7. https://www.ncbi.nlm.nih.gov/

Revolving Stool Syndrome

Bani Dayal Dhir, Assistant Professor
Coordinator- (iNFORMATION -cOMMUNICATION-nEURO-cOGNITIVE)
Technologies Assisted Language Lab, Department of English Studies

The grandeur of Divine Revolving Stool Syndrome behold ye all!
Beloved Supreme Lord-God majestically revolves blessing one & all.
Mighty currents of His Grace flow with each turn,
His inconceivable splendour unfolds with every turn.
Cosmic Dance in the centre of the creation!
His Gracious Divine Act, not a mere rotation!
Such marvel no mortal eyes have ever witnessed,
Such transcendence no soul has ever experienced.
No edges, no corners, epitome of completeness,
Exhorts 360 degrees - O! Stop living in fragments.
O worldly! Not a physical phenomenon it is,
The spiritual journey of the soul it is!
From this mortal world when spirit ascends to Spiritual regions,
Clinging to His Holy Feet it spirals up in circular motion.
O Beings! Realize unparalleled spiritual bliss within,
Performing seva chanting Holy Name within.
Ra-Dha-Sva-Aa-Mi , Ra-Dha-Sva-Aa-Mi, Ra-Dha-Sva-Aa-Mi
Our countless karmas find eradication,
As we partake in the Omnivalent's Sacred Rotation.
Worthless gross worldly desires we shun,
As our spirits spin & ascend above in devotion.
The Sacred Revolving Syndrome let's embrace,
And bask in our Dearest Lord-God's Grace!
In Beloved Supreme Lord-God's Holy Feet is Eternal Peace,
He will take us all to Original Abode with Ease.

Entrepreneurship at D.E.I : An Experiential Learning

Sangita Saini
Professor & Head, Home Science Department,
Dean, Faculty of Arts, DEI, Dayalbagh

Following an exploratory visit to some villages of Rajaborari Estate during the mid-semester break in October 2014, we weighed the possibility of impacting the economic status of their families in the tribal villages. It appeared to us that by training the women in the art of cutting and sewing fabrics into apparel, we could achieve this objective.

On return to Dayalbagh, we were highly encouraged by the Gracious Advice and Guidance and the promise of support from the institute. It was decided that to begin with, we get standard-size patterns from industrial experts and white fabric purchased from the local market was cut to yield 100 sets of Salwar-kameej for producing the DEI College uniform for girl students.

Armed with the cut pieces, the first batch of trainers set forth for Rajaborari in November, 2014. Unfortunately, the batch had no clear directions on how they should proceed. As a result, they distributed all the cut pieces to all and sundry within two days. There was more demand for cut fabrics and a second batch of trainers with clear instructions was sent. They had to face lot of difficulties as no records were available and the dresses stitched were of poor quality. This was a learning experience and thereafter, planning was done more meticulously. Instruction sheets were prepared for maintaining higher quality and clear directions were issued to each team visiting Rajaborari.

Each team, consisting of 5 female trainers, spent one week at site. The training given was on sewing, soft toy making and food processing. It was not always easy to have well trained trainers with the result that sometimes the training given was not the best. This went on till March, 2015 by which time more than 150 trainees had been trained in garment making, 100 women in making various seasonal processed food items and more than 75 in soft toy making.

By April 2015, three Sewing centres, which were to act as incubation centres were opened with adequate infrastructure in Rajaborari, Kairi and Mogradhana, respectively. At each centre, two mentors, who had learned the needed skills, were deputed. Each participant was paid stipend for sewing uniforms. Later, sewing other items like pillow covers, cushion covers and children's frocks was also undertaken. These centres gave good results. In January 2016, another centre was opened in Salai village. The product range was diversified with the introduction of suits and the organization started working under the banner ATMA, viz. Apparel & Toy Making Association. The products continued to be sold at the DEI Main campus. Since the

set-up had stabilized, the visits by DEI trainers were reduced and a Research Scholar was deputed. She provided guidance and used this opportunity to motivate, skill and contribute her input as a part of her doctoral effort.

By mid – 2017, the number of female members in the sewing centres had increased significantly and coloured fabrics also started being used for stitching garments. At this stage it was decided to expand the training to skills related to value addition like printing, embroidery etc. Efforts to sell these products in the local market and neighborhood were also being made. In addition Training of Trainers (TOT) was also undertaken.

Village Women Working in Sewing Centres

As a result, by 2018, about 150 women from Rajaborari and several surrounding villages were stitching uniforms (Kurta and Salwaar) and various other apparels at an acceptable quality level. Further about 70 more women were trained to start stitching and get involved with production of soft toys in larger quantities. A few women were also trained at one village in layering, layout, cutting and bundling of items.

Initially, as not all the women had sewing machines, so full shuttle machines were arranged for them at each centre where they could collect and stitch the items. Machines for interlock and buttonhole making were also arranged during the time of production of gent's kurtas. The need for an interlock machine and buttonhole-making machine was desired for getting the right quality of finished products. This training and arrangement of delivery of machines helped to develop quality product and to compete effectively in the market.

Women learning to use the round-blade cutting machine

When production in large quantities started, the need for a cutting machine was also felt. Since the bulk cutting of fabrics with hand scissors was impossible and took too much time, hence, a round-blade cutting-machine was arranged for the women which would help them in cutting multiple layers of fabric according to the layout of patterns.

A Catalogue with images of the produced items was developed to keep a record and to track the products, each item was coded. The prepared goods were still being marketed under the banner of ATMA for the community at Agra. Since the products made were now of standard quality and selling in the local areas had yielded results, it was decided to make the whole program self-sustaining. As such Self-Help Groups (SHGs) were organized which were designed to emerge as enterprises for rural women and provide them with means to earn on their own and also allow them to address local problems more effectively.

By the end of 2018, these SHGs were formally registered with NRLM (National Rural Livelihood Mission) and had their bank accounts with some seed money in it. The MP govt. gave an order to stitch 1500 uniforms for their schools which was completed within the stipulated short period. The training was organised as and when desired. This led to an economic flow (around Rs 54000/=) to the SHG members, due to which women from surrounding areas started rushing with a request to formulate more SHGs. By mid–2019, a total of five SHGs had been registered in this area.

In Oct 2019 a circular from AICTE invited institutes for USVA (Utkrisht Sansthan Vishwakarma Award) with the theme "How to enhance the income of a Village". The details of the Institute were uploaded and after the initial evaluation of applications on the basis of relevance it was followed by a presentation. Thereafter, a visit by experts to the adopted area was made. Surprisingly, the Institute received first rank for being an exemplary institutional intervention out of 188 institutions which had applied for the award.

DEI Team receiving the Award

The Certificate of Recognition

COVID-19 posed various challenges for all. The formulated SHGs which were in their infancy could also feel the seclusion, being quite far from the institute. During the COVID-19 pandemic, the rural women and men of SHGs produced over 6000 face masks and distributed 500 masks free of cost to meet 'Social Responsibility'.

Masks Being Distributed

Locally, baked items were produced with all precautions. During the pandemic time when the area was not connected with the mainstream, an order to stitch 9000 sets of uniforms for 72 schools was received by the SHGs for a total of Rs 28 lakh. It was successfully completed and achieved in 2021 wherein more than 12 lakh was distributed as stitching charges amongst 50 women who completed the activities within the stipulated time at Rajaborari. (https://www.dei.ac.in/dei/edei/files/DEI%20Progress-MHRD-May-22-2020.pdf). T shirt printing was

Activities During Completion of School Uniform Order in the midst of Pandemic

Printing T-shirt by Rajaborari Woman

आजीविका मिशन से आत्मनिर्भर हो रहीं आदिवासी महिलाएं, यूनिफार्म बनाने 28 लाख का आर्डर मिला

वनांचल में सामाजिक उत्तरदायित्व के लिए ग्रामीण महिलाओं ने बांटे निःशुल्क मास्क

News appearing in Local Paper

With time a few women were trained in the preparation of dairy products. A village-level milk collection centre and dairy technology plant started production for local and regional level markets. Value-added agro-products that had longer shelf lives were produced. These products were produced during the pandemic, stored and sold when markets are open again. The centre has now registered with Food Safety and Standards Authority of India (fssai) and is producing items under Agro-Dairy Nano-processing of Multiproduct (ADyNAM) of the institute. The rural women used the locally grown tomatoes and converted them into 'Sundried Tomato Powder' which could be stored up to 1 year. Similarly, the grapes were processed to produce 'Raisins'. With the production of local haldi and dhaniaya, the production of high-quality packaged spices was initiated. The SHG women established a spices making unit, producing packaged spices.

High quality packaged spices manufactured by SHGs

Spice Unit and Milk Processing

The success story, with inputs and cooperation from the Institute motivated the team to initiate, such activities locally at Agra from 2017 onwards. As a result two SHGs were registered in 2019, in the area located near the campus at Agra. During the pandemic, these SHGs received an order of 5300 cotton masks from a multi-national Company (MNC). The order was successfully completed by 20 women of the SHG at their homes providing an income of Rs 53,000/= which was distributed to the SHG members. After that various orders of lab coats, uniforms of schools, coats for doctors, etc. have been successfully completed.

Members of SHG at Agra stitching face masks

Items produced on order

Various bags being produced by SHGs at Agra

Over time the team members had an experiential learning from this long journey of about a decade which was full of surprises, knowledge and experience. The gaps between what is being taught and the real-life practice have been bridged. An understanding of community, professionalism and business have groomed the team of workers into individuals who are more confident, more equipped, and skilled to handle any challenge, yet they feel they know nothing but believe in miracles. Probably HIS grace and blessings have been showered in each area of such a pursuit leaving us wondering on how to take any credit for such an endeavour.

The Changing Landscape of Higher Education

V.B. Gupta, Coordinator,
Online & Distance Education Programme,
DEI (Deemed-to-be University)

Introduction

While going through a recent publication on higher education [1], I came across the following interesting statement under the heading 'Universities as leaders in high-tech industries' : One reason Canada is a world leader in knowledge – based industries is its integrated approach to fostering economic growth through innovation. Canada provides the world's largest number of high-tech research and development centres, and is also aggressively supporting the development of the country's high-tech industries, such as robotics, artificial intelligence and machine learning.

Prof. John Dewar, Vice Chancellor and President, La Trobe University, Australia feels [2] that Universities around the world need to undergo revolutionary change if they are to stay relevant against the backdrop of digital disruption and radically changing labour market as the shelf life of skills and qualification acquired through formal education is reducing very quickly.

To understand as to what should be the format and competencies of a university of the future, it will be helpful to trace the evolution of higher education since its origins. This evolution is generally believed to have taken place in four phases starting from the ancient age to the present day which have been termed as Education 1.0 to Education 5.0.

A publication of FICCI [3], which is based on such an approach, makes the following opening statement: Education Systems have evolved over the centuries in response to social, economic and technological innovations, which in turn are impacted by the evolution in education system itself.

The five stages of evolution will now be briefly described, first for education (Education 1.0 to Education 5.0), followed by the evolution of universities (University 1.0 to University 5.0). Finally, four future scenarios of higher education (Scenario 1.0 to Scenario 4.0) will be described.

Part – I: Education 1.0 to Education 5.0

Education 1.0

During ancient to Middle Ages, education was imparted on a personalized basis – a good example of this being the Guru – Shishya Parampara followed in India, thus it was limited in scale and informal in nature [3].

Taxila (500 BC to 500 AD) was perhaps the oldest Institute of Higher Learning in the world (Wikipedia). Generally, a student entered Taxila at the age of 16. The Vedas and the eighteen arts which included skills such as archery and hunting were taught, in addition to its law, medical and military science schools. Chanakya, Chandra Gupt Maurya, Charaka, and Panini were all products of Taxila University. Ancient Nalanda University (427 AD to the year 1197) and ten other Higher Learning institutes existed in India during this period.

Japan had five Higher Learning Institutions by the 9th Century. Islamic Universities and Colleges were built across India in the Mughal era. Institutions of higher learning also existed during this period in Greece, China, Korea and Egypt. There was no formal system of standardized curriculum, assignments and credentials. These Institutions are therefore to be distinguished from the western style universities that originated in medieval Western Europe.

Education 2.0

The invention of the printing press in the year 1436 allowed the masses to get access to basic education, and brought in a culture of scientific inquiry.

With the new technology, knowledge dissemination to the masses through printed books became possible and this had a profound effect on literacy levels in France, England, Germany, Russia and Asia in the 15th and 16th centuries. The literacy rate in England rose from 30% in the year 1641 to 62% in the year 1800. The number of universities in Europe rose from 29 at the end of middle ages to 143 in the year 1800.

Some of the developments in Higher Education after the invention of printing press are noted below:

(i) Universities of Yale, Harvard, Columbia and Princeton were set up in the USA
(ii) Science was included as a subject in the curriculam
(iii) In India, the first three universities at Bombay, Calcutta and Madras were established based on the London University model, and
(iv) The number of universities in Western Europe increased from 44 in the 14th Century to 97 in the 18th century.

Education 3.0

The emergence of internet and IT changed the mode of delivery, providing a technology platform to learn [3].

With technology available for content delivery in various online and distance learning programmes, the role of a teacher has changed from that of an instructor to a facilitator.

Learning Management Systems help students in learning virtually and deliver

targeted information effectively.

Until now, the U.S. is the fastest growing market for online learning followed by Asia and Europe.

Companies are becoming aware of the advantages of online learning for skill building and hence are spending increasingly on e-learning for employees.

Students are rapidly adopting self-paced e-learning as it allows them flexibility to attend courses and complete their assignments.

Education 4.0

In this section, the discussion is extended to the evolution of the fourth phase, viz. Education 4.0 (high speed internet, mobile technology, social media platforms, etc. facilitating personalized learning anytime anywhere and changing the role of teachers to facilitators and mentors). Education 4.0 puts the Learner at the centre of the eco-system and he/she has complete flexibility to be the architect of his/her own learning path [4].

Fisk [5] has specified a number of steps which assist in implementing the Education 4.0 paradigm. These are: (i) learning at different times and places, (ii) personalization of learning, (iii) adaptive and dynamic learning process, (iv) project–based learning, (v) field experience, (vi) data interpretation, (vii) formative assessment, and (viii) the mentoring system.

Education 5.0

Education 5.0 is stated to be the use of new technologies to provide more humanized teaching with a focus on students' social and emotional development. All social spheres like work, industry and health have come to understand that technology can and should be favourable to life [6].

Education 5.0 emphasizes the development of well-rounded individuals with not only cognitive skills but also emotional intelligence, social awareness and ethical values.

With the Covid-19 pandemic, life turned more digital and the need arose to prepare human beings for adversity and they knew how to turn digital transformation into a tool for social transformation.

Part – II: University 1.0 to University 5.0

The changing landscape of higher education has also been examined in terms of evolution of Universities in five phases, starting with medieval Universities, as follows: University 1.0 (Middle ages – 18th century), University 2.0 (19th century – 1960s), University 3.0 (1970s – 2000s), and University 4.0 (2010s – almost now) [1]. Prof. John Dewar, makes an important point [2] that the world

of work for which we are preparing students is changing very quickly, in particular with developments in digital technology. As a result, the shelf life of skills and qualifications acquired through formal education at school and university is reducing very quickly. The next point made by him relates to translating university research into commercial outcomes which takes too long. What is required is deep industry partnership, incubation and fostering start-up businesses.

According to Prof. Dewar, the following four features will come to define University 4.0 [2]: (i) University will provide on-demand learning in different modes (ii) there will be a move away from degrees as the only form of credential offered, towards a more mixed offering of degrees plus shorter cycle qualifications (iii) there will be a much stronger focus on career management for students, and (iv) university will become physical sites for co-location and research collaboration with industry.

Prof. Dewar further states that the university will shift from being self-focused to being 'for others'. They will become deeply connected to the communities around them. And they will become exceptionally committed to serve the needs of students. Further, they will become actively engaged to bring about a better world. All these features will qualify the university to become an ecological university.

More recently the concept of University 5.0 has come up which relies on three fundamental pillars [7], viz. (i) both societal and sustainable priorities should be incorporated into University strategy and mission, (ii) a strong leadership should protect the core academic values and , (iii) enhance the new green and digital culture which impacts research and teaching. Owing to this, the university promotes intelligent, flexible, inclusive, accessible and adaptive learning systems for all generations.

University 5.0 needs to extend Digital Social Innovation (DSI) to all missions, i.e. promote DSI within curricula, short courses, research agenda, etc. Also promote online education and introduce resilience alround.

Part – III: The Future Scenarios of Higher Education

Scenario 1.0 to Scenario 4.0

The story of the evolution of higher education, starting with Guru – Shishya method of teaching – learning in India and church – controlled informal teaching to a privileged few in the western world (called Education 1.0), grew with the invention of the printing press in the year 1436 into the massification of education (Education 2.0) with teacher being the knowledge provider and the student as the passive recipient. This was followed by Education 3.0 (use of computers and internet in

teaching and learning). The next phase was Education 4.0 which is generally attributed to two emerging trends [8]: one based on general innovations and changes in education and pedagogy and the other on the integration of technologies introduced by Industry 4.0 into education. The net result of these developments was that the Universities that came about had a highly flexible system of education with commitment to serve the needs of students. Further, they were deeply connected to the communities around them to bring about a better world. The two ultimate forms of transformation from this evolution have been designated as Ecological Universities and Universities based on liquid learning model.

A report entitled 'Scenarios for the Future of Higher Education' published in May, 2022 by a team of researchers at Budapest Business School, Hungary, after four years of intense research using a comprehensive process combining horizon scanning, systems mapping and scenario planning have come out with four possible scenarios [9]. The two dimensions that defined their scenarios were: first, the level of flexibility in the higher education system (mostly in terms of the process of learning and administration), and second, the 'Constitution' of education, which refers to a general assumption about the role and function of University Studies, namely whether they are about the provision of practically applicable knowledge (called the 'micro' end of the dimension) or about the formation of a well-rounded person able to navigate a changing world (called the 'holistic' end).

The main characteristics of the four possible scenarios are briefly described below [9]:

Scenario 1: fixed – micro-programs

In the future, the majority of universities will adapt to the expectations of the labour market and society by offering shortened, mostly one-year training programmes. It is a system of "mass schooling" where the content is set, the process is fixed, and teaching methods are mostly frontal. Eventually, the certificate earned by students gives them an advantage in job seeking.

Scenario 2: flexible – micro-programs

In the future, the domain of higher education will be shared by universities and alternative providers, all of them operating with the aim of offering students timely skills and knowledge sought after in the labour market. Trainings typically last for one year and are accommodating to student needs by combining online learning with a flexible schedule of intensive in-person classes. Students can curate their own professional portfolio of micro-credentials earned in such programmes.

Scenario 3: fixed – holistic programs

The future of the higher education market will closely resemble the present:

students enter bachelor- and master-level programmes to earn a degree that gives them an advantage on the labour market. The teaching methods at universities will evolve slowly but continually, and beyond knowledge transfer, they will put more emphasis on developing skills and problem solving. The university will be not only a space of education but also of professional socialisation and personal relationships.

Scenario 4: flexible – holistic programs

In the future, university education will still take the form of bachelor- and master-level programmes, but flexibility will become an overriding principle. The system will be ready to serve all kinds of needs: students will be able to curate the selection of courses they take (within certain limits), they will be able to choose between courses with different teaching methods, or they can even opt to finish a whole programme in a year. There will be intense international cooperation between universities which allows students to conduct their studies in several countries and institutions.

References:

[1] L.Gorina and E. Dolyakova, University 4.0 within the context of the Sustainable development of higher education, E35 web of conferences 250, 04002 (2021)

http://doi.org/10.1051/e3sconf/202125004002

[2] John Dewar, Higher Education, Home Magazine, August 2017.

[3] Leapfrogging to Education 4.0: Student at the core, FICCI, November, 2017.

[4] FICCI (Federation of Indian Chambers of Commerce and Industry): Leapfrogging to Education 4.0: Student at the Core (2017)

http://www.ey.com/Publication/vwLUAssets/ey-leap-forgging/$File/ey-leap-forgging.pdf

[5] Fisk,P.: Education 4.0 the future of learning will be dramatically different in school and throughout life (2017)

http://www.thegeniusworks.com/2017/01/future-education-young-everyone-taught-together/

[6] SYDLE Newsletter updated 10-08-2023

[7] Elias Carayannis and Joanna Morawska, Researchgate.net, Springer News, March 2023

https://www.researchgate.net/publication/369494772_University_and_Education_50_for_Emerging_Trends_Policies_and_Practices_in_the_Concept_of_Industry_50_and_Society_50

[8] Mamadou L Gueye, Ernesto Expósito. University 4.0: The Industry 4.0 paradigm applied to Education. IX Congreso Nacional de Tecnologías en la Educación, Oct 2020, Puebla (Mexico), France. hal-02957371 (https://hal-univ-pau.archives-ouvertes.fr/hal-02957371/Document)

[9] Scenarios For The Future of Higher Education 2022

(https://www.researchgate.net/publication/360642436_SCENARIOS_FOR_THE_FUTURE_OF_HIGHEREDUCATION_2022)

Report on 3-Day International Workshop On "Chanting Practices in Various Religions"

Dr. Rubina Saxena,

Sanskrit Department, DEI, Dayalbagh 282005

The 3-day International workshop on "Chanting Practices In Various Religions" was organized by the Sanskrit Department of Dayalbagh Educational Institute from 1st to 3rd November 2023 (from 7AM to 10 AM IST each day) at Department of Sanskrit, Arts faculty, DEI in Hybrid mode. The workshop was Organized by Dr. Rubina Saxena, Assistant Professor and DEI Coordinator for the MA (Theology) Online Programme. The total number of participants in the workshop was around 120 each day.

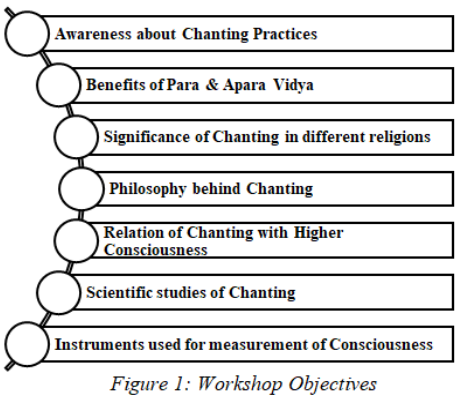


Figure 1: Workshop Objectives

The workshop began with a lecture by Shri Lokeshwara Kumar, from IIT Kanpur and from Bhativedanta Gurukula and International School Vrindavan. Shri Lokeshwara ji delivered the lecture on Chanting in Gaudiya Vaishnava tradition. He explained the significance of Chanting in terms of FIVE A's:

1) ATTRACTION, 2) ATTENTION, 3) ABSORPTION, 4) ATTACHMENT, and 5) AFFECTION

He said – When the Holy Name is chanted, 'the devotee desires to have millions and millions of tongues and ears to chant and hear…….'

Dr. Shikha, Sanskrit Department, Maitreyi College, Delhi University spoke about the Chanting methods in Hindu Darshanas. She described the types of Chanting in relation to types of karmas viz. Nitya Jap; Naimitik Jap; Kamya Jap and Nishidha Jap. She explained how Ashtaang Yoga helps to enhance concentration in Chanting methods and meditation.

Dr. Shobha Bhardwaj, Assistant Professor, Sanskrit Department, DEI, shed light on Krishna Mahamantra Chanting. She said, "Mantra is the sound which is made from a group of letters and words. This entire universe is permeated with a wave energy of two types – sound and light." Negative thoughts are eliminated from the mind of a person immersed in mantra chanting. If you 'Sattvikly ' chant the Mantra daily at a fixed time and a fixed place, your self-confidence increases and an optimistic outlook

also develops in you, which is essential for life.

Dr. Marcell Silva Steuernagel, Assistant Professor of Church Music, Perkins School of Theology, Southern Methodist University, Dallas, Texas, explained how and why 'chants' started and how they have become tools to reach the masses. He also demonstrated the correlation between written music text and the musical notes and the variations therein. He highlighted the differences between Anglican and Gregorian schools of thought in chants through personal demonstration and videos. He explained and demonstrated 'call and response' type church music and chants. All delegates, Professors, students and guests were excitedly enthusiastic to chant with him in his demonstration. He concluded his speech by discussing the modern day or contemporary chants and explained the intricacies and techniques.

Ms. Geshema Tenzin Lhadron from Zanskar Valley in Union Territory of Ladakh, India explained about Chanting practices in Buddhism. At the age of 13 she received teachings and Kalachakara Initiation from His Holiness the Great XIV Dalai Lama at Duzin Podang Pipiting in Zanskar. His Holiness's teachings and advice inspired her to make her journey to Dharamshala in Himachal Pradesh for studying the essence of Buddha's teachings based on Wisdom and Compassion and on reason and logic. She explained the significance of Chanting Mantras in Buddhism and how it benefits the practitioner to achieve peace.

Retired Indian Army Officer, Mr. Ajmat explained the Chanting in Islam. One of the five pillars of Islam is Namaj. All followers have to practise Namaz five times a day. This helps in connecting with the Supreme Being while living in the material world. He said that only knowledge of religion doesn't help, one has to practise religion. And Chanting is a way to practise religion. He talked about “Fatherhood of God and Brotherhood of Man” and said each religion has its own beautiful way and journey to reach the same Supreme Being.

Dr. Urmila Anand, Retired Professor, Sanskrit Dept, DEI, gave an introduction to Chanting in Ra-Dha-Sva-Aa-Mi faith. She explained how chanting helps in attention, Concentration and Meditation. Chanting is an easier way to connect to the Supreme Being.

Dr. Darash Adhari, Assistant Teacher, Music Department, DEI, explained the significance of Chanting of Holy name Ra-Dha-Sva-Aa-Mi with different sounds resounding at different levels of higher Consciousness.

Dr. Surjeet Nagpal, a businessman and a follower of Sikhism explained the significance of Chanting mantras in Sikhism. He said, only varnatmak chanting will not help and is only momentary. To achieve perfect bliss, one has to practise chanting internally so that the physical material world will not affect the blissful state one has achieved while living.

Prof. C.M. Markan, Professor in the Physics and Computer Science Department, DEI, who has proficiency in research area related to the field of Cognitive NeuroScience and Neuro-morphic systems, described the scientific studies related to Chanting practices. He explained the research where during and after religious chanting, participants displayed increased alpha frequency power. He also explained major Neurochemical pathways in human brain. He explained the study related to Ra-Dha-Sva-Aa-Mi Chant in which the 50 sec 'dhun' was segregated into 5 parts of 10 sec each corresponding to the 5 different instruments (Bell & Conch; Thunder & drum; Sitar; Flute and Snake Charmer's Lute) being played along-with.

The Head of the Sanskrit Department, DEI, Dr. Anita and the workshop Organizer, Dr. Rubina Saxena, Assistant Professor and DEI Coordinator of the Online MA (Theology) programme, coordinated and compered the event. The Director DEI, Prof. C Patvardhan and the Registrar DEI, Prof. Anand Mohan gave good wishes for the success of the event. Dr. Shobha Bhardwaj and Ms. Gazal Mathur helped in introducing speakers. The Workshop was in hybrid mode. There were around 70 participants at the venue and around 50 participants were connected in online mode.

WAS COVID-19 BAD NEWS FOR THE EARTH?

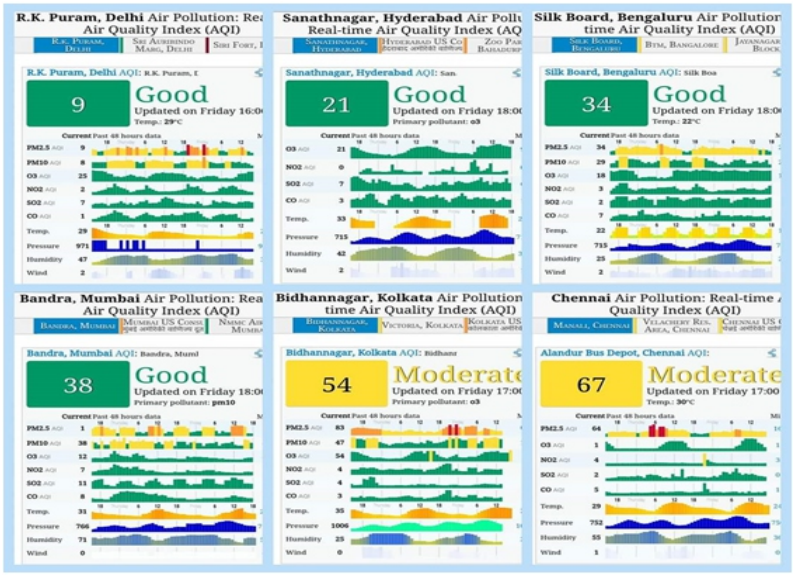
Reena Ahuja, Administrator
ICT Centre Soami Nagar, New Delhi

The start of year 2020 brought gloom and doom to this world. Humanity was faced with one of the biggest threats to its health and survival. The Covid 19 virus had brought the world to a near halt. Being locked in our houses for days together, not able to meet people, step out to the market, drive to the hills for a holiday all seemed so limiting. It was a life that humans were not ever exposed to, forget being prepared for it.

As towns, cities and countries came to a stop there was a revival of another kind. A kind which had until then been overrun by humans, their material needs, so called development, noise, selfish agendas and a near complete disregard to mother nature.

We narrate this based on personal experience and observation made in our area of residence, which is Soami Nagar & Panchsheel located in South Delhi, which is densely populated, has traffic snarls almost 18 hours of the day with vehicles honking & letting out obnoxious gases, plus has more lighting that it's bright all of 24 hours. The air quality was such that even before the pandemic many of us used to wear N95 masks with an AQI of over 500 which is equivalent to smoking 50 cigarettes per day.

However, a week into the lockdown that was imposed in India in March 2020 something around us changed. I believe this was a phenomenon across the country. Look at the Air Quality Indices of top 6 metro cities of India a few days into the lockdown.



Delhi AQI 9!!! Perhaps this was the best record ever since the pre-industrial revolution days. The mornings were bright & sunny, the sky was a brilliant blue in the day. At night it was deep, dark and stars were visible in the crystal-clear sky. On a moonlit night we could see the craters of the moon, a sight that people living in Delhi captured in their cameras to save for posterity. Worldwide there was an almost similar situation. As per some reports, ozone layer was being naturally filled up to normalcy.

The resultant optics was unbelievable. Trees looked fresher as each dust laden tree sprouted new green leaves since it was falgun-ritu also. Flowers blossomed and the brown parks were flush with all colours of the spectrum. Apart from these, bees were seen hovering around the freshly blossomed flamboyant flowers that indicate nature's abundance.

The most stunning change was the return of the birds. Usually, we saw only blue rock pigeons and crows around, as a part of urban biodiversity, but what we observed around us was a never to forget sight beginning March 2020 through the lockdown. We could sight the following twenty plus bird variety due to two major reasons including the onset of spring and negligible humans and vehicles on road -

Yellow footed green pigeon, Coppersmith barbet, White-cheeked barbet, Ashy prinia, Fan tail flycatcher, White throated kingfisher, Black drongo, Laughing dove, Spotted dove, Red wattled lapwing, Purple sunbird, Pariah kite, Tailor bird, Shikra, Rose ringed parakeet, Cattle egret, Spotted owlet, Green bee-eater, Asian koel to name a few.

We are sure that not only birds, but also other animal life may have flourished in the lockdown days. But then as so-called normalcy crept back into our lives and there was a return to our old habits and schedules, consequently, all that nature healed for itself which we humans failed to do, was set-back again.

Though Covid-19 was bad news for humans, it definitely was a balm for nature that suffered the onslaught of us humans. It was a learning for all humankind to respect nature, it's beauty, it's bounties and blessings.

(Acknowledgement: The data for this article has been provided by Mr. S.R. Sumant)

The Journey of Learning

Shivani Bhatia, Teacher
Soami Nagar Model School, New Delhi

The most prominent way to initiate an article is to commence it with a significant quote. I flipped through various quotes on teachers and students as well as tried interpreting Guru Shishya readings, but none convinced my heartfelt thoughts, as all it conveyed was what a great teacher should be.

Whereas, all I can think of as I reflect on my incredible journey is not what I could minutely render as a teacher, rather what Soami Nagar Model School contributed to me and the way it brought a change of heart.

It was in 2011 that I joined the school as a blank slate with naught experience. Little did I know, that as I will learn to plan lessons, a magnificent plan is being designed for me!

When I was in school one of my favourite teachers often told me that teachers are gardeners, they just sow the seeds and nurture the little sapling, but here it was, my own soul being nourished by the innocent, colourful buds...the little children/students. From a mother of two, they captivated me in such an alluring way that they made me a mother to all of them!

Amidst the joy and beauty, somewhere, I was still entangled and struggling with the complaints of life and battles between my heart and mind. But as I gradually connected with these students I grasped that they were deprived of the little delights of the very basics of life, yet their charming faces beamed with joy and cheer, I felt I am so blessed and thus, learned the greatest lesson of life -Gratitude.

Laid back as I was, I largely felt that getting late by a few minutes would hardly make much of a difference, but as I harmonized and established friendships, I perceived that my colleagues were traveling miles to reach school, yet they were there before me. They set an example teaching me the momentousness of punctuality in their own inaudible way.

In the thick of joy, humour, learning, and teaching, there always was a set of students who created confrontation and fuss. They seemed like huge attention seekers, but soon it was discerned that what they were yearning for was some affection, and it was now that I was learning to comprehend human nature like never before. Somehow, I could believe that beneath the coldest eyes were the softest hearts. This certainly gave rise to emotions like empathy, sympathy, and patience too.

It all taught me how to reach out and also that sometimes a tender, caring touch and being a listener matters...It was now arduous to sort out whether I was sent to teach or

being embraced and taught in a myriad and magical ways.

There were unquestionable fears that made me box myself and build a brick wall around myself, which read, ' I can never do or learn something ever' nevertheless, being surrounded by confident and courageous colleagues, inadvertently, made me move away a few of those bricks and create a small window that allowed me to breathe and peep out to the world. The push I got crumpled the wall to pieces and I noticed a shift from 'I cannot do' to 'I too can try.' The hand-holding overcame those stumbling blocks, which made me confident and self-assured.

' Seva Karni Main Nahin Jaanu ; Apni Mehar Se Aap Karaayi '

I bow my head in complete Gratitude to the Almighty for making me a part of Soami Nagar Model School.

Though I might have shared about gratefulness, punctuality, empathy, patience, and so much more, the truth is I still stand in complete nothingness, insignificant, blank, and incomplete, waiting to learn and evolve into a better human being, yearning to create Better Worldliness.

The journey of learning never ends……..!!!

●

Minimalism

Priya Singh, Centre-in-Charge,
DEI Information Centre, Chennai

Too much of everything there is around,
Materialistic things in excess are found,
People, crazy to buy the latest in everything,
Wonder, what satisfaction to them it brings.

This craziness makes humans hoard a lot,
No realization of how much they already got.
Their life gets filled with too much clutter,
Though, value of things finally reduces to litter.

So much waste, they end up creating,
Then find ways for disseminating,
Why not put a different plan in place,
To declutter and create more space.

Instead of hoarding, be minimalistic,
Don't show off, just be simplistic.
Everything has an expiry date,
Better give it off, before it's too late.

Materialism leads to attachment,
Minimalism helps in detachment.
It not only reduces worldly possessions,
but also dilutes our cravings and obsessions.

Minimalistic thinking is important too,
For it clears the clutter in our mind,
Bringing clarity of thought as the brain unwinds,
Then total peace and calm settles within,
Enabling the Divine Light to enter in.

Vocational Education-Its Role In Modern India

R.K. SHARMA
Mentor (Motor Vehicle Mechanic Programme),
DEI Information Centre, Meerut

Introduction

Vocational education can be defined as the education that is based on occupation and employment. It plays an important role in providing employment and improving economic condition of the country.

A large number of graduate engineers in India are unemployed because they are lacking in Skill. The core problem lies in education system that most of Indian universities follow. The teaching – learning process is predominantly theoretical. They emphasize more on technical writing skill instead of deploying innovative methods that may improve their technical competence and skills. There is lack of Industry exposure and limited opportunities to participate in social work and live projects.

Vocational education consists basically of practical courses through which one gains skills and experience directly linked to a career. It helps students to be skilled and in turn, offers better employment opportunities.

Role of Government

To make vocational Education play its part effectively in the changing national context there is an urgent need to redefine the critical elements of imparting vocational education and training to make at flexible, contemporary, relevant, inclusive and creative. The Govt. is well aware of the important role of vocational education and has already taken a number of initiatives in this area such as providing vocational education and training to backward and tribal areas to uplift them. But the core problem lies with private Engineering and technical Institutions, where the quality and value–based education is not yet developed. Necessary measures need to be taken to improve the gap of the skill demand of the existing and the future Industry.

Benefits of Vocational Education

- Vocational education helps people in the better performance of their jobs as they acquire a great learning experience in skill.
- Vocational education and training is a sort of introduction to the practical work as it makes employees ready for the work place.
- Due to the nature of the skills it imparts, a student can have better concept of

theory in academic education.

- It plays an important role in remarking unemployment in India by providing employment.
- The career of one's own choice is one of the major benefits of this education.
- Vocational education is a great asset to the economy.
- School dropouts and adults can also receive vocational education as it provides an opportunity to learn a skill or trade. There are many well paid career fields in which a college degree is not required.
- Hands on work activities allow direct application of acquired knowledge.
- Vocational education provides stable jobs and such jobs are in great demand.

I would like to conclude that Universities should function with the Motto of Service to humankind; Work is Worship, Duty, Beauty, Humility, Loyalty, Wisdom and Courage to make students complete persons.

Empowering Minds, Fueling Innovation: Some Job Opportunities for Women

Y V Mahalakshmi, Mentor,
DEI Information Center, Secunderabad

I. Skill Development For Women

Women comprise around 40% of the global working population today. There's no job that women can't do. With greater focus on gender equality and leveraging on the number of youth in the next 10-15 years in India, "Women Training under Ministry of Skill Development & Entrepreneurship" takes care of providing skill training to women in the country which aims at stimulating employment opportunities among women of various socio-economic levels and different age groups. It's heartening to notice that many of DEI's certificate and stand-alone modules are also totally aimed at skill set for women and empowerment.

Women's Vocational Training Programme promotes Vocational Training for women for wage-employment in industry, as instructors and also promotes their self-employment. The Names of these women Institutes have been changed as "National Skill Training Institutes for Women" (NSTIs for Women)[1].

The NSTIs(W) organize NCVT approved skill training programmes under Craftsmen Training Scheme (CTS) and Craft Instructors' Training Scheme (CITS) in areas such as Office Management, Electronics, Secretarial Practice, Architecture, Computer, Dress Making, Cosmetology, Fruits and Vegetables Processing, Desk Top Publishing, Surface Ornamentation Techniques, Fashion Design & Technology, Catering and Hospitality, Sewing Technology, Travel & Tour, Computer Aided Embroidery & Designing, Food and Beverages Service Assistant, Food Production (General), Draughtsman Civil and Interior Decoration & Designing , Architectural Assistantship , Cosmetology , Electronic Mechanic Fashion Design Thechnology , Office Management , Sewing Technology, Stenographer & Secretarial Assistant , Architectural Draughtsman , Interior Design & Decoration , Additive Manufacturing Technician(3D Printing) , ADIT IoT Technician, Smartphone Technician Cum App Tester , Surface Ornamentation Technique , Stenographer & Secretarial Assistant , Fruits &Vegetables Processing , Travel & Tour Assistant etc,.

Placement support is also provided to the passed out trainees by organizing on Campus Interviews. Support is also being extended to the trainees to facilitate them for Apprenticeship Training[1,2].

II. Other Work From Home Jobs Suitable For Indian Women

On another hand, there are jobs with excellent career choices for women in India who are unable to go out to work. Work life balance is the reason why most women opt to quit jobs after their marriage. It gives them a great opportunity to be productive and make use of their skills while offering some much-needed flexibility while being at home. This not only helps the women of the house to contribute to the family financially but also helps them to be independent enough on their own foot. They could live out some of their dreams to still work while managing their households at the same time. This helps them to overcome the restrictions of both their families and the society that still doesn't prefer the women of their household to go out for work.

One should keep in mind that the earnings from these best work from home jobs in India depend completely on you and your work and is directly proportional to capabilities.

1. Online Tutor: Internet usage has far-reaching advantages and one of them being the access to an affordable and much convenient education these days. Online tutors are the ones who make it possible. Find reliable streams and apply them to acclaimed platforms of online education. Work smartly to increase your demand. (Tutoring to USA and UK stundets is not uncommon) Skillset: In-depth knowledge of a particular subject/skill, Communication skills, IT Skills and Patience

2. Pastry Chef of Your Own Bakery: If you're interested in baking and have those skills to bake simple to fancy cakes, cookies, tarts and many more sweet dishes and desserts; you can start your own venture for a pastry store or simple delivery service. You can have a decent earning and take pre-orders and have them delivered with a booking price and have the full price paid before delivery as it suits you. You can also have yourself listed on food apps like Swiggy, Dunzo, Zomato and many more. Skill set: Culinary knowledge, Financial knowledge & budgeting skills, People skills and knack for creativity & experiment

3. Blogger: If you're really passionate about a particular topic that can be ranging from fashion, fitness, food, gardening, travel or even philosophy, you can perfectly start your own blog or can even start microblogging through Instagram. To maximize your earnings you should know your short-term and long-term blogging goal. For instance, you can decide whether you wish to drive sales or increase traffic on the blog. Skill set: SEO, reading and research, written communication, brevity

4. Content Writer: Content creation or writing has truly created its place among the most effective work from home jobs in India. The simple reason for this can be the demand for the work. Businesses essentially have to educate, inform, or entertain people through content and that is what's going to create people to opt for their brand. you can be pretty positive that the business won't have a scarcity for this type of work from home choices in India. Skillset: Strong Communication Skills, Proficiency in Language and Grammar, Ability to Research in given domain, Adaptive Writing Style, Knowledge of SEO

5. Vlogger: A vlog is nothing but (DIY) just a blog in a video format. Not just food vlogs, there are travel vlogs, Do It Yourself craft vlogs, informative, parenting or motivational talk vlogs, etc. If you've got the talents to create videos like these, you can begin your own channel. Once your channel hits a particular number of views, you begin getting paid for it. If you gain popularity you'll earn from affiliate marketing or product promotions too. All you would need is a high-quality camera or camera phone and mic to begin posting. Skill set: Viode shoots, editing, audio mix, integrated video making, good communication skills.

6. Social Media Influencer/Manager: Influencers are highly sought after these days by big brands and companies. They play a significant role in word of mouth communication for brands through their audiences and followers. Influencers not only promote a product through their social media platform presence but some of them also tend to review many products. They bag a good amount of commission from these activities depending on their partnering brands!Skillset: Creativity,Content Writing,Graphic Designing and Knowledge of different social media platforms

7. Data Entry: The job demands smooth and efficient processing of large amounts of information. All you require is an attention to details, a decent computer, fast internet, MS Office installed and some fast typing skills. You can create a profile on freelance sites and leverage freelancing portals to find projects that interest you the most. Skill set: Typing skills, Research skills, Attention to detail

8. Home-Cooked Tiffin Services: Indian household women are blessed with the best cooking skills and you could put it to some great use other than just cooking at home. It would require some more time and a lot more efforts to manage with your everyday chores. You can start your own cooking and packaging business and start a small tiffin service of sorts initially. There are many food apps that are promoting such services to home cooks as a business professionally, like Zomata, Swiggy, Homely and many more. Skill set: Art of cooking, estimation, budgeting, hands on to various cuisine.

9. Virtual Assistant: Virtual Assistants are freelancers who work remotely through the internet and facilitate businesses across the globe with numerous administrative tasks and keep everything organized. They are usually assigned to handle tasks like composing and responding to emails, making business documents like PowerPoint presentations and Excel sheets, responding to business inquiries, managing blogs and websites and a lot more. You can find the best VA jobs at freelance sites such as Elance.com, Zirtual.com, Fivver and Upwork.com.Skillset: Communication skills, IT Skills, Knowledge of social media, Time Management and attention to detail

10. Graphic Designing: Similar to content writing, graphic designing is also a field full of endless opportunities. If you're a creative person, who has the knowledge of

Photoshop and some other useful graphics tools, then graphic designing is the one for you. Creative posts are what captures the attention of a user. Graphic designers main function is to help in grabbing the attention of these users and achieve greater engagement on social media platforms. Skillset: Software knowledge, Design sense, Creativity, An eye for detail, greater visualization.

11. Customer service representative: For businesses to have a customer-centric approach, customer service is a great profession to enter. You will need to attend to customer requirements by paying attention to their concerns and insightful feedback. Customer care representatives that work remotely typically communicate with customers via email, chat, phone, or social media. You will be addressing their questions, assisting them in placing orders or resolving any problems they may be having. Skillset: Persuasive speaking skills, Empathy, Responsibility and Patience

12. Digital Marketing: Digital marketing as a career option requires incredibly professional talents and abilities. Building the brand you are working for and raising awareness of is what this job is all about. There are many different types of marketing, including email marketing, viral marketing, influencer marketing, content marketing, search engine marketing, and many more. Each of these categories of digital marketing approaches was created with a specific goal in mind, and the strategies employed varied accordingly. As a digital marketer, your day-to-day responsibilities include interacting with the target market, managing social media profiles like Instagram and Facebook to boost user engagement, and supporting marketing, advertising, campaigning, and proofreading online or print campaigns. Digital Marketing is one of the highest-paying work from home jobs for women. Skill set: Technical knowledge in the field, Data analysis, Creativity, Communication skills, marketing flair

13. Online Reselling

Online reselling is popular right now because sellers may supply products directly to customers from wholesalers, earning a profit for themselves without having to keep inventory in their store or storage facility. All that is needed is a basic understanding of social media and the internet. Through social media, exhibitions, and connections, a reseller must connect with the source and disseminate the commodity's description, information, and images/videos. Choose a niche or offer products that represent a certain aesthetic or lifestyle rather than selling anything you can get your hands on.

Skillset: Networking and Sales So, find the right courses to help you upskill, be passionate about the job you choose, update your LinkedIn profile regularly with your projects over time, as many employers can find you from there. Last but never the least, connect with a lot of people.[4]

References:

1. https://www.msde.gov.in/en/schemes-initiatives/schemes-initiatives-through-DGT/vocational-training-programme-for-women#:~:text=The%20NSTIs%20%28W%29%20%28erstwhile%20NVTI%2FRVTIs%29%20organize%20NCVT%20approved,18%20NSTIs%20%28W%29%20in%20the%20above%20mentioned%20trades
2. https://www.csrindia.org/women-skill-development/
3. https://www.meesho.com/blog/v2/10-simple-work-home-jobs-suitable-indian-women
4. https://www.cheggindia.com/earn-online/best-work-from-home-jobs-for-women/

Just Chant Ra Dha Sva Aa Mi

Naresh Shivani, Facilitator OACO
DEI Information Centre, Mumbai

Caught in this unrealistic world
Where desires overcast spirituality
Just chant Ra Dha Sva Aa Mi

In the world of Maya and kaal
To protect purity of the spirit
Just chant Ra Dha Sva Aa Mi

To rid the jivas of Chaurasi
With seva of the Lord prime
Just chant Ra Dha Sva Aa Mi

Away from clutches of Kaal Purush
Ascend the spirit to Desh of Dayal
Just chant Ra Dha Sva Aa Mi

To be blissful at all times
Happiness of the Lord prime
Just chant Ra Dha Sva Aa Mi

Report on National Service Scheme (NSS) and Unnat Bharat Abhiyan (UBA) Winter Camp at DEI Information/ICT Centre, Soami Nagar, New Delhi Dayalbagh Educational Institute (Deemed to be University)

A 4-day NSS and UBA camp was organised between 29-Dec-22 and 01-Jan-23 at the Soami Nagar information Centre. Various activities were conducted during the camp from 10 AM till 4 PM on these days. Overall 9 students – 7 registered in the online B.Com (Hons) programme being conducted at Soami Nagar and 2 outstation (Mathura) students – attended the camp. (The arrangements for staying and meals of outstation students were made at Soami Nagar).

- Cleaning and social service activities were conducted at the centre and Satsang Bhawan campus in Soami Nagar.
- Agroecology related activities were also organised where students got practical exposure to work on fields at the Soami Nagar Satsang Bhawan campus and a small garden at the Centre.
- Brief talks were organised on key areas relating to:

(i) Agriculture, ecology and Biodiversity by Mr. Sanjay Mathur


(ii) Green revolution – by Mr. Sant Prakash

(iii) Environmental awareness – by Dr. Bhupinder Singh


(iv) Self-service and cooperative efforts – Mr. Bhupesh Kumar

(v) Empowerment and awareness among youth – Mrs. Reena Ahuja


(vi) NSS: Basic concept and construct, evolution, history – by Mr. Bhupesh Kumar

- Students were also given time to share their thoughts on innovation, learnings from the camp and quality of life based on different activities they participated in. The students prepared and presented a skit, a poem and a song based on the learnings from the camp. The valedictory function was organised as a joint function for Shiksha Diwas (Education Day – 01-Jan-23) in the form of a Panel Discussion.

The theme of the Panel Discussion was "Dayalbagh Way of Life: Role of Soami Nagar as a Cooperative Model." Following panel members were invited to express their views:

(i) Mr. Sanjay Mathur, Branch Secretary Soami Nagar
(ii) Dr. Bhupinder Singh, Head & Professor, Environment Science, IARI, PUSA, Delhi
(iii) Mr. Bhupesh Kumar, Assistant Professor, DEI ICT Centre, Soami Nagar Delhi
(iv) Mrs. Arti Prasad, Principal, Soami Nagar Model School
(v) Mrs. Beenu Kapur, Principal, Soami Nagar Pre-primary School
(vi) Mrs. (Dr.) Renu Caprihan, Medical Advisor, Soami Nagar Charitable Dispensary
(vii) Mr. Saran Bhatia, Architect, Soami Nagar, Delhi

The Panel discussion started with University Prayer. It was moderated by Mr. Deepak Swaroop, renowned name in the sourcing industry. Mrs. Reena Ahuja, Administrator of ICT Centre explained the objectives of the Panel Discussion.

The panellists provided a bird's eye view of Soami Nagar society's contribution in moving towards a sustainable living with a focus to help the last, the least, the lowest and the lost which is envisioned by the Most Revered and Respected Chairman Advisory Committee on Education (ACE), Dayalbagh Educational Institutions, a non-statutory body serving as a think tank.

The students were able to understand the motto of the camp and related to the services rendered by the Institute and society to mankind. The goal of developing a Complete Man was also discussed briefly by the panellists.

The Valedictory Function and Panel Discussion concluded with the National Anthem. The participating students, staff and panellists were served high tea.

(The orchestrator of the entire event was PB. D. Amar, Mentor for the B.Com and M.Com programmes at Soami Nagar centre. Mrs. Reena Ahuja coordinated the sub-events within the camp. This article has been written by Mr. D. Amar with inputs from Mrs. Reena Ahuja).

कबाड़ से संवाद

अर्षेया कपूर, कक्षा–11
स्वामी नगर मॉडल स्कूल, नई दिल्ली

पुर्जा अगर जो गिर जाए, टूट जाए जो वो यंत्र से,
बन जाता है वो कबाड़, यांत्रिकी षड्यंत्र से।
कोई पूछे जरा उस पुर्जे से, कैसे साथ ये टूट गया,
पकड़ना था जरा जोर से, कैसे हाथ ये छूट गया ?
बोला पुर्जा बेचारा, ठोकर लगी, मैं गिर पड़ा, दूर कहीं मैं फिका था,
हर रिश्ते की एक उम्र है, मेरा साथ यहीं तक लिखा था।

अब क्या करोगे पुर्जा जी? सेवामुक्त होकर यूँ,
कूड़ेदान में जाओगे, कबाड़ की ढेरी में खोकर ज्यूँ।
कहीं भी जाऊं, कैसे भी, एक दिन मैं मंजिल पा ही लूँगा,
किसी आधुनिक शिल्पकार की, प्रयोगशाला में जा मिलूंगा।
क्या बात है पुर्जा भैया, तुम तो आशावादी प्रकार के निकले,
दुनिया कहती है, बेकार, नाकारा – एक बार जो ठोकर खाके निकले।

रोज आतंरिक अभिव्यक्ति से साकार भविष्य की आशा है,
हर हार के आगे जीत है, आज यही हार की परिभाषा है।
जब तक पाठशालाओं में जुगाड़, पुनर्चक्रण सिखाए जाएंगे,
किसी ना किसी दस्तकार की कल्पना में, हम भी पाए जाएंगे।

ऐसे ही शायद कभी ना कभी तुम किसी पुर्जे – सा छूट जाओ तो,
दुनिया हाथ झाड़ ले तुमसे, समूह में ना समा पाओ तो,
स्मरण सदा ये तुम रखना कि हम अलग–थलग होकर भी काम के रहेंगे,
पीछे ना मुड़ना, निराशा से ना जुड़ना, हम सदा ऊंचे दाम के रहेंगे।

जो पुर्जा समझ के फेंक आए, वो क्या हमारी कीमत समझेंगे,
वो कल भी रचनात्मकता से वंचित थे, आगे भी अन्धकार में रहेंगे।
एक–एक पुर्जा जोड़ कर ही तो जहाज, यंत्र और तकनीक बने,
कार्यगर रहना लक्ष्य रहे, जीवन की इसी सीख से सने,
जब तक काम आयें तो आयें, फिर पुरावस्तु बन जायेंगे,
बैठक में सजी प्रदर्शन वस्तु बनकर मंद मंद मुस्कुरायेंगे।

●