

The Significance and Pertinence of Ancient Indian Education in the Current Educational Framework

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Abstract

Since ancient times, and particularly during the Renaissance, the Golden Age of Indian Culture, India has had a strong heritage of education and study. The decimal system, the great Sanskrit epics, and the contributions to the fields of astronomy, mathematics, and metallurgy were the three main educational advances of this era. The four Vedas—the Samaveda, Yajurveda, Rigveda, and Atharvaveda—were established by principles, customs, and behaviors. A key role in the Indian educational system is played by the idea of action, or karma, which developed as education moved from the ancient to the contemporary era. During the Vedic era, two teaching philosophies were in use. The verbal/oral approach comes first, followed by the thinking-based approach (Chintan). Similar patterns of diverse methods have been observed in higher education today. Additionally, NEP 2020 recommends a multidisciplinary strategy. Three learning domains are identified by Bloom's Taxonomy: cognitive, emotional, and psychomotor. The three domains are also the foundation of the old educational system, which aims to improve lower-level cognitive skills in order to foster higher-order learning.

The exploratory study aims to analyze the body of academic research on the applicability of the ancient educational system in contemporary interdisciplinary education. It is based on secondary published research papers on the Indian educational system. The literature review highlights how many yogic practices were included into old Vedic learning methods. Asanas, mantra chanting, and meditation were generally used to promote learning and quiet the mind. Under the direction of AICTE and UGC, HEI emphasizes the same methods. Yoga has adopted the Universal Human Value (UHV) for holistic personality development and integrative practice. The logical approach, spaced learning, and rational memory are contemporary techniques for memory development. All of these are derived from the ancient way of teaching and learning. Using the ABCD listing methodology this paper explores the advantages, benefits, constraints, and disadvantages of the modern education system, both from learners' viewpoint and teachers' viewpoint.

Keywords: Ancient Education, Vedic Knowledge, Multidisciplinary, ABCD Analysis framework, Modern Education

I. Introduction

Transferring knowledge to the next generation is the primary goal of a traditional education system, which is a customary kind of education. Information is learned inside the four walls of classrooms in the traditional educational system. Compared to other parts of the world, education in ancient India was very different. For the duration of the learning process, the disciple or learner had to leave the home and live with the instructor in a gurukul. The curriculum, instruction, and learning could not be influenced by the monarchy or society. Both official and informal educational methods were used in ancient India. Education was taught at gurukuls, pathshalas, temples, and homes.

Students were educated about religion, customs, rituals, and traditions in the old educational system (Ghonge M. et al., 2020). In addition to learning more about nature and creation, students also gained knowledge about custom, religion, dharma, honesty, discipline, and self-reliance. As time goes on, we observe that the educational system has changed. Learners may now access up-to-date information and move toward a knowledge-based society thanks to the establishment of the contemporary educational system. Education nowadays is more application-focused and multidisciplinary. Because it was adapted from the old educational system, the Indian educational system is very diverse and well-liked by other nations.

India is a young country, and the demographic dividend of India is the force behind the growth. Technological and scientific improvements have boosted economic growth in India. An Indian university is the biggest and the largest education system built on the backbone and foundation of ancient education followed by education in the medieval period. The main purpose of this paper is to convey what is needed to develop in our current education system, adapting from the ancient education system to fit the modern education system in a

robust way. The National Education Policy 2020 envisages inclusive and equitable quality education while addressing the growing developmental imperatives of the country.

Early childhood education in NEP 2020, focuses on developing, inquisitiveness, teamwork and collaboration among learners. The ancient education system also focuses on the same. The Higher Education Institutions emphasizes on cross-functional and interdisciplinary learning approach (Aithal P.S and Aithal, 2020). We draw the corollary from ancient education. The National Education Policy has placed special emphasis on the rich heritage of ancient Indian culture, taking Yoga, Ayurveda and Spiritualism as the guiding path and this has translated India today into a global power (Khusnam P. N., 2022).

From elementary school to higher education, changes are positioned to ensure that learning outcomes provide the best possible equality and integrity to the system. Modern education is interdisciplinary, cross-disciplinary, and inter-disciplinary, just as the educational system of antiquity. A thorough literature analysis of the ancient educational system, modifications made to the medieval educational system, the education system from 1986 to 2020, and the present NEP 2020 served as the foundation for this essay.

Evolution of ancient indian education

Education during the Vedic period: 1500 BCE- 600 BCE

The ultimate aim of education emerged as the Chitti-Vritti-Nirodha (the control of mental activities connected with the practical world) Education was holistic and all-rounded. An attempt was made to make the student experience the situation or the divine truth and mould himself and society accordingly.

There was always a tight contact and open communication between the teacher and the pupil. Because the instructor was accepted by the community in which the students resided, he was seen as a role model. Teachers taught vocational training and upheld the dignity of labor via daily lectures, courses, and hands-on practice. The four Vedas are the foundation of Indian culture and education in antiquity.

The Rigvedic education was mainly meant for the priest class and there was secular religion and vocational training for the masses. The method of teaching was practical during the Vedic period and was based on Oral (Verbal) and Thinking (Chintan). In the modern days too, the teacher guides the students to research, apply, evaluate, and create, this process was very much present during the Vedic period. The educational system of the Vedic period was mainly focused on character formation, development of personality, and to a large extent through Yajurveda and Atharvaveda teaching, which made it practical and thus evolved the Aryan Culture. Hearing, thinking, and meditation were the three principal methods of instruction. The question-answer system too evolved during the later period.

The instructor had a prominent position and was the best mentor to the students. During the twelve years of Vedic education, which was delivered through Gurukuls, Parishads (academic institutions), and Sammelans (conferences), the norms of conduct and discipline were an integral element of instruction. The similar structure is also reflected in the current educational system.

The main occupations of the Vaishyas, or business class, were trading, agriculture, and animal husbandry. Math, geography, economics, agricultural science, and business methodology were all crucial to comprehending business. The Shudras were not given access to higher education. The shudras mainly learned dancing, vocal music, orchestral music, and the art of dyeing. Their knowledge and skill were transferred from generation to generation (Indian Education System, 4). The biggest demerit of the system was the watertight compartments in education and training, based on the caste system.

Education in the Sutras: 600 BCE – 200 BCE

The sutra literary era came after the Vedic literature era. The Sutras education, which was a more practical approach to education, was born out of the Vedic era's need for training and education. The pupils' access to specialized study areas was one unique aspect of this schooling. Numerous fields of study, including geometry, algebra, physiology, astronomy, astrology, and the Vedas, attained the pinnacle of knowledge. This literature and work are mentioned in Panini, Katyayana, and Patanjali's works. The advancement of philosophy was one aspect of this time that distinguished out. Character and personality development were the only goals of the whole educational system. Yoga (mind-body integration), Nyaya (justice), Karma (deeds), and Vedanta (vedic conclusion) were the means by which this was accomplished.

Education in the Epics

The scattered facts in the epics, like Ramayana and Mahabharat, give us glimpses into military education during that period. The word Kulapati (Chancellor) and Upkulapati (Vice-Chancellor) in modern-day University structure is derived from the mention in the epics. Kulapati was applied to the Guru (head) of 10,000 disciples. Military science was generally called Dhanurveda. During this period military education science was very important. Many institutions such as Taxila, Ujjain, Nalanda, Banaras, and Madura were established. Jibaka, a well-known medical expert of the 6 Century, Panini the famous grammarian of the 7 Century, and

Kautaliya, of the 4 Century, the authority on Arthasastra, were students of Taxila. To summarise, education in the epics was mainly vocational training, essentially practical and application oriented.

National Policy on Education 1968

The Indian government's first priority in the years after independence was to give education more focus. Established in 1964–1966, the education commission was tasked with advising the government on general educational development concepts and programs as well as the national educational pattern. A concerted effort was made to improve education at every level, with a focus on the advancement of science and technology as well as the promotion of moral and social values. The following were designed and promoted by the Indian government in 1968 (National Education Policy 1968).

- (1) Free and Compulsory education up to the age of 14, under Article 45 of the Directive Principle of State Policy.
- (2) The academic freedom of teachers to pursue and publish independent studies and research, along with the teachers' emoluments and service conditions we also considered.
- (3) Development of languages like Hindi, Sanskrit, English, one South-Indian language, and one international language was also encouraged.
- (4) More emphasis on the education of girls, tribal communities, and physically and mentally challenged children was given.
- (5) Education was given in the field of science, with special emphasis on research in agriculture and industry.
- (6) The education structure was broadly uniform in all parts of the country.

Merits:

- (1) Compulsory education for all children up to the age of 14 and emphasis also on adult education.
- (2) Suitable programs were designed to reduce wastage and stagnation in schools, with suitable teacher education to improve teaching standards.
- (3) The three-language formula helped to develop proficiency and cultural integrity among the learners, the future of India.

Demerits

- (1) Too many objectives and milestones to achieve in five -year time. No objectives or assignments could therefore focus on one task completion.
- (2) Education is an extremely complex system and cannot be delivered by Central Government alone. The active role of the State Government was missing in executing the NPE 1968.
- (3) Education and research, both require high budget outlay. There was a scarcity of resources in implementing the big national policy on education.

The National Policy on Education -1986

To guarantee a better enrollment percentage, pre-primary education was necessary, with an emphasis on health, nutrition, the play-the-way technique, and building relationships within the community and at home (Gupta A, 2022). The goal of NPE 1986 was to get India ready for the twenty-first century. The policy placed a strong emphasis on the need for transformation because Indian education was at a turning point at the time. On the one hand, the population was rising too quickly, and on the other, practical instruction was necessary. The primary goal of the 1986 National Policy on Education was to eliminate the inequality between the various socioeconomic groups, whereas the 1968 education policy mandated compulsory schooling.

It suggested 10+2+3 structure and gave autonomy to the syllabus followed by the states. There are 10 Core elements of the NPE 1986, India's common cultural heritage, democracy, and secularism, protection of the environment, removal of social barriers, knowledge of India's freedom movement, constitutional obligation, nurturing national identity, population control, egalitarianism and gender equality, regarding women's equality.

Merits

- (1) Recognition of the importance of technical and management education, Expansion of technical education both at degree and diploma level. The emphasis was on the facilities and on quality management education and higher education keeping in mind the changing economic scenario.
- (2) Open and Distance Education to augment opportunities for higher education and make higher education cost-effective and innovative.
- (3) The University system was also made centre stage, with a focus on more universities in rural areas to improve knowledge creation and knowledge sharing in the rural population. Emphasis on agricultural universities to meet the need for research and development in agriculture for mitigating the food requirement and improving rural education.

Demerits

- (1) Not much uniformity was seen in the education system of the country. A core curriculum with a multidisciplinary approach across all education and education level was overlooked.
- (2) Enrolment by itself is of little importance, if the student doesn't continue to study after one year. There was no proper mechanism to ensure that every child attended school regularly.
- (3) The challenge mentioned in point number 2 above could have been mitigated by mobilisation of teachers and local communities. The success of any strategy is judged by its implementation. A major challenge was this, given the teacher and student ratio.

The National Education Policy – 2020

Examining the 2019 proposal, we discover that there was a strategy to gradually include employability skills and vocational education into normal schooling. Skilling is now the norm rather than just a trendy term. To improve employability, a policy supported by skill-development programs is being pushed. According to the 2019 skill report, just 4.69 percent of India's workforce is skilled, and 45.6% of young people graduating are employable. In contrast, 52% of workers in the US, 68% in the UK, 80% in Japan, 96% in South Korea, and 24% in China are skilled workers. Because skill training and employability are not aligned, the proportion is low in India (NEP, 2020).

Education should provide professionally trained graduates to Industry 4.0 to fulfil its requirements. What's turning out to be more important is the approach in the face of complex challenges and uncertainties. The administrative abilities of leaders and managers are put to the test only in complex situations. When companies are redefining their purpose, education should redefine their pedagogy (Mishra, N., 2020). To rethink work, workforces, and workplaces, the role of higher education and B- schools, is imperative. Skills required in the year 2000 are not the same anymore. Often questions on problem-solving and perseverance are asked during recruitment. The answer to such questions is possible only when the students have exposure to industry-related activities and problemsolving skills, integrated with the programme and the course.

The technological disruption that the world is currently undergoing is unprecedented. This has led to a radical transformation in the education ecosystem. According to the Organization for Economic Development (OECD), "Future of Education and Skill Project (2030)", we need to replace old education standards with an educational framework with the 21st century skills of creativity, critical thinking, communication, and collaboration. According to Mishra. N. (2020), this can't be achieved by simply moving teaching from whiteboard to online. What is needed is radically transforming the way knowledge is disseminated and skills acquired. Along with knowledge and skills, what is needed is attitude and value to thrive in and shape the future into a more global workplace. The FICCI- EY report, 2021, has also studied the well-reasoned and bold reformation steps suggested by NEP 2020. The NEP focuses on disruptive changes by taking into cognizance the issues of equitability, inclusivity, accessibility, exploratory and experimental, all ingredients required for transforming Education 4.0 and beyond.

Curriculum and pedagogy could be revised to incorporate formal, informal, physical, and digital elements to enhance learning. Education models focussed on blended and interdisciplinary learning, that integrates technology access, teaching pedagogy and assessment methods can deliver better quality education.

In a country where 50 % of the population is below the age of 25 years, it's the onerous responsibility of the Government to provide better education, training, and skill development to enable the youth for a proper livelihood. Our literacy rate of 74 % and in some states at 100% doesn't fulfil the requirement of skills needed by the industry.

Our focus was earlier on Foundational Literacy and Numeracy. In the current situation, the focus should move to employability skills. With this background, certain changes in the NEP are proposed with the vision for a balanced education. The focus of NEP 2020 has been, employability and entrepreneurship (Aithal and Aithal, 2020).

Merits

- (1) The objective of NEP 2020 is to provide a multidisciplinary and interdisciplinary liberal education to everybody. Consolidation of existing fragmented HEIs into Multidisciplinary Universities and Multidisciplinary Autonomous Colleges with a focus on research and teaching-intensive colleges.
- (2) Aiming to increase the Gross Enrolment Ratio in Higher Education including vocational education from 26.3 % in 2018 to 50 % in 2035. GER is not just enrolment and studying for one year, it ensures tracking education till completion.
- (3) The Academic Bank of Credit (ABC) which would digitally store the academic credits is another positive feature of the NEP 2020. The digital storage will allow flexibility for students to complete their Bachelor Degrees, Master Degrees, and Ph.D. degrees, with multiple exit options.

Demerits

- (1) Conversion of affiliated colleges into autonomous colleges might compromise with the studentteacher ratio, infrastructure ratio, quality of education, and compliance. Granting autonomy to not-soready institutes might defeat the very purpose of NEP 2020.
- (2) Changing the mindset of all stakeholders and administrators at the same time is very challenging. Faculty members with their varied roles in education will now have to focus on outcome-based and research-oriented curricula.
- (3) Delay in the decision-making process as various lobbies will act in the system, this may affect the accreditation process, outcome-based learning, standard benchmarks, and awards.

The Modern Education System Based on Ancient Education System

Given the rising academic demands of modern education, it is critical to enhance it. The literature review highlights how many yogic practices were included into old Vedic learning methods. Asanas, mantra chanting, and meditation were generally used to promote learning and quiet the mind. Under the direction of AICTE and UGC, HEI emphasizes the same methods.

The Universal Human Value (UHV) has been adopted for holistic personality development and integrated yoga practice. During the orientation program, all students are required to participate in a 10-day UHV program. The logical approach, spaced learning, and rational memory were among the contemporary techniques for memory development. The old methods of teaching and learning are the source of all of them.

Relevance of ancient education in modern education system

Table 1: Comparison of the ancient education model with modern education

Issue	Ancient Education	Modern education
Teaching	Instruction based	Discussion based
Learning	Passive learning attitude	Active learning attitude and high engagement
Role of Teachers	Instructor	Mentor
Learning Activities	Text-books and texts	Project-based learning
Learning Locations	Traditional classrooms or gurukuls	Large learning space, including internet
Teacher Training	Degrees, credentials, and certificates	Continuous training and upskilling
Industry's Perception of Graduates	Assembly line workers	Co-creators and entrepreneurs
Employability	Qualified and major focussed	Prepared for multiple careers
Result	Limited career prospects	Equipped with a variety of skills & multiple career paths

Adapted from <https://www.dreamformula.education/edu4>

Analysis of ancient education compared to modern education

In exploratory research, analysis refers to the process of examining and interpreting gathered information. Exploratory research is conducted when there is limited knowledge or understanding about a particular topic or problem, and its purpose is to gain insights, generate postulates, identify patterns or relationships, and generate new knowledge about a particular phenomenon or problem. There are many analysis frameworks used in scholarly research which include SWOC analysis framework for internal analysis, PESTEL analysis framework for external analysis, and ABCD analysis framework for stakeholder analysis. Advantages, Benefits, Constraints, and Disadvantages (ABCD) analysis framework is proposed in the year 2015 to analyze systems, concepts, ideas, strategies, products/services, materials, etc. ABCD analysis framework can be used both qualitatively and quantitatively depending upon requirements. The qualitative ABCD analysis framework consists of (1) ABCD listing from information gathering from primary and secondary sources, (2) ABCD listing from Stakeholders' point of view of a system, (3) Factor and Elemental analysis using ABCD framework. The quantitative ABCD analysis framework consists of (1) Ranking the ABCD constructs based on primary data, and (2) Statistical analysis of ABCD constructs. In this section, we have used ABCD listing from stakeholders' points of view (both learners and teachers) on ancient education compared to modern education in Higher Education.

ABCD Listing from Learners' Point of View

(A) Advantages

- (1) The teaching and learning discussions encourage high engagement of the learner.
- (2) Focus on learning is more project-based and practical.
- (3) Learning is more technology-driven and focuses on learning infrastructure.
- (4) Modern education is outcome-based and emphasizes on upskilling.
- (5) Multiple career opportunities provided by industry and economy.

(B) Benefits

- (1) Modern-day education is not class or occupation-based, its more merit-based.
- (2) Modern-day education is multi-disciplinary and open to all.
- (3) The benefits of education of NEP 2020 are balanced with academics, experiential and skill development.
- (4) Modern education is credit based on the advantage of an academic bank of credit.
- (5) Modern-day education (NEP 2020) is more flexible and allows students to pick and choose their academic journey.

(C) Constraints

- (1) Modern-day education is expensive and requires heavy investment.
- (2) Education is more technology-based, thereby posing a constraint for places with poor technology infrastructure.
- (3) There is a shortage of trained and skilled teachers in implementing the new curriculum.
- (4) Bureaucracy and red-tapes can delay the implementation process.
- (5) India's challenging situation on poverty eradication, unemployment, and healthcare reduces the focus on education.

(D) Disadvantages

- (1) The focus on project-based experiential learning may reduce the impact of academic rigour.
- (2) Though education is skill-based the results are yet to materialize in the absence of trained teachers.
- (3) The role of a teacher or mentor is relegated to a facilitator, thereby affecting discipline and respect, two important virtues for a successful career.
- (4) There is a loss of communication skills, peer learning, and teamwork as the results are individualistic and goal-oriented.
- (5) Due to excessive focus on technology, there is reduced social interaction.

ABCD Listing from Teachers' Point of View:

(A) Advantages

- (1) Focus on research and innovation for teachers, thereby promoting more learning and development opportunities. With new focus on intellectual property rights, teachers are more inclined towards innovation, patents and research papers
- (2) More opportunities for teachers with talents and skilled in managing higher education institutions. Small colleges will be transformed into cluster colleges and universities thus providing opportunities for teachers from smaller colleges to move to either research-intensive universities or teaching-intensive universities
- (3) Merit-based appointment and promotion on the basis of the Career Advancement System (CAS) to make NEP 2020 more effective by attracting and retaining good teaching and research talent. Faculty selection and promotion will therefore be more transparent
- (4) More flexibility to teachers with autonomy in curriculum designing, teaching, and evaluation. This will enhance faculty engagement and improve the learning outcome

(B) Benefits

- (1) Education leaders are recognized as role models and faculty at the senior level are encouraged to continue research work along with administrative responsibilities.
- (2) Boosting online training and teaching (ICCT), allowing faculty to undergo upskilling through MOOCS and Swayam courses.
- (3) Flexibility to faculty in teaching across various different streams and specializations or choosing to teach one single area of expertise.
- (4) Opportunities for retired professors as research guides and welcoming industry practitioners as professors of practice to enhance experiential learning.

(C) Constraints

- (1) Teaching the fundamental subjects in the mother –tongue can be a big constraint for many teachers.
- (2) Multiple entry and exit routes for learners might make it difficult for teachers to keep track and bring the learners to the next best level possible.
- (3) Training teachers for multidisciplinary curriculum, examination reforms, and changing the mindset of all teachers to implement NEP 2020 comes with its own limitations and challenges.
- (4) Along with the teaching load, which is the primary duty of any teacher, the focus has moved to research and innovation, this might be challenging to teachers without any institutional and domestic support.

(D) Disadvantages

- (1) Faculty productivity might be challenging if a diverse and multidisciplinary education system is implemented.
- (2) Bringing uniformity in the education system will take time and hence the Academic Bank of Credit or transfer of credits will be a lengthy process.
- (3) Education is a state subject, the willingness and preparedness of every state in achieving NEP 2020 could be different, as the NEP 2020 education system stresses on autonomy and flexibility.
- (4) Influences & lobbies in the process of accreditation and approvals to attain full autonomy will defeat the very purpose of education and employability focus of NEP 2020 by diluting the standards and parameters of HEI.

Suggestions based on analysis

- (1) Modern-day education should aim at developing good, well-rounded creative, and ethical individuals, contributing productively to society.
- (2) Revamping the curriculum, pedagogy, assessments, teaching, and learning method to develop student-centric education.
- (3) Education should be more multidisciplinary and choice-based.
- (4) Focus should be made on faculty/teachers' training and upskilling to enable them to implement outcome-based education. This will allow autonomy and flexibility in teaching and research.
- (5) Effective regulatory system with good governance to assess the quality of education standards. Light but tight is what NEP 2020 mentions.

II. Conclusion

A holistic and multidisciplinary education will help develop well-rounded individuals that possess critical 21st-century capacities in fields across the arts, humanities, languages, sciences, social sciences, and professional, technical, and vocational fields; an ethic of social engagement; soft skills, such as communication, discussion, and debate; and rigorous specialization in a chosen field or fields. The influence of ancient education in the modern education system is tremendous. The emphasis on Indian Knowledge System, Value education, Yoga, and Skill based education is to develop psychological wellbeing through grit. The perceived grit in a person is highly influenced by psychological well-being, hence the focus on holistic education (Chakraborty et al., 2020). Ancient education always focused on higher knowledge of self and knowledge of strength. Modern-day education emphasizes on this concept of self-awareness and skill development through experiential and multidisciplinary learning.

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