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Reforming Design Education in India: Towards its Effective Utilization for National Prosperity

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Abstract: Design education is today fundamental to national prosperity. It is now considered a critical element of innovation strategy. Design education in India has witnessed exponential growth over the last fifteen years. The country's young population is now open to exploring alternate careers and design has today emerged as a much-needed option for them. From only a handful of design institutes in the country until about 2004, many new design institutes have been created in the last one and a half decades. This trend is expected to continue. As design education expands in the country, efficiencies will have to be developed and maintained to uphold standards of quality. A variety of different programs with many variables involved - institutional approaches, curriculum, area of specialization, student-faculty ratio, graduate profile, etc. creates a sense of confusion among all its stakeholders. Over and above these, there is now a growing sense of dissatisfaction among industry about the skills and capabilities of the upcoming graduates of these design schools. The curriculum needs to be revised and updated to meet the expectations of the new-age digital and innovation economy. There is an urgent need to develop a broad framework and guidelines for design education in the country. Reforming and reinforcing design education would be the right beginning for India to maximize the benefits of design.

Keywords: India; Design education; Innovation; Effective Utilization; National Prosperity

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Introduction

Design education in India has grown exponentially in the last fifteen years. Until 2004 there were only a handful of design institutes in the country. According to the report 'The Future of Design Education in India' developed jointly by the Design Council UK and the India Design Council, there are now over 70 design institutes teaching design in India [1]. As per this report, there are approximately 7,000 qualified designers in the country and approximately 5,000 on various campuses pursuing design education [1]. The 'India Design Report'; a nationwide study on design in India, developed by the Confederation of Indian Industry [CII] puts the number of design programs offered today in the country at over 1,500 [2]. The majority of these programs are in the areas of Architecture, Fashion Design and Animation, and New Media Design. These programs are offered as Certificate programs, Diploma programs, and undergraduate and postgraduate programs. According to the data available online, these programs are offered by over 550 institutes/colleges spread across the country [3]. Many of these institutes are franchises of major institutes. The duration of these programs ranges from three months to four years. By 2020,

according to 'The Future of Design Education in India' report, the country will require approximately 62,000 designers to cater to the potential market for the design of around Rs.188 billion [1].

With the country's relatively young population now open to exploring alternate careers, design has today emerged as a much-needed option for them. For its majority middle-income group segment, education is probably the only means to meet their aspirations. An increasingly competitive environment, rising awareness, and difficulty in getting formal jobs, all push these young aspirants towards higher education. With the Government's aggressive push for education and setting its target to double its gross enrolment ratio, GER, to 45% by the year 2030 [1], more and more young people in the country will be seeking higher education. Design Education, an increasingly attractive sector, is thus bound to grow fast in the country in the next decade.

Innovation and Design

The economy across the world is fast changing to the innovation economy. Innovation is now recognized as a central driver for the country's economic development. The thrust in India is also to encourage innovations at every stage of its economy. The government of India set up a Task Force on Innovation in 2016 to strengthen the ecosystem of innovation in the country and thereby further improve India's ranking in the Global Innovation Index [GII] [4]. Atal Innovation Mission [AIM] Self-Employment and Talent Utilization, and SETU are the few other government initiatives that aim to set up world-class Innovation Hubs nationwide, support start-ups, and encourage self-employment initiatives. Setting up incubator centers, innovation centers, research parks, innovation councils, and tinkering labs are among the other initiatives to foster an innovation culture in the country.

Design is now recognized as a driver of innovation and a key differentiator for providing a competitive edge for products and services. Today, Design is crucial for the success of any business. Harnessing the power of Design is thus vital to Indian industries and the country's move into a global economy. Realizing this increasing importance of Design in economic and societal development, the Government of India, in the year 2007, announced its National Design Policy. The policy aims to aid and hasten the process for a "design-enabled Indian Industry" that could impact both the national economy and the quality of life in a positive manner [5]. With a focus on strengthening the quality of design education at different levels, the policy encourages the establishment of sector-specific design centers, upgrading existing design institutions, and establishing new design institutions across the country. The policy also proposes the establishment of the Department of Design in all Indian Institutes of Technologies [IIT] and all National Institutes of Technologies [NIT] as well as in prestigious colleges of Engineering and Architecture. Subsequently, in 2009, the Government of India constituted the India Design Council [IDC] to promote Design at various levels in the country [6]. One of its mandates is to develop and standardize design syllabi, etc., for all institutions in India imparting design education.

Design Education in India

Until early 2000, there were only a handful of design institutes in the country. The National Institute of Design, India (NID Ahmedabad) and the Industrial Design Center (IDC, IIT, Mumbai) are included. NID was the first design institute set up by the Government of India in 1961 [7]. This was set up as an autonomous national institution for research, service, and training in Industrial Design and Visual Communication. The recommendations by the famous American architect couple Charles and Ray Eames compiled under the now famous 'The India Report' formed the basis for setting up NID. "We have been asked by the Government of India to recommend a training program in the area of design that would serve as an aid to small industries. We have been asked to state what India can do to resist the rapid deterioration of consumer goods within the country today," which is how Eames has explained in the report the context for commissioning the project [8]. "The report focuses on India's tradition and a philosophy that is familiar with the meaning of creative destruction, and stresses the need to appraise and solve the problems of our times with tremendous service, dignity, and love," wrote Pupul Jaykar, noted writer on the Indian craft tradition, in her tribute to Charles Eames. The report suggests that designers become a bridge between tradition and modernity and recommends developing a problem-solving sense of design that connects learning to experience. Towards this, the report recommends "that without delay there be a sober investigation into those values and those qualities that Indians hold important to a good life, that there be scrutiny of those elements that go to make up a "Standard of Living." The institute would strive 'to create an alert and impatient national conscience – a conscience concerned with the 'quality and ultimate values of the environment,' suggests the report [8]. The report recommends that the institute be small and maintain a one-to-one ratio of faculty to students. In 2014, NID was declared an 'Institution of National Importance' by Act of Parliament [9]. It now offers programs at undergraduate, postgraduate, and doctoral levels in nineteen different design streams through its three campuses.

The Industrial Design Center [IDC] was set up in 1969 [10]. Conceived as part of the Indian Institute of Technology [IIT] Bombay, the outcomes of its education and research programs are expected to gain strong technological support to actualize the solutions developed. It began its academic program with Industrial Design and now offers programs in five design streams. Over these last two decades, IIT Delhi, IIT Kanpur, and IIT Guwahati, have also set up Departments of Design [DoD] offering programs in design at undergraduate, postgraduate, and doctoral levels. The School of Planning and Architecture [SPA] Delhi, is also among the first few institutes offering design programs. Besides these, state-specific Craft Design Centers [CDC] have been set up in different parts of the country. Recently, the All-India Council for Technical Education [AICTE] issued a notification making it mandatory for colleges and institutes planning to introduce Bachelor of Design, B. Des., and Master of Design, M. Des. programs to obtain approval [11]. Set up as a national-level apex advisory body, AICTE works towards the coordinated development of a technical education system in the country [12]. While NID is under the Ministry of Industries & Commerce, IITs are part of the Ministry of Human Resource Development, Government of India.

In 2014, the Ministry of Human Resource Development [MHRD] initiated an exercise to develop a “Design Manifesto.” [13] The manifesto advocates design as an overarching framework to create opportunities for holistic education, especially for engineering and technology institutes, thereby steering their teaching and research towards social goals and economic aspirations. It proposes the education processes of these institutions of technology to be based on design pedagogy to encourage critical reflection, imagination, and empathy through inter-contextual and inter-disciplinary learning. The manifesto recommends that design education be structured within these technical institutions and anchored as an autonomous field of study so as to percolate design thinking into their various disciplines and expertise. The manifesto further advocates. “Design must be seen as an epistemological concept, not just a technical, or even a cognitive or perceptual training involving a limited skill set.” “In the Indian context,” the manifesto states, “grounding and centering of national development goals and challenges in design education and research will provide a powerful impetus to innovation, entrepreneurship, and policy systems.” [13]

Design education began in the country much earlier. However, initially, it was in industrial art, applied art, and craft education. The Madras School of Art, one of the oldest art institutes in India, was established in 1850 in Chennai and was renamed in 1852 as the Government School of Industrial Arts. The school was finally renamed the Government College of Fine Arts [14]. Similarly, the Government College of Art & Crafts in Kolkata was founded in 1854 as the School of Industrial Art. It was established to teach the youth industrial art using scientific methods [15]. Sir J.J. School of Art, one of the pioneering institutes of art and craft education in India, was established in the year 1878 [16]. Today, the school offers both undergraduate and postgraduate programs on its campus. Similarly, another institute in Patna, now renamed Upendra Maharathi Shilp Anusandhan Sansthan [UPSAS] was established in 1952 as the Institute of Industrial Design [17]. This institute focuses on the growth and development of the handicraft sector and craftsmen of the state. It conducts product development, research, and training programs throughout the year. Over the years, these institutes of art, craft, and design in the country have revised and evolved their programs and curricula to suit the Indian context.

Global Scenarios of Design Education

It is now established that design and creative education is the way forward for any country to deal with the complexity of the challenges in the 21st century. Design equips people to think beyond the present and into the future. Design education today is fundamental to national prosperity. It is now considered a critical element of innovation strategy. However, as the ICOGRADA Design Education Manifesto 2011 states, “the design practice that grew out of the industrial revolution is no longer sustainable (economically or ecologically). A new practice — one that responds to the information revolution — is emerging.” [18] Today’s design education, according to this manifesto, is out of date; it mainly reflects design’s origin in craftwork. “What is worse is that change is accelerating, and design education is stuck. It has little mean to move forward,” is how the manifesto reflects its anxiety [18]. Andreas Schleicher of the OECD, in his report ‘The future of Education and

Skills: Education 2030', states that "today, because of rapid economic and social change, schools have to prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that we don't yet know will arise." [19] He believes the paradigm of what schools prepare citizens for has changed irreversibly.

The United Kingdom has established its capabilities in design education and design employment over the years. Today, design is the fastest-growing creative industry in the UK. Its design sector employs over 350,000 people [20]. The UK is amongst the first countries to implement design promotion programs. The country is also a pioneer in design policy. However, "the government does not seem to fully appreciate the significance of design as the spine that runs through industry, innovation, and social wellbeing," states the report 'Restarting Britain: Design Education and Growth' prepared by the Design Commission, UK [21]. The report advocates the development of a broader cross-governmental strategy about design, particularly its potential contribution to the government and society as a whole. The report further proposes the allotment of its governmental resources. 'A Manifesto for Design,' a report prepared by the All-party Parliamentary Design & Innovation Group [APDIG] UK, argues that design must be central to its political, economic, and educational systems if the opportunities of the future are to be fully realized [20].

Over the last few years, China has aggressively embraced design as a tool to move up in the value chain. It is encouraging its industries to transition from Original Equipment Manufacturing industries [OEM] to Original Brand Manufacturing industries [OBM]. China wants to change the old saying 'Made in China' to 'Created in China.' The key contributor to this plan is the development of the country's design sector. There are now '1,275 universities and colleges in the country with design courses producing over 300,000 design graduates per year.' [22] According to Beijing Design Week, there are '250,000 design professionals working in 20,000 design institutes and companies in Beijing and generating \$11.75 billion in business.' [22] While the UK and Italy produce about 20,000 designers annually, around 28,000 designers graduate from Japan. About 36,000 designers graduate in Korea, while the USA produces about 38,000 designers annually [23].

Traditionally, design education programs were allied either with technology or with art. The programs varied tremendously between countries and reflected their cultural norms and expectations. According to the report 'Restarting Britain: Design Education and Growth' "the cutting edge of design education internationally is interdisciplinary practice. Its success is normally attributed to a mixture of very high-quality teachers (high degree of autonomy), the high cultural value placed on education and learning, and high levels of state spending on education". [21] Across the world, design education programs are now being re-examined to move towards a more inclusive and holistic approach. Also, efforts are made to bring Art and Design Education into the center of Science, Technology, Engineering, and Mathematics, thereby moving from STEM to STEAM to help foster creativity, innovation, and economic growth.

Concerns and Challenges of Design Education

Design education in India has evolved over the last sixty years. As the interest in design and its demands are growing, new design institutes are coming up fast. These also bring with them new challenges and concerns. Increasingly, there is a feeling in the design industry that today's design graduates are not well-trained. As they say, "they are not industry-ready." Today's education system is delivering graduates who do not possess the skills and competencies required to go straight into a job [2]. There seems to be a disconnect between the curriculum and present design trends. As design education expands in the country, efficiencies must be developed and maintained to uphold quality standards. With various programs - in terms of their durations, specializations, curriculum, approaches, etc., now on offer, there is a strong need for some form of standardization and framework for design education in the country.

The shortage of well-qualified faculty is another primary concern hindering both the development of well-trained graduates and the development of more design institutes. Design education demands faculty members to have both academic and industry experience. With the need for continuous faculty-student interaction and long working hours, design education calls for smaller classes, adequate facilities, and staff support. The lack of research opportunities in design and design education is another concern. Very few serious academic publications on design are emerging from the country. There is hardly any platform for design educators in the country to share, discuss their experiences, and learn from each other.

'The design education scenario in India lacks opportunities for progression from bachelor's to master's level and from master's to Ph.D. Most of the postgraduate programs are essentially after-graduate programs.' [1] Similarly, opportunities for continuing education programs within the design industry are limited.

Conclusion

The economy the world over is now transitioning to an innovation economy. Design education is now recognized as an essential element of innovation strategy. In India, design education has also emerged as an attractive career option. More and more students are now exploring and opting for design as their career choice. From only a handful of design institutes in the country till about 2004, many new design institutes have arisen in the last one and a half decades. As per one estimate, there are now over 5,000 students studying design in various design institutes across the country. The country will need about 62,000 designers by 2020. Design education in the country is expected to witness a rapid upsurge in the next few years.

Without any accreditation system in the country for design programs, most of these institutes have tie-ups with either Indian or foreign universities. These design programs range from three months to four years, and their fees per semester also vary

enormously. Over and above these, the many variables involved - institutional approaches, curriculum, area of specialization, student-faculty ratio, graduate profile, etc. - create a sense of confusion among its stakeholders - students, their parents, employers, and others. There is, therefore, an urgent need for a framework and a guideline for design education in the country.

Over the years, Indian design education has produced quality designers who have made their mark and created benchmarks for others. The early design institutes evolved their curriculum to suit the Indian context best and were closely aligned with the expectations of Indian industry and aspirations of society. However, there is now a growing sense of dissatisfaction among industry with upcoming graduates of the design schools. It is felt that the graduates are not industry-ready, and their skills and capabilities are not aligned with contemporary industry requirements. The curriculum needs to be revised and updated to meet these expectations of the new-age digital and innovation economy. It calls for an interdisciplinary and holistic approach with enough flexibility and autonomy built into the curriculum, adequate faculty members and high staff quality, and good infrastructure support.

Design has now established itself as an academic discipline, having a unique approach and practices different from those used in science, technology, or humanities education. Design is an epistemological concept that transcends the domains of industry. It helps synthesize and translate between bodies of knowledge. Design fosters creativity and helps integrate and channel various efforts toward positive outcomes. It helps improve the overall quality of life of the people concerned. India's unique, creative, and diverse culture and its multiple demands call for a broader design vision that encompasses art and craft besides technology and engineering, while still being rooted in Indian culture.

For the country to survive in today's fast-paced economy and move up the value chain, design and design education should form critical drivers of this process. To fully realize the country's potential and foster national prosperity, design has to be central to its political, economic, and educational system. This calls for the development of a broader cross-governmental strategy for design. It is now time for design in India to obtain a much-required impetus to realize its impact, and reforming and reinforcing design education in the country will be the right beginning in this direction.

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