Design Pedagogy in India: A Perspective

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If defining design is an awesome task, any attempt to define Indian design would be even more difficult. This is because, in India, the word design has many meanings and past/present associations. It is not just the language, but the manifestation of design in more than one area of Indian living and production. Indian women make floral patterns as auspicious welcome signs, and traditionally this is called design. The intricate decorative border of a sari is considered design. A piece of jewelry is design. But the innovative new chair made by a carpenter, or an improved bedpan-which the modern world calls design—is not considered design by people in India. Even in this twenty-first century, modern Indian industry is familiar with engineering design, but gets quite confused when it comes to design. The reason for this is traditional association, as well as what its colonial rulers promoted as design through Indian arts and crafts schools. When modern design, as it is known today, was introduced in India, and when the first professional group of designers was founded, it was called the Society of Industrial Designers of India (SIDI). This was done to emphasize the relationship between design and industrial production, although the Society admitted all designers including graphic designers, exhibit designers, textile designers, and animators.

Roots of Indian Design

India's oral culture and its intense religious mysticism might give one the idea that there is an absence of rational thinking and scientific systems, but this is far from the truth. Historically, it is evident from the Mohenjadaro-Harappa excavations that, as early as 2500 BC, there was highly developed architecture, town planning, and technology in many places. India's traditional knowledge was highly organized and meticulously articulated. Even in the arts, there were extremely detailed canons and highly sophisticated structured treatises. Ancient India had Shilpa Shastra for sculpture, Natya Shastra for dance, Sangeetha Ratnakara for music, Vishnu Dharmottara for art, and Vaastu Shastra for architecture. Since Indian culture did not distinguish between applied art and fine art, there was no separate treatise on design. The Shastras are studied even today by the classical practitioners. This practice remains parallel to what is being taught at the new art schools, and modern design schools have not been able to integrate these classical treatises into their curriculums.

Systems of Education in India: Gurukul and Craft Training

To start, the complexity of Indian design education and design practice must be clearly and appropriately recognized. This complexity is not just unity in diversity, but also the simultaneous telescopic existence of the past traditions with the contemporary: the bullock cart beside the spacecraft, the burkha1 beside Miss Universe, and illiteracy beside software supremacy. In the field of education, such a complexity requires design education of a different kind as well as of a different degree. India's ancient system, called the Gurukul2 system, still is used with some changes in the learning of traditional performing arts such as classical music and dance. The pupils go to the guru, a practicing performer, who teaches all subjects from the very beginning over a period of five to seven years. The change is that the pupils learn the dance/music in addition to the basic education in a modern school, while in the past the gurukul provided comprehensive education. Another continuing learning tradition is in crafts, caste/community-based, on-the-job training. Through apprenticeship, the skills and knowledge are passed from generation to generation, almost always orally without any written texts.

While these two systems continue in the specific areas of learning, the most pervasive education system in all other fields, from primary schooling to college graduation, is the education system ascribed to Lord Macaulay introduced by the British during their colonial rule over India. Although this was an exploitative system meant to create a middle-level administrative staff to serve the needs of its British rulers, India has not been able to replace this system with a better alternative in more than half a century of independence.

Pre-Independence Period: Macaulay's Basic Education and British

In the early nineteenth century during the colonial rule, Britain introduced art schools to India at Calcutta, Madras, and Bombay (in that order), that tried to include craft design in the curricula. But these art schools run by British principals were intended only to produce "copyists" to serve various colonial government agencies. They ruined local creativity and design talent. In the name of improving "native taste," such schools imposed Western techniques and visual idioms which caused lasting damage to the confidence of Indian craftsmen and craft learning. The Indian culture always considered ornament as essential to architecture, and made no discrimination among decorative arts, fine arts, and applied arts. The artificial separation taught at the colonial art schools violated the Indian tradition.

The response to this violation came from Indian thinkers in the larger ideological framework of *swadeshi*³ or indigenousness, a concept of deepest significance to the Indian psyche even today. *Swadeshi* was a part of India's struggle for independence, lasting

Burkha is a black cloak worn by Muslim women in public places.

² The generic meaning of guru in Sanskrit is "very high." Presently, guru means venerable spiritual teacher, as Hinduism expects a true teacher to be. Gurukul is literally "the guru's family" because the pupils in this system used to stay with the guru like his family.

³ Swadeshi literally "belonging to one's own country," refers to a pre-independence nationalist movement, favoring home industries and boycotting foreign goods.

from 1857 until 1947. India's struggle was unique. Lead by the visionary Mohandas Karamchand Gandhi, the struggle was remarkable not only for its principle of nonviolence, but also for its inclusion of social and educational reforms in its goals. Economic self-reliance is a key component in *swadeshi* ideology. As caste-based craft learning began to suffer due to the onslaught of industrial production, Gandhi himself and other Indian intellectuals started experimental schools and innovative pedagogy. Gandhi called his education *Naya Taalim* (new training), and established his schools in a decentralized way in remote villages where people needed training most. Notable among others was Nobel laureate poet Rabindranath Tagore, who established in Bengal his Santiniketan, an experimental university for arts, crafts, and design. Starting well before the emergence of the Bauhaus, Santiniketan compares favorably with the renowned German school.

While similar to the Bauhaus but in an environment of feudal oppression and colonial exploitation, Santiniketan stood for the cultivation of arts and crafts in a concept of total education. Tagore believed that, "Man's energies running on two parallel lines of utility and self-expression tend to meet and mingle The building of man's true world—the living world of truth and beauty—is the function of art.4 An integrated process of learning painting, sculpture, crafts, design, and decoration was followed at Santiniketan. Freedom of learning and freedom of expression were given emphasis not only in methods of learning, but also in the physical environment. Most classes took place in the open under a tree. Secular festivals were created as vehicles for religious reinterpretation and for new forms of expression. One such event was Vasanta Utsav, a spring festival in which students and faculty participated together. Tagore communicated with Walter Gropius, but realizing the Western dominance already in the art and artifacts of India, he later turned to Japan and China for inspiration.

The Bauhaus and Santiniketan were much alike in trying to synthesize the work of artists and craftsmen. Their difference lay in their application. While the Bauhaus evolved and taught a machine aesthetic oriented to mass production, Santiniketan considered the language of the hand more important in the Indian context, and oriented its teaching towards craft production. In India, craft is not a thing of the past, but a thing of the present as well as of the future. With nearly twenty-three million craftspersons still practicing, craft is as contemporary as mass production, showing a great promise in the globalized world of the future. For the student, craft is an education that makes men and women grow in wholeness by being brought in touch with materials. The discerning art critic Herbert Read called this "education through things," while India's "great soul" (Mahatma) Gandhi advocated this as the pedagogical principle of "learning by doing."

R. L. Bartholomew, ed., Nandalal Bose: A Collection of Essays (New Delhi: Lalit Kala Academy, 1980), 53.

Post-Independence Period: Modern Design Education and Tech-nology-based Design

Based on Macaulay's foundations of basic education, higher education in India adapted the Western models. Design education was the latest to arrive in India. After Independence in 1947, India focused on rapid scientific and technological development. India's largest dams, largest core industries, and scientific organizations started with help from the best foreign expertise available. Space research and nuclear research programs were established at premier technological institutions such as the Indian Institutes of Technology. The then Prime Minister, Pandit Jawharlal Nehru, had the vision to see the importance of modern design and architecture in the development of industry and the economy of the country. He invited Le Corbusier to design the whole city of Chandigarh as a model of city planning and architecture, and Charles and Ray Eames to recommend a program of training in the area of design as a model of design education. This program particularly would aid smaller industries, and show what India could do to resist the rapid deterioration of consumer goods within the country.

Viewing design as an activity that improves the quality of life, in their 1958 "India Report," the Eameses recommended a sober investigation into those values and qualities that Indians consider important to a good life, and "to follow it with a restudy of the problems of environment and shelter; to look upon the detailed problems of services and objects as though they were being attacked for the first time; to restate solutions to these problems in theory and in actual prototype; to explore the evolving symbols of India." Drawing a distinction clearly between "America, which was a fertile tradition-less field," and "India, a tradition-oriented society where the decisions are apt to be unconscious decisions—in that each situation or action automatically calls for a specified (preset) reaction," they wrote that "all decisions must be conscious decisions evaluating changing factors. In order even to approach the quality and values of a traditional society, a conscious effort must be made to relate every factor that might possibly have an effect. Security here lies in change and conscious selection and correction in relation to evolving needs." Traditionally, in India, design is an evolutionary and not a revolutionary activity. The Eameses not only recognized, but also greatly admired, the process of evolutionary design of India. They stated: "Of all the objects we have seen and admired during our visit to India, the Lota, that simple vessel of everyday use [to carry water], stands out as perhaps the greatest, the most beautiful" and hoped "that an attitude be generated that will appraise and solve the problems of our coming times with the same tremendous service, dignity, and love that the Lota served its time."5

Charles and Ray Eames, The India Report (Ahmedabad: National Institute of Design, 1958), 1–18.

The first major, full-fledged industrial design institution to be established in India on the basis of the India Report's recommendations was the National Institute of Design at Ahmedabad in 1961. This is not to say that there was no design education in India earlier. Many educational institutions in India offered courses in various fields of design, such as commercial art, architecture, craft design, and engineering design. NID is a landmark in molding itself as a center for excellence in design education in the most contemporary sense, providing learning in all the disciplines of design under one roof. The pioneering educational philosophy established during the 1960s at the National Institute of Design is so successful that all design schools of note in India have adopted it as their founding principle. Thus, it is not altogether wrong to assume that what I am describing here is not the pedagogy of one design school, but of design education in general in India, with localized variations to fit the structures of individual institutions.

The design education system established through NID four decades ago did not remain static. It was reviewed and changes were made from time to time, internally as well as with the help of foreign experts such as Charles and Ray Eames, Herbert Lindinger, Gui Bonsiepe, John Reid, and Carl Aubock. One of the major reviews of NID was done by the Kamla Chaudhary Review Committee in 1989.6 Another thorough review was made by an educational review group led by the author in 1993.7 Following this group's recommendations, a new system was put into practice at the NID which still is in use today.

The Question of Influence

There is an erroneous notion, largely prevailing in the West, that art education in India was a gift of the British colonial rulers, and that modern design education in India was greatly influenced by the Bauhaus. Even my comments in my book *Thinking Design* (1998) were misread by some critics to support this. Art education, a precursor of design education in India, perhaps can be called a curse rather than a gift because it was an imposition by authorities who misunderstood the culture of art learning in India. This was opposed by Indian leaders as well as sympathetic British artists and art critics at the time.

As far as modern design is concerned, the National Institute of Design (originally called the National Design Institute) which pioneered design education in India may reflect some of the best aspects of design pedagogy from many parts of the world, but was not exclusively influenced by any particular foreign school. It is true that the early Indian founder educators had been trained in the West and, in some cases, used some curricula in association with a visiting foreign expert. But they were conscious of the difference in the Western and Indian realities right from the beginning. They examined the curricula and outcomes of the great design schools

⁶ Kamla Choudhry, Report of the Review Committee on Future Directions and Forward Planning for the National Institute of Design (Ahmedabad: National Institute of Design, 1989).

⁷ S. Balaram, ed., New Curriculum (Ahmedabad: National Institute of Design, 1993).

in order to learn more what not to do than what to do. This is not a categorical denial of all influences. There are a great many influences from many sources, and they always have been mutual. India in its characteristic way particularly assimilated the *Vorkurs* or preliminary course of the Bauhaus.

India followed Mahatma Gandhi's remark: "I want cultures of all lands flown about my house as freely as possible, but I refuse to be blown off my feet by any."8 Notable among the design schools which have had a strong association with India were the Bauhaus in Weimar, the Hochschule fur Gestaltung in Ulm, the Kunst Gewerbeschule in Basel, the Royal College of Art in London, and the Cranbrook Academy of Art in Michigan. Some of the world's best designers and design thinkers were invited to visit India to teach at the newly established design schools or to work on an Indian design project of longer duration with Indian design teachers, and freely exchanged ideas. This model worked extremely well, particularly in the beginning years. There is a superficial Western cultural influence on modern India. In the end, demand for Indian realities prevails. The bullock cart which is the second most important transportation means; the pressure cooker for cooking rice, the wet grinder to make idlis,9 the Devanagari script to suit modern printing processes, the unstitched sari, the supercomputer for farmers' needs-these all are modern, authentic Indian realities from which there is no escape for Indian designers, and their education should reflect this.

The Students before Entry

Before formulating design pedagogy, it is necessary to consider the education system preceding it. The higher secondary education system (Macaulay's) in India is an overstructured, didactic "rote, routine, restriction" type, and a switch to a totally different system is not easy for the students. Analysis and lateral thinking are the lifeblood of design education, and conventional rote learning kills both. The design education offered at the undergraduate level has to cope with this prevailing situation. But when education is offered at advanced or postgraduate levels, it has to cope with students entering after craft training, after art school training, or after graduation in engineering or architecture. All these streams follow different learning systems, so the first task of the Indian design school is to nullify the pedagogical shock by making the student unlearn old things and old ways before he or she learns new things and new ways.

Educational Philosophy

The early visionaries of Indian design education, notably Gautam Sarabhai (textile industrialist and Le Corbusier client), adopted through NID, where he was chairman, the approach of creating within the student a concern for the quality of his or her physical environment and for its relevance to human needs. After a series

M. K. Gandhi, Young India Journal (Ahmedabad: publisher unknown, 1921).

⁹ Idli is a popular south Indian snack prepared from fermented rice paste.

of discussions among Indian thinkers, Sarabhai aptly modified the earlier pedagogical principle of "learning by doing" to "learning to know and learning to do," which soon became the credo of design education in India. He firmly established the principles of action for this approach. The first and foremost principle is the "focus." The focus of learning for the student is not on acquiring knowledge about a specific design discipline or subdiscipline, but on having adequate opportunities (a) to think for himself or herself, (b) to have his/her ideas questioned, and (c) to be able to intelligently question the ideas of others.

The second principle concerns the "scale." Avoidance of massive size was advised because Sarabhai believed that large institutions have to pay a heavy price in terms of alienation of both faculty and students, as well as in bottlenecks in decision-making and of unmanageable complexities that hinder the opportunities for growth and maturation of the students. If the classes are large, "the instructional system gets swamped with students, many of whom are so immature and unwilling that they can reduce the best of teachers to frustrative incompetence."

The third principle regards "discipline." He proposed the provision of opportunities for growth and maturation rather than the continued dominance of disciplinarian teaching. Growth and maturation in students was described as the ability to discover for themselves to what use they could put the knowledge they gained, and to accept responsibility for such use. Many of the disciplinary measures usually prevailing at Indian educational institutions are contrary to this principle. Enforcing measures such as compulsory attendance in classes, excessive testing, and grading "... are attempts to reinforce an authority lest because of its failure to accept responsibility either for intellectual training or for the provision of opportunities for growth and maturation." ¹⁰

Project-based Learning

Indian design education also realized that it is more important "to make one learn" than to teach one. Within this broad principle, teaching methods vary greatly around the country. The most prevailing ones are studio work, and individual guidance and group discussion. Lecturing and textbook reading are kept to a minimum.

Much of the design education in India is project-based; students are encouraged to take an empirical, intuitive approach to design problems and to experiment freely with new forms, new materials and processes, and to develop original, creative thinking. Workshops thus are given prominence at NID and other Indian design schools. But Indian industry complains that the graduates do not fit into their corporate culture, which is rigidly structured and hierarchical. After all the "unlearning" the student had to undergo at design school following his rigid, overstructured school or college

¹⁰ Gautam Sarabhai, NID: An Educational Philosophy (Ahmedabad: National Institute of Design, 1972), 2–3.

education, the young designer again is faced with another rigid, overstructured production system. Thus most young designers in India opt to become freelance design consultants or design entrepreneurs, rather than join the industry as in-house designers.

Making of the Professional

Design educators consider the essential characteristics of a profession to be the practice as required by its society, and maintaining very high professional quality in work and conduct. Professional education in design involves both the teaching of design-related knowledge and skills, as well as practice under supervision. The teachers who impart such education thus are required to be practicing professionals. Practice keeps the teacher continually in touch with the contemporary needs and concerns of the Indian industry and markets. What he or she teaches is thus never out of date, constantly made relevant, and it enriches the teaching significantly. More important, such practice earns the respect of the student; the teacher and his/her work become a role model, and the relationship between the teacher and the student is powerfully reinforced. However, the teacher must be aware of and avoid the risk of inhibiting innovation and of curbing originality in the student, who might simply try to imitate the teacher.

The founders recommended professional practice either individually or collectively by teachers throughout the institution in order to unite theory and practice as complementary parts of one integral educational process. Institutionalized practice would be less financially rewarding to teachers, but easier compared to outside individual practice because the institute's reputation, national character, and infrastructure would attract projects. Currently, while agreeing in principle to teacher-practitioners, different design institutions and centers have varying systems for institutional practice and private practice.

Ideally, students' participation in professional practice along with teachers appears to be an excellent concept. But there are serious problems in implementation: nonmatching of client and curriculum time schedules; disparity between student skill levels and the skills demanded by a specific project; and problems of incompatibility between curricular requirements and professional project opportunities. An alternative to student participation in institutional projects is sponsored projects. These projects from clients could be undertaken in a class where the project would be appropriate to the curricular requirements.

Design as an Approach: Emphasis on Generality and Holism

In India, production takes place at four levels: large-scale, small-scale, craft, and cottage- or home-based. These all are sectors too large to be ignored by Indian design. The design requirements of each sector are vastly different. The last two sectors are unorganized

and labor-oriented. Therefore, separate design education for each sector is hardly practical. Experience shows that the appropriate way for design education to address this production complexity is to teach design as an approach—a creative process that enables the student to find solutions in any given situation. The same design approach should work for any production level, even though the tools employed may be different.

As more knowledge areas emerged in the world, more specializations formed which led to fragmentation. This phenomenon is evident in the practice of allopathic medicine. In the traditional Indian system of Ayurveda, a holistic system that aims at strengthening the whole body to overcome the disease rather than offering a local cure, the physician, rather than offering medicine, prescribes a certain plan for diet, for rest, and for conduct during a specific period of time. A similar integrative total approach is perhaps suitable for Indian design education. Although specialization is valued more in the world than generalization, it would mean unmanageable multiplicity for India which has an enormous diversity of cultures, languages, and religions. Design is an act of synthesis. Indian educators firmly believe that, if we need to choose between breadth and depth of design knowledge, breadth should be our priority. Generalization in design education is particularly recommended for the undergraduate level. Specialization can be taken up in advanced studies. Indian design schools prefer crossing borders between design faculties to compartmentalization.

Course Structure

The courses in most Indian design schools are structured as shown below:

Figure 1

A basic design course exercise by the author as an industrial design student, following a logical method of transitions between two end forms and a point located in space.



Foundation	Field Work	Projects	Production	Final Project
Course	Documentation	Courses	Experience	or Thesis

Although generalization is difficult, the typical program starts with skill learning as the basic design course, and proceeds to application in projects, which progressively grow in their complexity and include technical as well as conceptual integration (Figure 1). The documentation of fieldwork is considered important in the students' acquisition of indigenous knowledge, as well as in establishing rapport with rural people. In their final year, the students undergo production experience or internships at an industry, craft center, or a design studio. Only after this are the students allowed to proceed to the final project/thesis, where they are expected to demonstrate an acceptable level of professional competence. The curriculum emphasizes project learning, in which the production situation and professional practice situation are considered tools of learning.

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At this point, Indian pedagogy has developed some innovative design courses. Notable among them are the craft or traditional process documentation, the environmental perception course, and the space-form-structure. In terms of motivating the student, the prediploma presentation required at the NID is quite significant.¹¹

Indian design educators currently are trying to cope with the perceived inadequacies brought by changing times, such as the lack of a theoretical knowledge base in design, environmental concerns, developmental issues, appropriate inputs in design management, computer applications, and interface design.

The varied levels of Indian production require varied types of designers: some with a strong technological base; some with a strong aesthetic base; and others with a strong creative, conceptual base. These are evident at the different Indian design schools. At the design schools that are part of large technical universities such as Indian Institutes of Technology, the accent is on strong technical input; while at autonomous institutions such as the NID, the accent is on creative conceptualization. Accordingly, the entry qualifications, years of learning required, and the degrees awarded at each institution are different.

Documentation of Traditional Practices and Research

Indian design education's true challenge lies in addressing the diverse needs of an enormous, developing country. One of the most pressing needs is helping people with design. This requires educating students to give design training to people who are illiterate. Back in the 1970s, the author first proposed the "barefoot designer" concept as a solution to impact such a vast population with design. This required policy-level changes which have not been made in India until now. Although there are several design schools in the country now, all of them are located in urban centers, leaving the remaining eighty percent of the population in villages untouched.

One of India's major strengths is its enormously rich tradition. A wealth of knowledge, distilled through generations of evolution, exists but is not apparent because of the oral nature of Indian society in which written records are not kept. Traditions simply were passed on by word of mouth, from generation to generation, and this practice continues to this day. The "Lota" admired by the Eameses is only one mundane object on the Indian scene, and a vast number of such design-rich objects and communications are there for the designer to research and learn from. Documentation is the preliminary step in researching a product or a process, helping Indian society by recording such knowledge in tangible form so that it can be shared globally for the benefit of all and for posterity.

Conventional research is viewed as rediscovering a new aspect in a hidden past or taking the frontiers of existing knowledge further. Because most Indian traditions are living, what needs to

¹¹ Forthcoming articles on these innovations. Interested readers may consult S. Balaram, ed., New Curriculum (Ahmedabad: National Institute of Design, 1993), 14, 26, and 57; and S. Balaram and N. N. Patel, Adalaj Village: Environmental Perception Course Documentation (Ahmedabad: National Institute of Design,1992), 26.

S. Balaram, "A Different Design Movement: A Call" (Paper presented at the Asian Design Forum, Nagoya 1986):
 It was published later in S. Balaram, Thinking Design (Ahmedabad: National Institute of Design, 1998), 77.

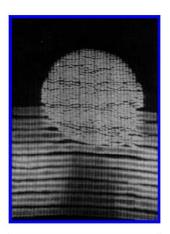


Figure 2 A natural indigo-dyed textile painting by Padmini Tolat Balaram, an NID graduate.

follow the documentation is the application of traditional knowledge to contemporary or future design situations in new ways for new effects in a creative fashion. It also means leaping from past traditions to future aspirations; connecting traditional materials, forms, techniques, and wisdom to the world's future materials, techniques, forms, and needs.

The research challenge to Indian institutions is both to be relevant to industry's present needs, as well as innovative with local materials and processes. Take the case of using natural indigo to create contemporary textiles and abstract paintings (Figure 2); or another example, a blend of technical innovation and design developing fine-count yarn out of usually coarse coir fiber (from coconut palms) to design coir dresses. Similar experiments continue at India's design institutions with materials such as palm leaf, jute fiber, and bamboo; all abundant in India. Thus, an important part of the curriculum is to enable the student to find new and unique design applications for older materials.

Cross Cultural Interaction

It enriches the quality of design education in India to have Indian teachers work with foreign teachers, and Indian students to work with foreign students. The best of cross-fertilization occurs when students work together as a team at an equal level towards achieving a common objective. This aspect of design education is particularly important for India, where life is deeply rooted in culture. Some very fruitful outcomes of collaboration have been the design of GADI (Ground-level Assistive Design for India), produced jointly with Canadian students and teachers; and a future car for India designed jointly with Japanese students and teachers (Figure 3). In the networked society of today, such sharing offers great promise.



Figure 3
The "Palki 2010," a future car for India.
This was a collaborative project between
the students of the National Institute of
Design, Ahmedabad; the Indian Institute
of Technology, Mumbai; and Tokyo Zokei
Daigaku.

On the other hand, short teaching inputs by visiting foreign faculty usually are nothing more than a brief exposure. Since foreign faculty take time in grasping the Indian ethos, such teaching inputs work well only if they are long or repetitive, and coordinated by an Indian educator.

Conclusion

It is no exaggeration to say that Indian institutions stand on a par with the best design schools in the world, and have excellent design teachers. Yet the number of design schools and the number of trained designers is dismal in proportion to the country's needs. Ironically, the reason is that neither the policy makers nor industry believes the Indian designer to be crucial to the acceleration of the country's development. Indian industry commissions foreign designers to design for them, or produces things totally designed abroad. Here is a good example of how even the best design can fail in the Indian context: the most expensive car in India, the Mercedes, sells for approximately ten times more than any other competitive brand from Korea or Japan available in India. The Mercedes has more space in the front area and less in the back (passenger) area. In India, almost all cars are driven by hired drivers, and the owner sits in the back. The owner thus has to suffer less legroom, leaving the best part of the car to his driver.

Until there is more awareness at the parliamentary level, and effective policies are made and implemented, this situation will continue and design institutions will be forced to provide education to overseas students because Indian education costs the least in the global market today and its medium of instruction is English. The damage in the long run will be to India, because such education will not focus on Indian needs.

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