

Multi-lingual admission test for IITs — Changes under socio-political compulsion?

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Education, it is often said, is simply too important a subject to be left to educationists. Hence the society, through its elected representatives, draws a National Education Policy in broad contours and the Academia are expected to function within the approved framework. The new pattern of IIT-Joint Entrance Examination (JEE) constitutes an example of how this arrangement works.

Every year, out of some thirty lakh school-leaving children in the country about 75,000 try their luck at the JEE for the five IITs and Institute of Technology BHU. Some 2000 or about 3% among the aspirants qualify and get admitted. The IIT-JEE, as it has come to be known, is one of the toughest examinations—at any level—in the country. Started in 1957 by the IIT Kharagpur and joined later by other IITs since 1961, the examination system has earned countrywide reputation as the most efficiently conducted one, impervious to any kind of 'influence' and with strict confidentiality maintained at all stages. Old-time insiders in the Administration still recall the polite reply of an IIT Director in early years to an enquiry from the then Chairman, Planning Commission about his son's performance and prospect. 'Since your son's rank is such-and-such and the available seats are so many, he can get admission if, and only if, 86 more seats are sanctioned for intake at the IITs', the reply said; and nothing more was heard from the other end. That tradition is still maintained. It goes to the credit of the marvellous system that, since its inception, not a single question, not a single problem has been repeated any time, even though the syllabus remains the same for many years. Also, a lower success-ratio of the campus schools compared to that of some of the better schools at Calcutta is the most eloquent, convincing evidence of the impartiality and fairness of the system. A rigid time-schedule for holding the examination, evaluations, scrutiny and publication of results has been maintained punctually

throughout its history since 1957, barring one or two recent defaults. The entire operation is coordinated, conducted and overseen by the Joint Admission Management (JAM) Committee of the five IITs.

Lately, under directives from the Ministry of Human Resources Development, some major changes of far-reaching consequences have been introduced in the system. First, question papers, which used to be in English so long, are now being printed in English and Hindi from 1990, with provision for expanding to all 14 languages in future. Second, the candidates may answer in any of the regional languages provided they had studied and answered their Higher Secondary (or equivalent) papers in science subjects in that language. Third, it is now a two-tier examination; the first paper, 100% objective, merely serves to act as the strainer; the answerscripts for the real papers of only those who obtain qualifying marks in paper I are evaluated for actual ranking. The cut-off grade for paper I is so set that a substantial number, about 20 times the number of available seats, qualifies for the second-tier evaluation. All answerscripts in the same regional language are collected and evaluated in one of the five IIT centres. Help from outside the IIT system has to be obtained where necessary for evaluating answerscripts in regional language.

The change-over has been carried out rather quietly, with very little publicity, no public debate and no media attention. However, the Senates of all IITs discussed the proposition threadbare. It was a somewhat pointless exercise, since the decision came as a *fait accompli* and the IITs were simply asked to work out the modalities of implementing the decision.

Why was such change-over considered

necessary at the highest level of decision-making, in spite of the unblemished record of the system?

Over the years some very disquieting trends were emerging from statistical analysis of the JEE database about the candidate's family background, schooling, ethnic and socioeconomic status, etc.: 92% of successful candidates are from English-medium schools; 82% are from just eight cities; and a similar percentage had obtained special coaching. It is common knowledge that a multimillion-rupee industry has grown up in the field of coaching—postal and regular—for IIT aspirants. If one refuses to accept the preposterous implication that all intelligence, all talent, all grey-cells in the country are concentrated in English-medium schools in eight cities, one would suspect that something must have gone wrong somewhere in the JEE system; and that equal-opportunity was being denied because of such aberration. Is it the hitherto imposed 'English-only' restriction? Or is it that the JEE system seeks to evaluate/assess the wrong parameters? Or does the fault lie with the existing school education system in the country as a whole, the JEE results being merely a reflection of the enormous disparity of standards between urban and rural schools?

Predictably, the directive from above was not taken very kindly by the IIT Faculties and Senates. Initial resistance and criticism were considerable. It was argued that the proposed change-over would adversely affect both the JEE system and the IIT standard.

Concerns were expressed about the likely loss of confidentiality due to participation of external examiners; inexact/inaccurate translation of question papers in different languages is likely to

All statistical data are quoted from unpublished reports of JEE (IIT Kharagpur).

create confusion, linguistic partiality among evaluators could not be ruled out altogether. Further, in such two-tier system it is always possible that some really bright students may not qualify in the hit-or-miss game of the first paper, but do extremely well in the majors papers which would not even be evaluated!

It was also feared that comprehending lectures delivered in English would be difficult for many students, thus necessitating a slackened pace of teaching. In the semester system where time schedule is very rigid, complete coverage of the courses would not be possible. The level and the standard of teaching are therefore likely to suffer.

To be fair, most of these eventualities cited are real problems, but they are not insurmountable. Also, difficulties of implementation should not be construed as academic unsoundness or weakness of the proposed system. Participation of external examiners cannot affect the confidentiality if the existing checks and balances—such as all examiners sitting in the same hall to perform their job of evaluating false-scripted, unidentifiable answerscripts under supervision of senior faculty members—are rigorously followed. Further, participation of external evaluators already exists in some of the IITs. Inaccurate translation of question papers is a distinct possibility, but the possibility can be minimized by careful editing and cross-checking. Chances of an evaluator in a regional language being partial to his own

linguistic group cannot be ruled out in these days of heightened regional chauvinism, but its effect would at the most be only marginal. Courses on remedial and functional English, already there in the 1st year curriculum for students weak in English, can be strengthened and emphasized to counter the problem of comprehension among those unaccustomed to English medium of instruction. After all, the problem already exists with about 15% of the existing students.

While the IIT-JEE system is being thus overhauled, some introspections are going on about other important features of the system. Some crucial questions have been raised about the objectives of the JEE. What exactly are the attributes sought to be assessed through this test? Is it the candidates' mental alertness, their knowledge, their mnemonic ability, their exposure beyond the horizon of the textbooks, or their aptitude for the engineering programs? Or is it simply their ability to read fast and write faster, an ability that does not necessarily reflect the quality of mind and is acquirable through rigorous mechanical drilling—a technique almost perfected by the coaching schools? It is suggested that a committee, comprising senior faculty members from all the IITs, should look into this question of refocusing the objectives of the JEE and analysing whether the desirable objectives of testing are being fulfilled by the existing system.

To set the record straight, the new pattern was introduced and finalized by

the previous government in response to a movement at Delhi IIT, spearheaded by the newly emerging 'Vernacular Elite'. Data are available for JEE-1990, the first year after implementation of the new system. In the very first year, as much as 22.4% of candidates answered their scripts in vernacular. While overall qualifying percentage is 2.9, that of English-medium candidates is 3.7 and that of vernacular-medium candidates is 0.3. In absolute numbers, about 80,000 appeared, nearly 62,000 answered in English and remaining 18,000 in vernacular; 2322 candidates from the first category and only 48 from the second category qualified! It would however be hasty and unwise to dismiss the entire exercise as futile on the basis of data from one year only. The data at least make the point that these 48 students of now-proven merit would never have made the grade, had the system not been changed. It would be necessary to monitor the progress of these students, and to enhance their capacity for comprehension of lectures in English through appropriate academic programmes. In all fairness, therefore, the new system should be given a chance.

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The real brain drain

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Estimates of the magnitude of the annual brain drain from India and results of studies which help in understanding the brain drain as a process are presented. A term called the 'real brain drain' is introduced and a systematic policy for mitigating its harmful consequences is described.

The term 'brain drain' refers to the permanent migration of highly qualified and talented manpower from a developing country, in which it has been trained at considerable expense, to a developed country. In India, the problem first became important in the sixties because

of changes in the US immigration laws. With these changes, it became possible for a large number of Indians to migrate to the US. Initially the issue of most concern was the large number of doctors leaving India. In recent years, as the need for Indian doctors in the US

has diminished, the focus has shifted to the large-scale migration of engineers and scientists.

Magnitude of the brain drain

In the Indian context, the phrase 'brain