A Delphi study of futurist management pedagogy

Arvind Tiwary, Jayshree Viswanathan, Mahesh Jhatta, and R. Ravisankar *

By using Delphi technique, which is to build scenarios of the future, this paper recounts three iterations of writing scenarios for pedagogy in 2000 A.D. in management institutions by a group of four panelists.

The conclusions they arrived at were: Pedagogy in management institutions will involve'modularization of knowledge, technological aids will be more extensively used, and the focus of pedagogy will be on interpersonal skills. Knowledge will become more amenable to packaging and will not have to be taught. In short, education will become more individualistic.

---

* Erstwhile MBA level students, IIMA. The study was part o/coursework designed to assist IIMA's Committee on Future Directions.

We conducted a Delphi study(1) of pedagogy in the year 2000 AD in institutions like IIMA. Delphi is a technique for building scenarios or visions of the future. We had a group of four panelists, each of whom went through three iterations of writing scenarios of future pedagogy, reading each others' anonymously written scenarios, and refining their scenarios in the light of others' scenarios. The panelists were a mix of academics and students. The scenarios are reproduced later. The initial note raising the main issues, which we circulated to each of the panelists, is shown in the Appendix.

It is remarkable to note the extent of similarity in the ideas of the panelists, none of whom knew the identity of the other three. This commonality in ideas is noticeable right from the first stage of the scenario writing. This somewhat pre-empted the actual intention of the Delphi technique which initially produces divergent scenarios that converge only after *a* few iterations.

The following issues emerged from the study: There was a consensus over the fact that by the year 2000 AD, pedagogy in management institutions will involve modularization of knowledge, skills, and techniques. In other words there will be modules of very specialized sort, easy to learn knowledge, which however will have multiple entry accessing. That is, knowledge will be available to a learner regardless of his background or discipline. Technological aids such as the computer will be extensively used in imparting skills and techniques. While knowledge and information will be packaged and mechanized, insight, however, will be personalized, and will arise from using knowledge in real life problem solving.

On a broad conceptual level all the panelists stressed that the focus of pedagogy will be largely on interpersonal skills, unstructured problem solving, creative methods, and conceptualization of complex pattern and situations. Knowledge will become very precise and will be amenable to packaging. It will not really have to be taught. The onus of education will thus largely be on the individual.

By the end of the third stage some of the panelists painted the picture of a very complex and dynamic environment where social engineering will be the order of the day and institutions like IIMA will be involved in creating, transforming, or even destroying organizations and systems. It is interesting to note how they said that the vital need will be for educational interludes not for acquiring knowledge but for "humanizing" people. These institutions will enable one to pick up the threads of one's education whenever one wanted. Hence, time and space for renewing oneself will be required. Thus, one of the panelists went to the extent of saying that institutions like IIMA will resemble an ashram, with emphasis on techniques of self-knowledge such as yoga, meditation, etc.

The issues of ethics that were raised had the panelists hoping that the undesirable practices of today's education will be eliminated by 2000 AD. These undesirable elements were listed by them as the conflicts arising out of unnecessary and wasteful competition, the class and status orientation and resultant alienation, and the arbitrariness of the admission policies of today. One panelist was, however, quite pessimistic.

As far as pedagogy is concerned, the panelists unanimously visualized a toning down of teacher's evaluation, and greater emphasis on self and peer evaluation. Similarly, group work, self-awareness, and communication will be areas of great importance.

For helping students conceptualize complex situations, various methods such as cases, management games, and simulation techniques will be used. Tools and techniques will be relatively unimportant and number-pushing will be consigned largely to the computer and other technical aids.

One issue about this broad scenario is its internal consistency. If there is such a heavy reliance on technological aids to deal with the modules of knowledge and skills, will it be possible to retain the human element and move towards value based learning? It may be possible, but it bears further crystal gazing.

In the following pages, the scenarios of the four panelists over three iterations are presented.

First iteration

1. In 2000 AD., when we are about to step into the 21st century, we may perhaps take a look at the last 20 years which have been a real era of change. You might recollect the educational institutions of the 1980's—cramped; little motivation for learning; arbitrary and haphazard teaching; emphasis on techniques, not skills. Some,

like IIMA tended to be different, with limited success. But even these needed change. I will concentrate only on changes in management education.

Almost all our graduates today pass out without ever coming to IIMA. Till 1985, IIMA was entirely residential and did not have a single correspondence course. But there was tremendous pressure to turn out more managers. And the faith in residential education as the sole means of education disappeared. This was facilitated by technological changes such as the advent of the micro-computer in a big way in the 1980s. Course instruction materials could be sent to students scattered far and wide by means of audio and video cassettes. The easy availability of micro-computers with display terminals was the key factor in this change. There was also the advent of computer interactive programmed learning materials. Each student could now learn at his own pace; he had clarifications when he was stuck; he could not proceed to the next lesson before he had mastered the previous one. Thus we recognized the fact that each student is different and takes different times to learn different subjects.

The education system up to the 1980s was meant mainly for young students. It was presumed that there was a time for learning and a time also to stop learning. We saw the absurdity of this idea in the late 1980s. Technological aids enabled the decentralization of education. The happy result is that today we have a number of older "students" sharing their experiences with others.

Today a teacher is no more a terror. But in the late 1980s the rigid time-slots for education made active and widespread teacher-student contact difficult. The present idea of a teacher as a catalyst and a facilitator for learning, rather than an instructor, was slow to take shape.

Evaluation at that time was teacher centred, and the benefits of the present system of evaluation by peers and self was realized much later. In the 1980s evaluation was done at the end of each course. Students were fitted into rigid time-slots. Now we have flexible time-slots and one can take as long one likes to master a subject.

The 1980s education was not education at all—certainly not management education. We might perhaps say, with Shaw, that the only time our education was interrupted was when we went to

schools, colleges, and other such institutions. We have gradually understood that the critical knowledge areas are inter-personal relations, conceptualization, and development of insight—to see patterns behind complex situations. These we have developed by having ex tended personal growth sessions and extensive discussions sessions (organized locally in various parts of the country) about the real issues facing us. We now give "students" very complex cases. The last one was about 200 pages long and the students' role was to figure out the patterns that emerged. Also we give them plenty of time to do so. It is not in the solitude of their rooms that real insights take place but in the discussion sessions. Also the facility we have now of coming on the tele-circuit to communicate with the central knowledge dispenser and the professors by merely dialling a number is a great help. Another prime mode of instruction now which develops much insight into business situations is the management game.

2. If apex institutions like the IIMs wish to be relevant to the environment in 2000 AD—unlike at present—there has to be a strategy for achieving laid down objectives. The objectives in 2000 AD as I see them will be:

A harmonious integration of the circular process of interaction-feedback loop-learning between "theory" and practice. Attempt to initiate a continuous learning process rather than try to begin and end a process.

Emphasis on re-orienting the thought process rather than on content. Anything that is rational/logical—in fact any so called 'technique" or "tool"—will be computerized by the year 2000 AD. Hence, mankind will be in a position to rid itself of the ^hackles of rational/logical thought processes and be free to concentrate on

— Irrationality
— Asides and fights of fantasy
— "Mad" ideas.

Today computer programmers are writing themselves out of jobs and engineers are finding it difficult to find creative areas of working. All of this points to one thing—that the computer is capable of taking over every rational activity of mankind.

Coming back to management education in IIMA today, there is an attempt to structure

thinking in most of the courses—either through abstractions from the specific to the general (case method) or by attempting to fit any square peg—a real life problem—to the rigid round hole of structured thinking.

Structured thinking leads to responses to situations being "learnt" and there is no room for the speculative. Therefore, the so called professional management or the management of rationality (basically clerical work) does not require the waste of a human mind. Hence, apex institutions like IIMA should concentrate on liberating structured thinking minds from the stereotypes that might have crept in because of whatever "education" they might have gone through.

The content of management education in 2000 AD, will, therefore, emphasize understanding of behaviour, attitudes, and human nature in general—a much greater emphasis on human intangibles.

The case method will continue to be used, but effectively without the drudgery of making obvious calculations. Any known algorithm/technique/analysis/scheme that needs to be applied and the outputs will be provided. The entire focus of class discussion will be on an attempt to generate and evaluate fantastic and apparently unrealistic schemes or ideas. Premature evaluation of schemes, a great failing of the present system, will be completely eliminated.

"Idea men/women" will be the sole products of IIMA and other apex-institutions, and not the hotch-potch products they now produce—a poor attempt at a compromise between *a* clerk (rational thinker) and a problem solver.

It is a crime to take in high ability people into such institutions through a very selective admission process, and then systematically fetter their thinking abilities.

By 2000 AD, institutions like IIMA will hav re-examined every basic premise of their func tioning, and—rather like Hindu philosophy—will encourage divergent thinking.

3. Assume that the rate of change will increase. Search, response time will decrease. Obsolescence will be much higher. Active, creative participation by an individual will begin much earlier and continue lifelong. Learning will be lifelong.

Knowledge systems will change. They will be integrated, and will be easy to access, store, and retrieve. They will evolve into "information-

centres."

The following trends are likely:

(a) Increasing specialization will lead to current divisions of knowledge being cut up and fused like "bio-engineering."

(b) Increasing "modularization" of knowledge. Different modules would be selected by indi viduals when they want and as they want. Self learning based on modules of knowledge "packets" will be encouraged.

(c) Some counselling systems rather than face to face classroom relations, if any, will exist.

For those involved in implementing these there are two different directions depending on the socio-political environment :

(a) Finer and finer specialization and therefore smaller role of individuals.

(b) Integrating the specializations of today, like technology and social sciences, for aiding development.

In a dynamic environment task relationships will be transient, evolving, and therefore work-structures will be very fluid.

Just as one talks today about various forms of energy and the transformation of one into another, we will need to think in terms of transforming, restructuring organizations. Organization design will extend even to the "death" of organizations.

Organizations may be built around social engineering visions. Just as decades ago physics and mechanical-electrical engineering combined to from nuclear engineering, one will see a greater capability to view organizations as the "atoms" of society and to combine them for social developmental missions.

Knowledge centres will be centralized but learning will be decentralized. Modularization implies far greater human self-regulation. The regulation will be more in terms of value-systems.

Probably much beyond 2000 AD the onus of education will be forced back on the individuals. Deliberate learning, or education, will be initiated and controlled by the individual. Knowledge or information learning will be terribly dehumanized— plug in the earphone-videophone type. New types of value-laden courses will be needed not for knowledge but for "humanizing" people—decentralized, education-of-yourself-to-bea-human-being.

Present day institutions like IIMA will dis-

appear. New spaces for "recharging" oneself will be needed. Probably even today this social "need" is being expressed in oblique ways by the religious or Godman cults sprouting all over the place. These "recharging spaces" will be woven into the fabric of society in a way different from today's concept of sequences in life.

Historically, all the great changes in society, the attempts of the "makers of the world," have been a reversion to simplicity. The revolt has always been against a system which has become complex and cumbersome, and a reversion to simplicity is attempted.

Today the physical notion of need satisfaction has led to a deliberate creation of vast wants and expectations, of consumption incommensurate with resources and development.

The cycle of reversion to simplicity will be shortened—not centuries, but faster. Therefore, the need for human and mental regeneration is far greater.

Dissemination of knowledge will be separated from its creation. Centralized knowledge institutions will exist. Human networks will generate innovative ideas which will then be taken up by a big brother computer or central intelligence.

We have probably gone off on a tangent. Let us come to IIMA today. It should be moving into public systems, entrepreneurial management. Universities should deploy techniques and social sciences to the problems and resources of their local constituencies. A national hierarchy of organizations is needed—the apex institutions should be engaged in "engineering of development systems."

Management education as such will probably not be taught as IIM moves towards spinning off organizations—a builder of organizations. A few questions come to our minds: What is excellence in education: Adding gold to gold? Adding gold to lead? What about late starters who are shunted by the present educational system into obsc re corners? What about the inbuilt inertia of the educational system?

4. The critical need in education is not the imparting, of knowledge but building skills so that knowledge can be acquired independently. Hence, the role of apex institutions like IIMA in 2000 AD will be to trigger diversity rather than replicate prototypes, and to liberate teaching from the classroom.

We will stop our present practice of bringing creative and bright people to an institution to maul them and make them mediocre, by curbing their initiative, inflating their ego, and making them more of machine operators rather than contemplative human beings, capable of reasoning, listening, persisting, and pursuing ideas.

The elimination of elitism in academics is a challenge to be faced squarely by the year 2000 AD, if St. Stephens and the like haven't to continue to feed IAS and other elite service corps ad infinitum.

The essence of the Indian theory of knowledge of cognition, conflict resolution, etc., will be incorporated into academic curricula.

Institutions such as IIMA will have different streams for differently oriented individuals. Also, relating to the larger social structure envisaged for 2000 AD, there will not be the emphasis on degree-oriented people alone as there is today.

In discussing the social structure, it should be noted that the corporate economy has been playing an increasing role in individuals' lives. For example, when AIR introduced commercials on medium wave the die was cast for market penetration, at least to make people impatient through media advertising. This impatience will simmer and ferment and people—especially people in Indian villages—will not remain passive any longer.

Today there are trials and experiments being conducted by village craftsmen, artisans, mechanics, farmers, etc., every moment. But the technology-transfer mode of teaching precludes learning from them. In future they will be brought into the mainstream to avoid the cost of delaying the acquisition of today's divided knowledge. This will widen the boundaries of he classroom. Management education will includ' involvement and pursuit in fields/workshops/streets or wherever to discover at least one innovation tried out by the "illiterates".

The basic issue is not critical knowledge need, bi't the purpose of getting a formal degree—should it continue to occupy such an important place?

In my opinion, no institution should pass or fail any student nor should a student necessarily undergo a course in a fixed time-slot (such as two years, no more, no less).

Hence what will be monitored will be output rather than input (e.g., inputs such as attendance

are monitored today). The essential and compulsory requirements will be reduced to a minimum. Students with experience will offer courses or seminars which will be attended by other students, faculty, research associates, etc.

Today's evaluation without individual benchmarks is meaningless. In future people will not be evaluated on standard parameters but against benchmarks of their own previous levels.

Second iteration

1. I continue to hold to my earlier scenario. I wish to add/emphasize the following:

a) A major ommission in the management edu cation in the 1980s was the discussion of the social context in which management func tions.

The real urgency of imparting relevant management education which would help alleviate mass rural poverty was not fully realized. Its introduction by the late 1980s helped in increasing the credibility of man-agement education.

b) We now give students very complex 200 page long cases and the students on the campus are encouraged, or rather compelled, in the ample time given to them, to engage in group discussion.

2. The following features will characterize an institution like IIMA in 2000 AD.

a) A tremendous amount of information will be available through the micro/mini computers. It will be possible not only to access data of all sorts—but also every known algorithm/tech nique/methodology that has been dis covered/invented in fields related to solving the socio-economic problems of mankind will be rapidly and quickly accessible. Of course, access will not be geographically con strained. From any part of the country, this information will be rapidly accessible through sophisticated tele-circuits, video phones, voice machines and interactive terminals. In short, information will cease to be a constraint and valuable time will not be wasted in accessing information.

b) The word management will be used in the strictest generic sense to encompass every socio-economic/techno-economic problem of mankind. The pressures on institutes like IIMA will be tremendous by the late 1980s to drop the narrow, restricted meaning of the word as it connotes today—the management of corporate enterprise. Instead the word will mean management of man-environment systems. This could be a silicon-chip firm, or a cooperative of village artisans, or the popularization of synthetic foods.

c) The information system will automatically be global and all encompassing—a true systems concept. The entire base of the system will be that no technique/methodology or approach used anywhere in the world to solve (or which failed to solve) any problem of man and environment will be ignored, i.e., di versity in approaches will be tolerated and actively pursued.

d) Admission will be granted to anybody (age/ other demographic variables no bar) who demonstrates high abilities to integrate and grasp complex situations. People who have demonstrated skills/abilities in engineering new solutions/approaches and proved them selves will be invited to share and contribute (rather like the Harvard Advanced School of Business).

e) On-campus learning will definitely exist and man being the social animal that he is will benefit from human interaction significantly.

f) The pedagogy will be split among the following :

The case method for extremely complex large systems; Field trips, in-site projects, and assignments; Specific technique to en-courage associative thinking, such as brain-storming, and creativity courses to encourage and tolerate diversity in thought processes; Attitude reorientation and methods of increasing sensitivity to human/inter-personal relationships—managing human skills and talents more effectively; Free dis-cussions and meetings to encourage sharing of knowledge.

g) Learning processes will be initiated and not evaluated by any formal process like exams or other absurdities. Guidelines will be given for self and group learning. At no point will any participant be told that the learning process will be ended.

h) The feedback mechanism will be very strong. Participants will contribute to the informa-tion bank and an effective mechanism of using practice to develop theory will be

established.

3. I notice a certain common thread running through the four scenarios (including mine) on a broad conceptual level. However certain practical elements have been left out.

Pedagogy is generally concerned with two aspects—firstly, logic, or the gaining and using of knowledge that already exists, and secondly, creativity, or the generation of new knowledge. These, of course, are not mutually exclusive.

By the year 2000 AD, the infrastructural facilities for dissemination of knowledge, particularly in management education, will be centralized. It will be analogous to the correspondence courses of today, where the pedagogy is formulated centrally and feedback is received from individual users.

A large part of today's curriculum can be reduced o precise knowledge. However, in real life, there are few neat solutions to complex problt ms. The social sciences today which deal with so many intangible factors are quite atomistic or modular because the variables involved are very qualitative. By 2000 AD, more and more intangible factors will come within the ambit of definite knowledge in the management sciences, that is, will be capable of quantification. This process is visible even today.

Earlier there were distinct areas such as managerial accounting and personnel. Today we have areas which combine these, such as control systems, human resource accounting and so on. This process of combining streams of knowledge is a long one. It will require faculty who cut across areas. The internalization will have to be done mainly by the learner. Teaching guidance will, however, be of such a nature that any person will be able to internalize the knowledge.

Today's academicians live in ivory towers. Undoubtedly there is learning today but it is got by getting away from the real world. Such ivory towers will n t be permitted in 2000 AD. Learning will stretch from macro to the micro and back. The macro planner and the micro actor will be internalized in the same person; he will have multi roles in different dimensions without being labelled a "faculty member," for instance.

A screening system will be needed to devise criteria for disseminating knowledge. Perhaps a "product test" of knowledge could be conducted. The onus for validity of knowledge will rest on the learner. The learner's sense of dis-

crimination will be honed by subjecting him to more and more intangibles, just as more e^posure to subjective areas like fine arts improves one's sense of discrimination.

It is in the nature of social processes that there will be checks and balances in the system of education; there will have to be because greater atomization automatically calls for greater self-regulation.

The social sciences, being very gross, have drawn analogies from the natural and physical sciences, especially the laboratory sciences. Social organizations are explai able by reference to DNA, metamorphosis and the like. With this capacity to engineer social groups, we shall be able to engineer our society. There will be an acceleration in the evolution of human systems and any order that exists will be of a dynamic nature.

In the entire history of mankind, there has always been a striving towards Utopia. The Utopia which today we are seeking to achieve is a pedagogy that will enable i) learning to learn ii) learning to discriminate, and iii) self-regulation.

The economics of the pedagogic system of 2000 AD are as follows: The state will allow 5,000 course modules of knowledge to each person. Besides, there will also be modules for sale. Any person can buy or exchange knowledge modules. This assumes that unlimited access to modules is available. The most important and pure type of learning is that of discovery. Hence a pedagogy of stimulating discovery will be evolved. Lifelong discovery process will be the privilege of the privileged. Outside formal systems, there will be large spaces to test oneself out in a variety of ways ranging from fine arts to sports to village work and cyclone relief operations, etc. Just as living organizations have inhibitors, pedagogic systems will need to develop inhibitors as part of self-regulation mechanisms.

4. I see the following scenario in education in 2000 AD:

Greater tolerance of interdisciplinary inroads in some institutions like universities but less freedom of the same in management institutions. The trend of specialization and the power of specialists will increase unless a counter-culture grows. From my experience of PGP students I am skeptical about a counter-culture growing.

People's learning needs will transform themselves into destructured forms. More and more packaged courses will bring out less and less educated people. Perhaps some subjects like history, poetry, civics, geography, natural sciences might at last find entry into the managerial curriculum.

The race for grades among PGPs and the like will become worse, involving intrigues of various sorts. Multinational management institutes will become more prominent.

PGP students will still belong to a privileged class which is perhaps a tiny fraction of the total Indian population. The whole scene in 2000 AD will probably be much more volatile and the managerial class will be much more defensively cohesive. Managerial interests in the larger context will always need a worker class which only the lesser educated—or those educated in more oppressive systems like board exams — will provide.

In places like IIMA, the incapacity of some to innovate and create will lead them to structure the system more and more. Hence there will be greater regimentation so that deviants will be rejected like the antibody-antigen reaction. A new biradari of managerial class will emerge which will compete with the IAS biradari. There will still be some deviants who will go into the disorganized sector.

Alienation will increase because of increasing disparities in the lifestyles of the modernized few and the traditional majority. Probably we will then start rediscovering our past—at present there is no reference or very little reference to our traditional knowledge.

The role of women and their representation among IIM students will increase.

Third iteration

1. Content *of education :* This will get changed from pure technique-oriented approach to one emphasizing complex problem solving and interpersonal skills. The thought process reorientation will be more important than content of curriculum.

There will be greater blending of theory and practice by having more emphasis on project work in the field.

Courses concerned with personality development and group working will gain more import-

ance. One section will be conducted by the participants themselves, with the faculty playing the role of a catalyst.

2. Students : There will tend to be greater in take from the older age groups. But competition becoming tougher, selection will be more and more merit based and institutions will get segregated for different classes of students of different quality levels.

3. Pedagogy : Microcomputer based program mes will enable individuals to learn at their own pace. Thus programmable learning will be left to machines; the role of faculty will be to teach what the machines cannot—the qualitative and subjective elements. Class discussions will no longer be limited to get numerical answers, but what to do with them.

Evaluation will be both teacher based and peer based.

Management games will figure prominently in the pedagogy as an instrument of varied learning.

Case method will continue as an effective way to approximate real life situations. But the cases will be long and complex, and emphasize integration of various aspects of business, rather than numerical answers.

Our entire process of business education will centre around developing integrative abilities and learning to tackle complex business problems in which the interpersonal dimension is extremely critical. It will therefore be centred around the concepts of integration, development of interpersonal skills, and learning at different paces.

2. I have only three things to add

a) I do not agree with the pessimistic view of scenario 4 in terms of "demand," "competition", etc.

The emphasis on evaluation will be far less. Self/peer evaluation will be more important. However, learning will be much more autonomous. Students will learn, in their own way, at their own pace.

b) I do agree that there will be a far greater tole rance of "deviance." Functional and creative thought processes will be encouraged.

c) There will be a predominant shift towards the social sciences and a great amount of teach ing will focus on these issues.

3. In my earlier scenario I spoke about a cen tralized education system with multiple entry

points for individuals to plug into the system and acquire whatever modules of knowledge they wished. This system will mainly be needed to take care of certification; it will provide certification for those who desire it.

There will be a screening process in pedagogy that will avoid the entry of trashy knowledge into the system. This will consist of:

a) a referal back system
b) a check against existing knowledge—the system will have the ability to classify in formation into sense and nonsense.
c) external resources—essentially human intervention to discriminate and recertify.

The pedagogy will consist of a mix of both modular learning and self learning, somewhat analogous to today's executive development programmes which provide opportunities to think about problems away from the work enviroment. This helps in self learning and understanding oneself better.

The learning environment could be compared to a church-the structure is not so important as the space and atmosphere created. Spaces—both in the spatial and temporal sense—are required to legitimize the individual's need for renewal.

4. The interests of the managerial class will coalesce—this will lead to further isolation of management institutions like IIMA from social reality.

At present, a "market" of courses is emerging in the Institute. This trend will continue in the future. The instructors will try to tailor courses to the "demand," which, in turn, will reflect the preferences of the larger market—industry. The market will become very stiff, with intense competition between instructors in terms of registration of courses, etc.

In 2000 AD, old traditional Indian values will need a thorough re-evaluation. Traditional values as illustrated by the story of Dronacharya and Ekalavya—the role of teacher and taught, with the total subjugation of the taught—will change. However, the bourgeoisie will try to maintain these values, for they are dependent on them for their existence.

The emergent institutions will be learning networks—not really formal systems, but loose and highly differentiated organizations.

The pedagogic tools of the future will be dialectic methods. They will be more de-structured and individual-oriented. Courses may even be totally redesigned while they are being taught. The commitment will not be on teaching what one sets out to teach but rather on fulfilling learning goals.

With regard to relevance of courses, however, the trend is not encouraging. Social relevance may not be taken into consideration.

Appendix 1

Instructions to panelists

Pedagogy in 2000 AD—A Delphi study

We are a group of students doing a study on pedagogy in the future. We would like you to help us by building up a scenario for the year 2000 AD of pedagogy that could be used at such institutions *of management* as IIMA. Please build up the scenario based not merely on likely trends but also on what you consider desirable and what could be achieved with some effort. You might like to consider the relevance of pedagogy at such institutions with reference to factors such as

— What would be the critical knowledge needs in 2000 AD?
— Therefore, what would need to be taught?
— What would be the role of apex institutions of the country (such as IIMA) in this context?
— What would be the technologies of education available in 2000 AD ?
— Given the above, what could be the most effective learning tools, techniques, and processes in these institutions?

While visualizing the scenario you might also like to consider issues such as:

— Role of teacher and taught
— Role and methods of evaluation
— The prevalent academic environment
— The use of aids
— mechanical, electrical, electronic, etc.
— psychological, psychic, etc.
— process related, simulative, experiential, etc.

As an input to the other panelists, please write out your scenario along with an indication of the factors you think are important and how they develop.

Reference

1. O. Helmer, Convergence of expert opinion through feedback. Santa Monica, California: RAND Corporation, 1964.