



Available online at www.elixirpublishers.com (Elixir International Journal)

Educational Technology

Elixir Edu. Tech. 91 (2016) 38503-38509

Elixir
ISSN: 2229-712X

Higher Education in India– New Insights for Innovations in Learning Process

Arya Kumar

Lal Bahadur Shastri Institute of Management, New Delhi, India.

ARTICLE INFO

Article history:

Received: 2 January 2015;

Received in revised form:

15 February 2016;

Accepted: 22 February 2016;

Keywords

Higher education,
Quality,
Innovation,
Active,
Effective Modes of Learning,
Flexible Learning,
Modular structure.

ABSTRACT

The Indian higher education system is the third largest in the world, after China and the United States. There has been an exceptional growth in number of universities, colleges as well as enrolment in higher education system particularly during last 15 years. The ratio of professional to non-professional enrolment has been almost 1:3. Key challenge before higher education system in India is to make it relevant and purposive, so that it responds to societal needs and enables students to get meaningful employment opportunities. The areas in which there is a need to come out with policy perspective at macro level and innovations at institutional level are - Quality and Excellence, Equity and Access & Inclusion. There is a dire need for the teaching community to keep coming out with innovations in teaching-learning process, in particular in the areas of curricula, pedagogy, and assessment which should make learning an enjoyable experience and more and more purposive to the societal needs. This paper attempts to identify specific areas of innovations in higher education system to improve the quality of higher education, so as to make it relevant and purposive to societal needs. The strategy to innovate has to take care of local and global dimensions of multiple sources of learning such as – networked learning, life-long learning, world class learning with local and international perspective. Above all, higher learning has to imbibe a framework of flexibility by introducing a modular structure which can be taken as per the desired pace of understanding of the student, implying a possibility of completing the degree programme in shorter or longer duration and a choice-based learning that allows the student to opt for interdisciplinary courses of his liking and interest as a part and parcel of curricula to complete his degree programme.

© 2016 Elixir all rights reserved.

Introduction

Higher Education is a critical input for the growth and development of human resource that in turn contributes to the overall growth and development of economy. India over years has created a higher education system which is the third largest in the world, next to China and the United States. India's Gross Enrolment Ratio (GER) in higher education was only 16% in 2010, which was much below the world average of 27%, as also of other emerging countries such as China (26%) and Brazil (36%). However, India has come a long way since independence with estimated GER increase from 0.2% (in 1947) to the current 17.9% (2012)¹. As per the Twelfth Five Year Plan (2012-17), the objective is to touch a GER of 21% by the end of Twelfth Plan and 30% by 2020, which would mean an addition of 26 million in Higher Education. It is in the recent years that the nation had introduced and initiated a series of development linked strategies for promotion of higher education. Some of the prominent being the 'National Knowledge Commission' (NKC), the Report of 'The Committee to Advise on Renovation and Rejuvenation of

Higher Education' and the Conclave of Vice-Chancellors and other Forums of Educationists.

In terms of expansion of numbers, there has been an unprecedented growth since independence, with the number of universities increasing from 20 (1947) to 733 (2014-15) at a Compound Average Annual Growth Rate (CAGR) of 5.5 and number of colleges increasing from 500 (1947) to 35,500 (2012-13) at a CAGR of 6.77%. The number of universities increased from 103 in 1970-71 to 256 in 2000-01 i.e. 153 in 30 years. However the number had gone up from 256 in 2000-01 to 733 in 2014-15 i.e. an increase of 477 universities within a period of 14 years. There were 46 Central Universities, 336 State Universities, 127 Deemed to be Universities and 224 Private Universities in 2014-15. The major expansion in number of universities has taken place after 2001 onwards, mainly of Private Universities or Deemed to be Universities and mainly funded through private sources. Similarly, number of colleges increased from 3604 in 1970-71 to 12806 in 2000-01 i.e. 9202 additional colleges in a span of 30 years. While in next 14 years their number had gone up from 12806 in 2000-01 to 39671 in 2013-14 i.e. an increase by 26865 within a period of 13 years i.e. an average annual growth of 9.08%.

Student enrolment in institutions of higher education in India stood at 2.0 million in 1970-71, 2.8 million in 1980-81,

¹Report of University Grants Commission, 2012

4.92 million in 1990-91, 8.40 million in 2000-01, 18.67 million in 2010-11 and 23.76 million (Provisional) in 2013-14. The annual growth in enrolment ranged between 4.1% and 6.1% during 1996-97 to 2000-01 and increased between 6.7% and 8.2% during 2001-02 to 2004-05. This further increased to 9.1% to 9.5% during 2005-06 to 2009-10 and thereafter had slowed down to a range of 8.3% and 8.9% during 2010-11 to 2011-12. Again, after touching a 9.7% growth in enrolment in 2012-13, it had dramatically fallen to a level of 6.6% in 2013-14. Last few years' slowed-down growth in enrolment indicates a bigger challenge of relevance of higher education and need for greater emphasis on quality of education that could result in worthwhile employability of passing out students.

The enrolment position in the academic year 2013-14 reveals that majority of students in the higher education system had been enrolled mainly in a variety of programs at the under-graduate level and their share in the overall enrolment in colleges and universities constituted 85.12% (provisional). The percentage of students enrolled for Master's level courses (PG) had been 12.35% while a very small proportion i.e. 0.85% of the total number of students had enrolled for research including MPhil and PhD. Similarly, only 1.68% of the total number of students had enrolled in diploma/certificate courses².

It reflects a lop-sided growth in favour of under-graduate students as against postgraduate and diploma/certificate students. It is basically research enrolment that can contribute to future quality teachers and innovators to strengthen the higher educational system and to come out with innovative solutions to problems faced by society at large, while it is skill driven diploma/certificate programmes that result in greater employability.

Similarly, of the total enrolment of students (237.65 lakhs), 36.57% students were pursuing their studies in Humanities, followed by 17.23% in Sciences and 17.60% in Commerce/ Management; adding up to 71% enrolment in these three disciplines. The remaining 29% were pursuing their studies in professional disciplines, namely Engineering/Technology (15.55%), followed by Education (Teacher Training) (5.42%) and Medical Studies (4.18%), etc. It is pertinent to note that hardly 0.45% of total enrolled students in 2013-14 were pursuing their studies in Agriculture and allied disciplines, and 0.12% in Veterinary Sciences. It is evident from the faculty-wise distribution of enrolment that there is a need for policy shift in favour of professional disciplines and vocational programmes, which are having greater demand as well as greater prospects for employability. The ratio of professional to non-professional enrolment has been almost 1:3, and hence it is essential to draw up an appropriate policy change with a view to reduce the glaring disparity and to focus on vocationalisation of education. Key challenge before higher education system is to make it relevant and purposive, so that it responds to societal needs and enable students to get worthwhile employment opportunities. The areas in which there is a need to come out with policy perspective at macro level and innovations at institutional level are identified and discussed in this paper.

Quality and Excellence

With a rapid expansion in terms of number of institutions and enrolment, especially, during last one and a half decade, the greatest set-back and challenge that has arisen is the issue

of ensuring quality and excellence in higher education. It is evident from just having two institutions namely Indian Institute of Science Bangalore (147 rank) and IIT Delhi (179 rank) from India amongst the top 200 institutions in world as per Q & S ranking 2015. There are another five institutions from India namely IIT Bombay (202 rank), IIT Madras (254 rank), IIT Kanpur (271 rank), IIT Kharagpur (286 rank) and IIT Roorkee (391 rank) amongst top 400 institutions in the world as per Q&S ranking 2015.

The steps taken and approach adopted by UGC to achieve higher quality and excellence have only been marginally successful, in spite of allocation of huge sums of financial resources over the last more than 65 years. Some of the crucial challenges for achieving excellence in higher education and creating institutions with world standards lie in:

- Extreme faculty shortage - there is 40% and 35% shortage of faculty in state and central universities, respectively.
- Accredited institutions – more than 62% of universities and 90% of colleges were average or below average in 2010, on the basis of their NAAC accreditation.
- Low citation impact - India's relative citation impact is half the world average.
- Financial position of majority of state funded universities is in a pathetic condition.
- Majority of private sector initiatives in higher education have short-term gains as the prime motive and thus have grossly diluted the standards.
- Infrastructure by way of libraries, laboratories and classrooms is below standards, especially for engineering, science, agriculture, veterinary and medical disciplines.
- Pedagogy of teaching-learning process has hardly introduced innovations to impart education.
- Relevance of education has a big question mark because of lack of integration and collaboration with industry.

Thus, it is not a matter of achieving a target of 30% GER by 2020 but to have a relevant and purposive educational system that can meet effectively the requirements of societal needs.

The Higher Education sector needs to ensure the quality of the educational system with an independent body involved in objective and transparent accreditation process. The main body that accredits universities and colleges in general education is the National Assessment and Accreditation Council (NAAC) established by the UGC in 1994, whereas a similar function is done for technical education by the National Board of Accreditation (NBA) set up by AICTE in 1994, and for agricultural education by the Accreditation Board (AB) set up by ICAR in 1996. NAAC proposes to introduce the India Education Index (IEI) for ranking institutes based on academic, research performance and other parameters³. However accreditation continues to be voluntary and need to be made mandatory as also to have greater acceptability and credibility amongst institutions of higher learning. The National Institutional Ranking Framework (NIRF) has been recently introduced by the Ministry of Human Resource Development (MHRD). This framework provides a methodology to rank institutions across the country from Indian perspective of having institutions which are

²Report of the University Grants Commission 2013-14

³Dr. K. Kamar Jahan, and Dr. D. Christy Selvarani, Higher Education in India: Issues and Challenges, International Conference on Humanities, Literature and Management (ICHLM'15) Jan. 9-10, 2015 Dubai (UAE)

teaching driven and another set of institutions which are teaching and research driven. The methodology draws from the overall recommendations arrived at by a Core Committee set up by MHRD, to identify the broad parameters for ranking various universities and institutions. The broad parameters for ranking include "Teaching, Learning and Resources," "Research and Professional Practices," "Graduation Outcomes," "Outreach and Inclusivity," and "Perception".

Relevance and Quality

The greatest challenge that higher education is facing is one of relevance of education and the quality of teaching-learning process. The system requires a need for thorough reforms in admissions, curricula, pedagogy and assessment. There is not much emphasis laid on mission-oriented and application driven research that should result in improvement in efficiency of operations and innovations. Educational environment need to encourage entrepreneurship in the Indian institutes of higher education, so that students start thinking beyond seeking jobs to creating jobs. The role of technology in imparting learning as also to overcome certain challenges like shortage of good faculty and accessibility of higher education needs to be continuously enhanced and optimised. The course curricula in general are outdated. The faculty and administration has not been empowered to come out with innovations in designing and delivering the curricula.

Infrastructure

Higher education institutes in particular run by the state governments, because of financial crisis, are saddled with poor physical facilities and infrastructure. There is a skewed pattern of demand and supply in terms of different programs/courses offered. The courses having mass popularity and demand from the market have less number of seats, due to limited infrastructure facilities and faculty constraints; while there are seats in excess for the less popular general programme of studies without having relevance to employer's needs. There needs to be an expansion and optimum utilization of already established infrastructure as well as addition of new institutions. More public private partnerships can play a pivotal role in addressing these challenges.

Faculty

While the student enrollment has increased at CAGR of 6.4% from 1970-71 to 2011-2012, the faculty enrollment has only increased at a CAGR of 4.9%. There is an acute shortage of good faculty across institutions. Many faculty positions in institutes remain vacant because of lack of availability of well qualified faculty having passion for teaching and research. Primary reason behind this is lack of priority given to research and development in the country and linkage of research & development with entrepreneurship development. The number of research degrees (PhDs) awarded by various universities in India had gone up from 19,861 in 2011-2012 to 20,275 in 2012-2013, thus registering an increase of 2.08% in one year. Of the total number of PhDs awarded in 2012-2013, the Faculty of Science had the highest number with 6641 degrees, followed by the Faculty of Arts with 6298 degrees. These two faculties together accounted for 64 per cent of the total number of Ph.D. degrees awarded. 1585 degrees were awarded in the faculty of Commerce/Management. Keeping in view the demand for faculty, the number of PhDs that is coming out each year is much below the requirements. Quality of PhDs has dramatically come down over the years. Further as people get forced to join this profession, they lack an interest in teaching. There is a need to train the faculty by establishing special training cells.

Accreditation

With the increase in the number of institutes surfacing and the increase in intake of institutes, the quality of education is being compromised. Higher education is being taken as a business to be run on commercial grounds, so as to recover the investments made in the shortest possible period. Not even 25% of the total higher education institutions in the country were accredited in June 2010. And among those accredited, only 30% of the universities and 45% of the colleges were found to be of quality to be ranked at 'A' level⁴. Although 11th Five Year Plan made it mandatory for all institutes of higher education to seek accreditation, the UGC is still facing challenges in periodical assessment and accreditation of these institutes. There is a need to establish Internal Quality Assurance Cells (IQACs) in universities and colleges so as to continually focus on strategies and programs for promotion of quality in each university and college.

Industry Linkages

There is an enormous gap between the industry demands and the institute supply of skilled employees. There is very little engagement and commitment from the industry in the training of students and their contribution to development of curricula. There is an urgent need to have a close collaboration and integration between university system and industry. The course work needs to include employment linked modules in order to prepare better skilled employees for the industry. As such Industry has been questioning the employability of graduates and post-graduates from Indian institutes of higher education because of lack of the desired high quality skills required for working in any industry. Further, many graduates are reported to have inadequate soft skills like communication and inter personal skills. Most organizations need to spend resources towards training fresh graduates from Indian universities, which reduce the demand of students passing out of institutions of higher education in the job market. A research by Ernst and Young reveals that more than 62% of graduates need to be further trained for any job in the IT sector.

Equity

The Indian higher education system is facing the challenge of equitable access. There are disparities across states, gender, urban-rural areas, socio-economic groups and communities. As far as the number of universities in states is concerned, Rajasthan (61), Uttar Pradesh (59) top the list followed by Tamil Nadu (51), Karnataka (47), Andhra Pradesh (43) and Maharashtra (42). These six states constituted around 46% of total universities in the country in the year 2013-14. These six states had a total enrolment in higher education to the tune of 135.75 lakh constituting 57% of total enrolment in higher education in the country (237.64 lakhs) in 2013-14. Of the total enrolment, 44% constituted women population.

There has been a wide disparity in terms of number of universities as also enrolments from state to state. Some of the key aspects of gender and inter-state disparities are evident from the wide disparity in the GER of higher education across states and the Gross Attendance Ratio (GAR) in urban and rural areas, and gender- and community-wise in 2013-14:

⁴Compilation Based on the Deliberations of the Working Group for Higher Education in the 12th Five-Year Plan (2012-17) University Grants Commission, Inclusive and Qualitative Expansion of Higher Education

- Inter-state disparity in GER - 47.9% in Delhi vs. 9% in Assam.
- Urban-rural divide - 30% in urban areas vs. 11.1% in rural areas.
- Differences across communities - 14.8% for OBCs, 11.6% for SCs, 7.7% for STs and 9.6% Muslims.
- Women constituted 44% of overall enrolment with as high as 60% each in Goa and Kerala, 51% in Tamil Nadu, 48% each in Himachal Pradesh and Jammu & Kashmir, 47% in Karnataka and Maharashtra 45% in UP and 43% in Andhra Pradesh.

Access and Inclusion

India has achieved a significant success as regards ensuring access to primary education. However, in spite of accelerated growth of higher education in India during last one and a half decade; much is yet to be achieved both in quality and quantity terms in higher education. The Gross Enrollment Ratio (GER) was around 17.9% (2012), that too lopsided in favour of general and undergraduate education. This is much lower than the world average (24%) and the average of other developing nations (18%). The target of achieving 30% GER by 2020 would require substantial resources to be deployed effectively by bringing in qualitative improvements, including increasing intake by universities, upgrading of autonomous colleges, formation of university clusters, opening new institutes of excellence like IIT's and IIM's throughout the country, strengthening the Open University system, forming public private partnerships, etc. Fundamentally, higher education system in India requires basic structural and systematic changes in universities and colleges.

The greatest challenge that lies today before institutions of higher education is to impart relevant education by constantly updating the curricula and delivering through dedicated and passionate teachers who need to be continually abreast of latest developments in their areas of specialization and know how to deliver knowledge, so that it gets absorbed by the students with ease. Along with innovations in pedagogy there is a need for objective and transparent entrance examination system for higher education, implementing Semester System, Continuous and Comprehensive Internal Assessment, Choice Based Credit System and mobility of students through effective mechanism of credit transfer across institutions of higher education. While some institutions have welcomed these initiatives, there are many others that oppose it strongly. This poses a major challenge.

Reproduced Tertiary Learnings vs. Site Bounded Tertiary Learning

Indian higher education system for the past almost five and a half decade has followed an approach wherein students are treated as followers of their professors/instructors. As a result standard programs with similar pedagogy are taught year after year, irrespective of students' ability to grasp and absorb. The whole process of learning is hedged in with little or no freedom to the students and treating students on the receiving end. The focus is on routinely delivering some knowledge and skills input. It becomes challenging to be student centric in delivering education wherein students are often arranged to learn in a separated way and are kept responsible for their individual learning outcomes⁵. Students'

learning experiences are institutional driven and are estranged from the fast changing local and global communities.

Rapid globalization is one of the most salient aspects of the new millennium, particularly since the fast development of information technology over the last two decades (Brown, 1999). To different stakeholders, different types of globalization can be identified even though most of the attention is in the areas of economy, technology, and culture (Brown & Lauder, 1996; Waters, 1995). Educational system need to be responsive to globalization, localization and individualization to achieve its real purpose. Aligning these three dimensions as a whole can be taken as a Triplization Process that can be used to introduce educational reforms and formulate the new pedagogic methods and environment to implement new curriculum for enhancing Contextualized Multiple Intelligences (CMI), of tertiary students⁶.

Innovations in Teaching /Learning Process

To build world class institutions, Indian higher education institutions need to continuously innovate so as to impart relevant education whereby needs of the society are well catered, while providing worthwhile employment to passing out students. Some of the key areas that would require attention to come out with innovative solutions to manage change in the environment wherein the prospects for future jobs lie are as under:

Curriculum

A new approach to curriculum design and development has to focus on developing students' abilities to make triplization for their own learning and development. Therefore, the design has to ensure that it maximises development opportunities for students' individualized, localized, and globalized learning. It needs to be necessarily integrative, and interactive with the support of IT, networking, local and global exposure, and field experience and virtual reality, to meet the diverse needs of the society at large.

Pedagogy – Active Learning

The traditional approach of teaching pedagogy accentuates and focuses on delivering subject knowledge and skills to students. The emphasis is on students' learning as a disciplinary, receiving, and socializing process and fundamentally involves close supervision during the learning process. Against this, the new pedagogy revolves around Facilitating Self Learning that should ensure students' learning as a self-actualizing, discovering, experimenting, experiencing, enjoyable, and introspective. Teachers need to inspire students' to make use of Multiple Sources for Learning such as self-learning programs and packages, interactive multi-media materials, web-based learning, outside faculty and professionals, experiential programs by solving community problems, etc. Institutions and faculty need to develop partnership and collaboration with social entities, business, and industry for effectively delivering educational programmes to students for enhancing their learning experience and developing capabilities. The learning process has put multiple challenges to the faculty members to be updated with use of latest technology such as the Internet, e-communications, visiting programs, local and global exchange programs, and sharing by video-conferencing. The networked

⁵Cheong Cheng Yin, Paradigm Shift in Higher Education: Globalization, Localization and Individualization, International Paper Presentation Invited by the Ford Foundation at the Ford Foundation Conference on

"Innovations in African Higher Education" Nairobi, Kenya, 1-3rd Oct 2001.

⁶ Cheng, Y.C. (2000). A CMI-Triplization Paradigm for Reforming Education in the New Millennium. *International Journal of Educational Management*. 14(4), 156-174.

learning adds the much needed value to educational process by providing an opportunity to access a wide spectrum of learning experiences and maximize opportunities for students to benefit from various settings and cultures. It should include some typical and important components such as world-wide networking through the Internet, web-based learning, interactive self-learning, multi-media facilities and learning materials, and video-conferencing for local and international sharing and exposure (Ryan, Scott, Freeman, & Patel, 2000)⁷. This approach needs to be **Learner-centered** that involves a shift in instructional paradigms, wherein traditional educational approaches were largely teacher-centered (Stanford-Bowers, 2008). Learner-centered models "emphasize students' responsibility for their own learning" (Howell et al., 2003, para. 31).

Student Retention

Apart from highly rated institutions of higher learning, dropout rates of students is very high; more so in case of distance learning or online learning programmes. Students may be more apt to drop-out if they do not feel adequately supported by the institution (Stanford-Bowers, 2008; Tinto, 1993; Veenstra, 2009). Therefore institutions of higher learning need to come out with distinct innovative strategies that revolve around student support system and students association with the Institution in all areas - financial aid, academic, counseling, tutoring and hand holding. Institutions need to keep coming out with congenial learning environment wherein emphasis is laid on quality of interaction between faculty and students so that relationships and values of teacher and learner are based on Gurukul model. Above all, due emphasis needs to be laid on self-inspired discipline. The principle behind this is that students take responsibility for their own learning that helps promote authentic and meaningful learning (Khare & Lam, 2008).

Student Intake

Quality vs. Quantity

What matters the most in delivering quality education is the quality of input. Majority of institutions that have come up more with commercial objectives or have diluted their standards over a period of time are finding it hard to fill their seats and in turn have very poor quality of intake. On the other hand - very few institutions keep thriving to come out with new and different methods for student intake to ensure quality input. Much needs to be done to come out with objective, transparent, relevant methods of admissions that do not compromise on quality of input, even if it means financial loss.

Assessment

Students' feedback that they receive through assessment plays a very critical role in not only the learning process but also their future prospects. It is a recurring theme in the literature, where it is noted that getting a close alignment between the teaching, the learning outcomes and the assessment will result in better learning on the part of the students (Biggs, 1999, quoted by Rust, 2004). Faculty need to be deeply concerned and careful to develop objective evaluation system which should encompass different stages of learning i.e. Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation. Graham Gibbs, visiting professor at Oxford Brookes University, says assessment is

teachers' main lever "to change the way students study and get them to put effort into the right things". Some of the key aspects that need to be taken care of to keep coming out with innovations in assessment should revolve around the following:

- Be for learning, not simply of learning.
- Be continuous, objective, dependable, reliable, valid, and consistent.
- Consist of effective and constructive feedback.
- Keep coming out with innovations to inspire, motivate and improve learning.
- Have a focus on understanding and application, rather than just reproduction.
- Be central to faculty development and teaching pedagogy, and need to be frequently reviewed.

Feedback can be improved by the use of technology (Rust, 2001) and looking for ways of automating feedback might help the learners while not overloading the teacher. Above all, assessment process should have a common understanding and same definitions about standards. This can be nurtured by increased exchange, discussion and engagement.

Psychological Barriers in Learning Concentration drops with sustained and unchanging low level activity (such as sitting and listening). Therefore Lecture Method is not effective beyond a point for any subject being taught. Students' attention is typically maintained for ten to fifteen minutes that too by effectively using lecture method in teaching. Appropriate laughter doses are a natural, universal phenomenon that acts as a strong prescription to be receptive, with positive effects, both physical and psychological. Therefore students prefer a teacher with an infective sense of humour. It helps in creating congenial and affectionate relationship with students.

Effective Modes of Learning

The literature contains many endorsements and experimental research studies that support the idea that meaningful learning is tied to experience (Bodner 1986; Angelo 1990; Caprio 1994; Lord 1994). Cannon (1999) has suggested that a lack of appropriate learning strategies (especially student-centered methods) is the largest variable contributing to attrition in science majors.

Lab and Experiments

For science teaching usual approach is to impart conceptual input followed by a lab. However research has shown that the absorption and understanding particularly in case of non-major students increases, if lab component is imparted before lecture to teach the same science concepts. This facilitates instruction to proceed from concrete to abstract and makes learning much more successful. It is a great challenge for the faculty to accommodate the different ways in which different students learn by using many different approaches. The use of visuals and objects for making thoughts more concrete help greatly in teaching effectively, especially in large-enrollment classes.

Participative and Experiential Learning

Effective group learning focuses on student as a center and focal point. The students share an overall common experience along with their own experiences as a resource with each other. There is active involvement in discussion and activities. There is an internalization of learning because of self-experience. Group as a whole and each participating student mutually share their insights and resources in learning from each other. Participative, where learning is by doing,

⁷Ryan, S., Scott, B., Freeman, H., & Patel, D. (2000). *The virtual university: The internet and resource-based learning*. London: Kogan Page.

reflecting on active experience, discovering the learning points, working out how to do things, identifying and improving skills, learning to reapply them. Experiential learning provides the greatest advantage because here the student is central to the whole process. In such an approach the student is able to relate the learning experience with his own situations, attitudes, ideas and feelings. The role of the facilitator to comprehend and relate experiences with concepts becomes a crucial input in such a learning process.

Flexible Learning

It provides a student modular course learning along with opting for interdisciplinary courses of his liking and interest as apart and parcel of the curricula to complete his degree programme. These courses could be taken as part of free electives across the institute, irrespective of discipline, provided a student meets the prerequisite criteria to opt for these courses. Else a student can take these courses as add-on to his normal routine provided he is willing to take extra load. Flexibility also comes by way of modular structure which can be taken as per the desired pace of understanding by the student, implying a possibility of completing the degree programme in shorter or longer duration. This enables students to prepare for unique future by choosing to study different subject areas that interest them and that will help them to develop transferable skills.

Project Based Learning

This method of learning equips a student with variety of skills such as planning, design, pooling up the knowledge of each individual, bringing in different perspectives to deal with the problem etc. It also helps in improvement in communication skill when meeting with people from different social and cultural backgrounds. Promotion of teamwork and multi-disciplinary approach to problem solving gets imbibed by students. Thus group assignments and projects help in engaging students in collaborative work, provide leadership in team work, conduct critical analysis, see things from different perspectives, and make informed decisions.

Conclusion

The Indian higher education system is the third largest in the world, after China and the United States. There has been an unprecedented growth in number of universities, colleges as well as enrolment in higher education system particularly during last 15 years. The ratio of professional to non-professional enrolment has been almost 1:3 and hence there is a need for an appropriate policy change which may rationalize and reduce this disparity and to focus on vocationalisation of education. Key challenge before higher education system is to make it relevant and purposive, so that it responds to societal needs and enables students to get worthwhile employment opportunities. The areas in which there is a need to come out with policy perspective at macro level and innovations at institutional level - Quality and Excellence, Equity and Access & Inclusion. Teaching fraternity has to keep coming out with innovations in teaching-learning process, in particular in the areas of curricula, pedagogy, and assessment which should make learning an enjoyable experience and more and more purposive to the societal needs. As per Triplisation Paradigm, learning needs to have three key dimensions to prepare students for facing the future challenges of the world of work namely – global, local and individual. Individual facets need to take care of considering the student at the center of education as was prevalent in Gurukul System and therefore while dealing with the class the teacher has to come out with individual programs that encourage self-learning, self-

actualisation, self-rewarding and above all having a focus on how to learn. Similarly, local and global dimensions have to take care of multiple sources of learning such as – networked learning, life-long learning, and world class learning with local and international perspective. Above all, higher learning has to imbibe a framework of flexibility by introducing a modular structure which can be taken as per the desired pace of understanding of the student, implying a possibility of completing the degree programme in shorter or longer duration and a choice-based learning that allows the student to opt for interdisciplinary courses of his liking and interest as a part and parcel of curricula to complete his degree programme.

References

- [1] Angelo, T. Learning in the Classroom (Phase I). A report from the Lawrence Hall of Science. Berkeley, CA: University of California, 1990.
- [2] Biggs, J, Teaching for Quality Learning at University, Society for Research into Higher Education/Open University, 1999.
- [3] Bodner, G. M, "Constructivism: A theory of knowledge", Journal of Chemical Education, 1986, 63:873-878.
- [4] Brown, T, "Challenging globalization as discourse and phenomenon", International Journal of Lifelong Education, 1999, 18(1), 3-17.
- [5] Brown, P., & Lauder, H, "Education, globalization and economic development", Journal of Education Policy, 1996, 11(1), 1-25.
- [6] Cannon, J, "Cooperating with constructivism", Journal of College Science Teaching, 1999. 29 (1): 17-23.
- [7] Caprio, M. W, "Easing into constructivism", Journal of College Science Teaching, 1994, 23:210-212.
- [8] Cheng, Y.C, "A CMI-Triplization Paradigm for Reforming Education in the New Millennium. International", Journal of Educational Management. 2000, 14(4), 156-174.
- [9] Cheong Cheng Yin, Paradigm Shift in Higher Education: Globalization, Localization and Individualization, International Paper Presentation Invited by the Ford Foundation at the Ford Foundation Conference on "Innovations in African Higher Education" Nairobi, Kenya, 1-3rd Oct 2001.
- [10] Howell, S. L., Williams, P. B., & Lindsay, N. K, "Thirty-two trends affecting distance education: An informed foundation for strategic planning", Online Journal of Distance Learning Administration, 6(3). Retrieved March 29, 2009, from <http://www.westga.edu/~distance/ojdla/fall63/howell63.html>
- [11] Jahan, K. Kamar and Christy D. Selvarani, "Higher Education in India: Issues and Challenges, International", Conference on Humanities, Literature and Management (ICHLM'15) Jan. 9-10, 2015 Dubai (UAE)
- [12] Khare, A., & Lam, H, "Assessing student achievement and progress with online examinations: Some pedagogical and technological issues", International Journal on E-Learning, 2008, 7(3), 383-402.
- [13] Lord, T, "Using constructivism to enhance student learning in college biology", Journal of College Science Teaching, 1994, 23:346-348.
- [14] Ryan, S., Scott, B., Freeman, H., & Patel, D. The virtual university: The internet and resource-based learning. London: Kogan Page.
- [15] Reports of UNIVERSITY GRANTS COMMISSION, 2012 to 2015.

- [16] Ryan, S., Scott, B., Freeman, H., & Patel, D, The virtual university: The internet and resource-based learning. London: Kogan Page, 2000.
- [17] Rust, C. A Briefing on the Assessment of Large Groups: Assessment Series No. 12, LTSN Generic Centre, 2001.
- [18] Stanford-Bowers, D. E, Persistence in online classes: A study of perceptions among community college stakeholders. MERLOT Journal of Online Learning and Teaching, 2008,4(1). Retrieved March 29, 2009, from <http://jolt.merlot.org/vol4no1/stanford-bowers0308.pdf>
- [19] Tinto, V, Leaving College: Rethinking the causes and cures of student attrition (2nd Ed.). Chicago: University of Chicago Press, 1993.
- [20] Veenstra, C. P, "A strategy for improving freshman college retention", Journal for Quality and Participation, (2009), 31(4), 19-23.
- [21]. Waters, M, Globalization. London: Routledge, (1995).