

## **PEDAGOGIES IN HIGHER EDUCATION: STRIDING TOWARDS INNOVATION**

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### **ABSTRACT**

The present paper explores the need and scope of Pedagogies in the domain of higher education. Pedagogy is often a neglected sphere when it comes to higher education, where more attention is given to the mastery over the content, concepts, skills & training. But, a question often raised is, can the learning outcomes be realised effectively without a sound pedagogy? Often, in professional and technical courses (vocational education), the focus is more on skill development and training by an expert in the field. It is being envisioned in the UGC's report on Higher Education that Indian graduates should not only be competent in their scholastic achievements, rather, they need to be also grounded in their value systems and richness of personality. This requires a transformation of the pedagogy and pedagogical content knowledge (PCK) to bring about quality learning experiences that aims for the holistic development of individuals.

**Keywords:** Pedagogy, Higher Education, Quality Education, Pedagogical Content Knowledge (PCK)

### **1. INTRODUCTION**

It has been realised that Elementary Education, although an essential phase in the development of children, cannot alone lead to the progress of a nation, as the focus is mostly on literacy and the 3 Rs. Of late, Higher Education is an area that has gained attention both by the Government as well as research institutions all over the Nation. The evidence for this is the recent spurt in the opening of a number of higher education institutions, such as central and state universities,

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colleges, IITs, IIMs, medical and technical institutions, etc. In the past, there have been policies on Higher Education, such as the Radha Krishnan Education Commission (1948-49), University Education Report (1962), Kothari Commission (1964-66) and the National Policy on Education, 1986 that emphasised upon the role of Higher Education in Nation building, resulting in the growth and progress of the country. Also, data shows that the five-year plans proposed by the Government from time to time have yielded positive outcomes in terms of greater participation and enrolment in Higher Education. As a result of these efforts, the statistics reveal that India's Higher Education System is the third largest in the world, next to United States and China. However, when we are aiming and proposing plans for higher education, then the concern is not merely on enrolment and retention, as there are other grave issues to be addressed, such as, the issue of quality, equity, access, and employability. These are the concerns common to both school education and higher education alike as envisaged by the National Policy on Education, 2016. Both, the meaning and the purpose of education is communicated through the pedagogy that is adopted by the teacher in the classroom. The pedagogy is one such overarching element in the whole education process that supports and facilitates not only a conceptual or cognitive growth of the individual learners rather has many implicit facets, such as the development of core values and value system, realisation and comprehension of constitutional ideals, life skills, assuming active citizenship roles, responsibility sharing, sustainable living, character building, etc. that add quality to the education system. Pedagogies adopted in higher education are much more complex and multifaceted as compared to any other level of education, owing to the increasing complexity of the subject matter, as well as higher levels of learning and greater autonomy of teachers.

A concept that is seen to be evolving in contemporary researches in the field of Teacher Education is the need for Pedagogy of Teacher Education. It is based on the premise that the teaching of 'teaching' requires specialised skills, knowledge and abilities that have to be developed and refined by teacher educators as they become more 'expert' at teaching about teaching. Teaching about teaching is, thus, different and distinct from teaching per se. This calls for the need of education of those who teach teachers, i.e. the teacher educators. Taking the argument further, these teacher educators are an integral part of higher education. Then, can the matter of education of teachers of higher education be left unattended? Present day researches compel us to seriously address this question and discuss its ramifications.

Therefore, recognising this fact and dwelling deeper into the understanding of pedagogy at higher education, the present paper underscores this very idea and concept to foster quality education.

## 2. AIMS OF UNIVERSITY EDUCATION AND STATUS OF HIGHER EDUCATION IN INDIA

It is often said that a University is one that is known for its high academic standards and outstanding contribution to teaching, research, innovation and nation building. It has to gear itself to meet the emerging challenges of the world and the demand of the society in which it is situated. Universities, all over, aspire to achieve excellence in teaching, research and engagement. They are expected to be creators and repositories of new, positive ideas that promote openness of mind. In contemporary times, inculcating values of empathy, ethics, respect for diversity, freedom with responsibility, creativity, humaneness, also become the basic foundation for any University.

Looking at history, it is seen that the Radhakrishnan Commission for higher education also called as the University Education Commission (1948-49) had laid down the aims of University Education or higher education in India. Besides developing the intellect and cognition of the young learners, it asserted that higher education should aim at the development of an integrated personality, where the head, heart and hand are given equal importance. This means that true education should foster training for a profession or avocation alongside the development of the emotional or affective side of the individual and inculcation of a value system. All knowledge should be interconnected and give a synoptic and coherent view of any phenomenon at hand. Knowledge should lead toward self-development and self-identification. An education system, besides developing skills among the individuals, should also strive toward preparing them for the social order of this country, as only then can the individuals actually partake in the national development, as also envisioned by John Dewey (1900) and Mahatma Gandhi (1937). Teaching cannot be a mere transmission of facts or knowledge within the classroom; rather it has to be viewed as a nurturance of the inherent talent and abilities of a diverse group of learners. A teacher should be able to identify the hidden talent and orientation of the learners towards reflective, artistic and practical pursuits, and accordingly design her pedagogy.

With the coming of the University Education Commission, there was a spurt in the number of higher education institutions in the country, such as opening of new colleges, Uni-

versities, technical and vocational education institutions, etc. The number of Universities increased 34 times from 20 in 1950 to 677 in 2014. The sector boasts of 45 Central Universities of which 40 are under the purview of Ministry of Human Resource Development, 318 State Universities, 185 State Private universities, 129 Deemed to be Universities, 51 Institutions of National Importance (established under Acts of Parliament) under MHRD (IITs - 16, NITs – 30 and IISERs – 5) and four Institutions (established under various State legislations). The number of colleges has also registered manifold increase of 74 times with just 500 in 1950 growing to 37,204, as on 31st March, 2013.

Some centrally sponsored schemes have also been launched for the promotion of higher education in the country. Rashtriya Uchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme (CSS), launched in 2013 that aims at providing strategic funding to eligible state higher educational institutions. The central funding (in the ratio of 60:40 for general category States, 90:10 for special category states and 100% for union territories) would be norm based and outcome dependent. The following are the salient objectives of RUSA:

- Improve the overall quality of state institutions by ensuring conformity to prescribed norms and standards and adopt accreditation as a mandatory quality assurance framework.
- Usher transformative reforms in the state higher education system by creating a facilitating institutional structure for planning and monitoring at the state level, promoting autonomy in State Universities and improving governance in institutions.
- Ensure reforms in the affiliation, academic and examination systems.
- Ensure adequate availability of quality faculty in all higher educational institutions and ensure capacity building at all levels of employment.
- Create an enabling atmosphere in the higher educational institutions to devote themselves to research and innovations.
- Expand the institutional base by creating additional capacity in existing institutions and establishing new institutions, in order to achieve enrolment targets.
- Correct regional imbalances in access to higher education by setting up institutions in unserved & underserved areas.
- Improve equity in higher education by providing adequate opportunities of higher education to SC/STs and socially and educationally backward classes; promote inclusion of women, minorities, and differently abled persons.

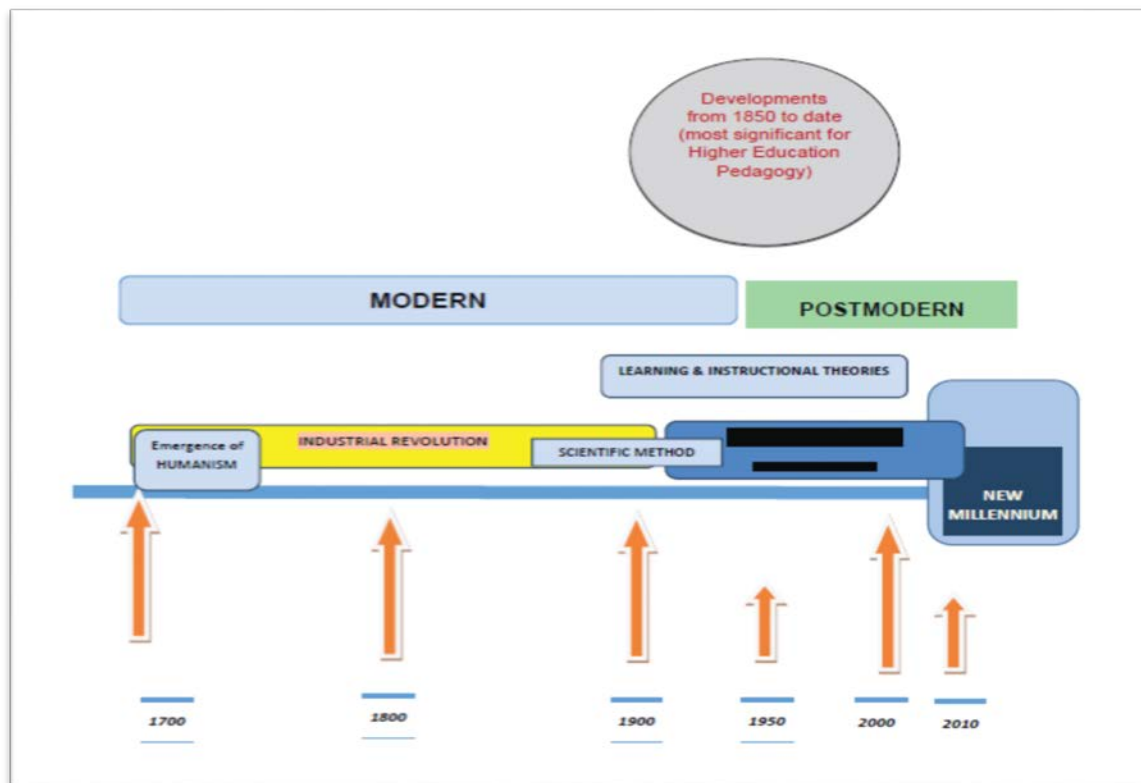
Thus, the country is striving hard towards the achievement of the targets for universal enrolment and quality in higher education by setting up new institutions and allocation of funds. However, this alone is not sufficient to bring about quality in higher education because mere training in skills and attainment of degrees is not the ideal behind higher education, as envisaged in the aims of the University Education Commission. A deeper engagement with the components of higher education, including its content, pedagogy, utility and assessment is required. Beginning with the question of pedagogy, what the present understanding of the term is and how it can address the issue of quality in higher education seems to be the most pertinent question. An attempt is made to seek answers to this question in the present paper.

### 3. EVOLUTION OF THE CONCEPT OF PEDAGOGY IN HIGHER EDUCATION

Pedagogy is referred to both as a science and an art of teaching, as enunciated by a number of educational philosophers, such as Kant (1724-1804) and Hegel (1770-1831). Both Kant and Hegel added a higher dimension to the understanding of 'pedagogy' per se. It was earlier understood to be within discipline-specific boundaries, but was not viewed from the perspective of moral development. Kant stressed a lot on institutions of education and their organizers as harbingers of moral and character development of individuals towards a meaningful living and responsible citizenry. In his view, Pedagogy should be such that it promotes the development of the natural aptitudes inherent in human nature. Kant relates pedagogy to its emancipatory role by way of critical philosophy which ascribes to the cultivation of reason, which should be mastered by those who are to teach. This particular notion of Kant coincides with the critical pedagogy of the neo-Marxists and post-Marxists.

Pedagogy is an ever evolving concept and has undergone many paradigm shifts since ancient times, the Vedic period and in the present day conception of the term. Educational practices in the ancient period (610 B.C. – 1285 A.D.) mostly comprised of moral instruction, reading and oral learning through repetition. However, Plato's academy (founded in 387BC) encouraged exploratory learning processes, reasoning and questioning. The Medieval period was marked by the influence of the Church over the lives of the people and even the system of education. It was influenced by Aristotelian dialectical thinking and syllogistic reasoning. The early modern age was marked by the rise of the middle class (artisans, merchants, etc.) and bolstered the literacy levels. Liberal studies and non-theological arts subjects gained prominence during this period of 15<sup>th</sup> century.

The mid-late 18<sup>th</sup> century is considered to be the late modern period marked by many social, political and economic changes such as capitalism, industrialisation, nation states, science as well as heightened European interests in the rest of the world. The importance of reason, scientific method, positivism and knowledge (Scientific knowledge) particularly gained prominence in attaining human freedom and happiness. The development of Pedagogy since the Modern and late Modern periods may be explained as follows:



**Figure I: Development of Pedagogical Theory and Practice- since late modern and post-modern periods (Source: Raman, 2016)**

Of significance in this period is also the writing of Newman (1999) who wrote on the idea of a University. He emphasized training of the mind, and his writings bring out the place for Lecture as a pedagogy in Higher Education. He held that the primary end of education was not the acquisition of useful information or skills needed for a particular occupation in life, but cultivation of the mind. The special fruit of University Education, as he saw it, was to produce what he called, 'the philosophical habit of mind'. Newman was troubled by the increasing compartmentalisation of education, because he believed in a very broad conception of the word 'Education'. According to him, whenever a group of students sit down to eat together, their conversation is likely to act as a sort of Lecture from one to another. Newman stressed

that the essence of University lies in teaching, not merely research, and that a combination of lectures, small group or even individual teaching, is needed to promote intellectual culture and the training of the mind.

The post-modern period was basically a critique of the methods of modernism, and a singular idea of progress and development. It laid emphasis on the role of multiple pathways, diversity, difference and the partiality of all knowledge (Gilbert, 2008).

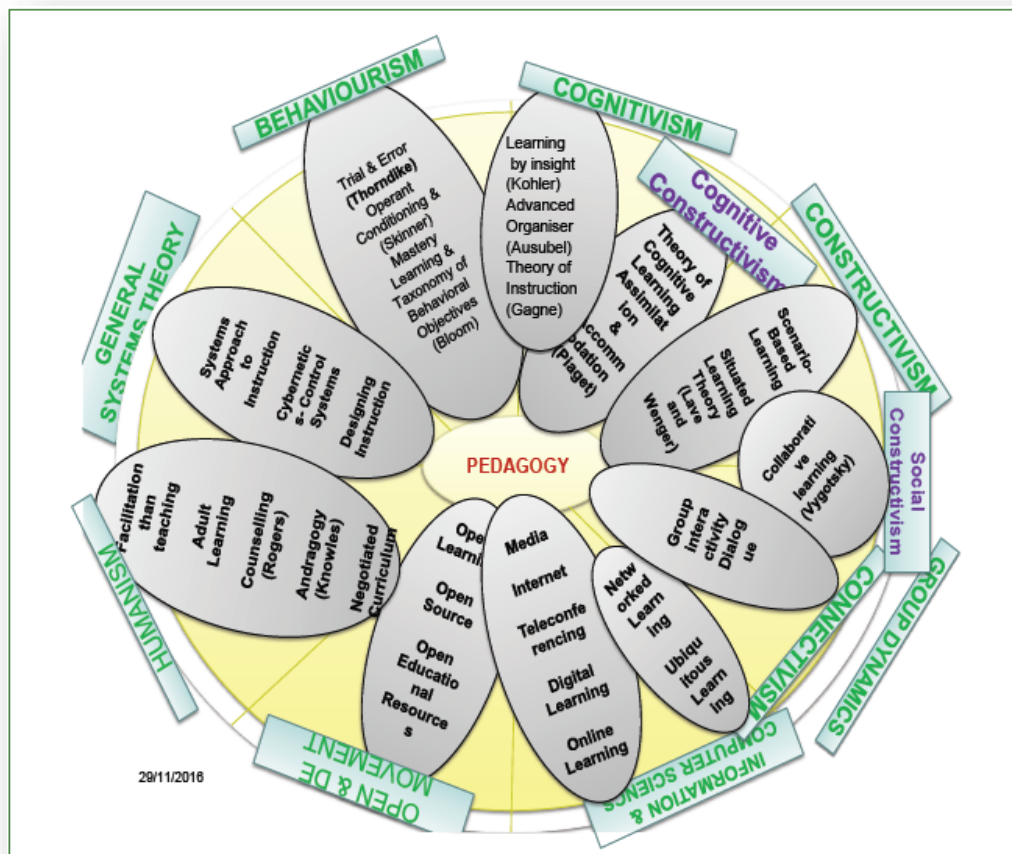
Freire (1972) vied for a humanistic pedagogy that takes into account the conditions the oppressed (students) have been subjected to by establishing a permanent relationship of dialogue between the oppressor and the oppressed. Freire also rejected the 'Banking Concept' of education, wherein the students are treated merely as recipients, or vessels in which knowledge given by the teacher can be stored as it is without any modification or critique. This kind of an approach is dehumanizing as it subjugates the inherent consciousness of the students as also suppresses their creativity. In Freirean terms, such a person would become an 'adapted' man (p.50) as he is able to fit in the environment that has been created by the oppressor without any resistance. One pedagogical intervention that was highly advocated by Freire, and is also said to be the foundation stone for a libertarian education is the 'problem-posing approach' (p.52), thus connecting men and women with the real-life problems and searching for their solutions by making use of their cognitive abilities and reincarnating their consciousness.

Michael Apple in his *Democratic Schools- Lessons from the Chalk Face* (Apple & Beane, 2006) discussed about the democratic view in education which is not just rhetoric but a way of life, it is much more than mere participation in the class-room conversation. It is an intelligent and reflective appraisal of issues and problems. In order to achieve this goal, the curriculum also needs a revamp so as to provide opportunities to explore and resolve rather than mere rote memorization of facts and information. The curriculum can be called as truly democratic if it enables young learners in decision-making and enterprising skills and gives them the freedom to construct their own knowledge as well as critique the present knowledge content based on valid reasoning and evidences.

Giroux in his work *On Critical Pedagogy* (2011) stated that a *context-specific pedagogy* relates to the students' environment, culture, community and resources. There is a complete rejection of the traditional methods of teaching and pedagogy that denigrate the value of justice,

social relations and ethics in the writings of Giroux. Pedagogy has largely been reduced to a ‘culture of reproduction’ and a transmission of knowledge. A critical pedagogy as envisaged by Giroux takes into account a sensitization toward the suffering of others by not just bringing the varied experiences into class room life but enabling the learners to also be critical agents who are responsible for the moral or political conflicts of their time.

On the other hand, researches in the area of cognitive psychology also had a major bearing on pedagogy and resulted in marked changes in its approach and understanding, from Behaviourism (Edward Thorndike’s Law of Effect & Skinner’s Operant Conditioning) in the late 19<sup>th</sup> century leading to cognitive revolution (a critique of Behaviourism with the ideas of Noam Chomsky, Jean Piaget, Vygotsky and Brunner).



**Figure II: Impact of theories & schools of thought from physical and behavioural sciences on pedagogy (Source: Raman (2016))**



Further it is seen that, the twentieth and twenty first centuries evidenced two very significant developments in the field of instruction in higher education, such as:

- The advent of the Open Education Movement
- The integration of Information and Communication Technologies.

Thus, it may be asserted that pedagogy is a complex construct and takes into account many social, contextual, cognitive and developmental factors. It is not only concerned with building up of the concept in the minds of the learners but also lends itself to foster a critical understanding in the same in the light of the contemporary scenario.

#### 4. PEDAGOGICAL CONTENT KNOWLEDGE

Pedagogy refers to the art and science of teaching which is 'empty' without an appropriate content. In a way, it may be said that content is the soul of pedagogy and provides it substance and character. They should not be divorced from each other, as it is the content that decides the appropriate pedagogy to create a seamless blend of activities that foster a deepened understanding of the subject matter.

Lee Shulman (1986) in his paper, *Those who understand: Knowledge growth in teaching* coined the term Pedagogical Content Knowledge (PCK) as it refers to the different facets of a teacher's knowledge base. PCK includes the most regularly taught topics in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, demonstrations, examples, explanations, and ways of representing and formulating the subject that makes it comprehensible to others. PCK can also be understood in terms of what makes the learning of specific topics easy or difficult; the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons. Barnett & Hodson (2001) developed a newer model for defining teachers' knowledge and termed it as 'Pedagogical Context Knowledge' that derives its basis in the Shulman's concept about Pedagogical Content Knowledge (PCK) that encompasses it as well. The model employs ways of ascertaining teachers' knowledge and situates them in different contexts such as the class room, the teachers' own belief systems, value structures, language culture, etc. and this list can be non-ending. The study tries to bring out the fact that all such factors are bound to influence the teaching and knowledge repertoire of a teacher, and as such teaching is not a straightforward task. A real teacher is that who tries to bring out all such factors into one's teaching and links it with the present context instead of practicing

the age old conventional approaches as dictated by certain documents and texts. Gudmundsdottir (1990) earlier proved that teachers' own value systems put a great impact upon their way of choosing the content specific teaching strategies, way of using the textbook as well as perceptions about teachers' learning needs and difficulties. This was due to the fear that the inclusion of teachers' own personal values in teaching would subjugate the content for teaching and give it a subjective inclination. That is perhaps the reason why researchers have always separated the two, values and PCK. But, in reality teaching cannot be separated from values as they are very much integral to the processes of teaching. For instance, methods of evaluation, assessment in education, discipline specific value orientation, such as scientific temper, falsifiability of scientific theories, care for environment and all living beings, conservation of natural resources and preservation of wildlife, etc are the values that can be inculcated naturally by studying different subjects.

Zembylas (2007) emphasised upon the role of teachers' emotional knowledge or 'emotional ecology' as it enables them in connecting with the subject matter, the curriculum, the students and the society/context at large. There occur mainly three planes on which emotional knowledge of the teacher influences her teaching: Individual (in connecting with subject matter, attitudes & beliefs about learning & teaching, educational vision and philosophy, emotional self-awareness); Relational (affiliations with students, students' own emotional experiences, caring, empathy, classroom emotional climate, knowledge of students' emotions, social-emotional interactions) and Socio-political (emotional knowledge of the institutional/cultural context, power relations, emotional understanding of curricular deliberations, emotional politics of pedagogies and subject matter discourses). Such an understanding also helps in fostering the affective side of learning and values in education.

#### *4.1 APPROACHES THAT FOSTER INNOVATION AND EXCELLENCE IN TEACHING*

In order to adapt to the changing environmental, demographic, economic, cultural, and socio-political conditions, the education system cannot remain a static domain, rather, higher education has to be responsive enough for the influx of changes that are brought about by all these factors. It is education that can help in building a society that is sufficiently cognisant, sensitive and critical minded for approaching newer issues and problems. In fact, education can provide them with the requisite tools, skills and belief systems. For these to happen, the higher education system and its practices have to invent and reinvent strategies that foster innovation and

excellence among the teachers as well as learners so as to cope with the impending changes and devise solutions.

The study conducted by Kagan and Tippins (1991) revealed the impact of teachers' beliefs on the structure and content of their teaching. The sample for the study included some pre-service as well as some in-service teachers and their written case narratives of the classroom experiences. Some patterns could be observed in these narratives when both, the structure, and the content were viewed and analysed simultaneously. The broad themes that emerged from these narratives were: the internal conflict provoked by a problem, a sense of history and ethical concerns that also comprise the basic essence of becoming a teacher.

Another study, conducted by Silver (1999) reviewed and discussed the nature of innovation in higher education teaching and learning. It traced a shift from innovation generated predominantly at the local form to innovation largely directed by the higher education institutions. It argues that the study of innovation demands that questions be asked about the nature and ownership of the innovation, the context and whose interests the innovation serves. The broad categories or typologies under which these innovations in education can be placed include- Individual and group innovations, Disciplinary initiatives, Innovations responding to the educational media, Curriculum-prompted innovation, Institutional initiatives, Systemic initiatives, etc. The pertinent questions that need to be asked before hoisting an innovation should be, in whose interests, and in what policy contexts is the innovation for. There are different ways to bring about this innovation into teaching learning so as to foster quality education and conceptual growth of the learners.

### *1. Issue-Based Teaching and an Interdisciplinary Approach*

Teaching learning should not be subject or discipline-centered as it limits the scope of understanding and application of the concept studied. This does not in any way mean dilution of the academic rigour of a particular subject or discipline but only increasing its disciplinary breadth. For instance, within Science teaching and learning, the Socio-Scientific Issues (SSI) and the ethical issues provide avenues where integration of disciplines of science, social science, humanities and language is sought. Oulton (2004) pointed out that while dealing with controversial issues, multiple viewpoints surrounding these issues need to be regarded well; different ways of interpretation occur depending on different worldviews, values, etc; and an issue can only be resolved once more information becomes available.

The importance of addressing ethical issues in, for instance, Biological Sciences cannot be overemphasised and many researches have delineated their role in enhancing scientific learning and scientific literacy amongst students (Cross & Price, 1996; Pedretti, 2003; D. Zeidler, Sadler, Simmons & Howes, 2005). The curriculum of science needs to be made more flexible so as to incorporate these issues with their true intent and spirit. Case-based approaches to teaching of moral and ethical issues have also been advocated for basing the scientific concepts into real-life events and happenings (Allchin, 2013). A discussion can be generated in the classroom amongst the students about the possible impact of a particular research or divulsion of an inherent fallacy or myth in the arguments generated for finding out the reasons and logistics behind it. Sometimes the issue is debatable on moral or ethical grounds as and when all the arguments appear to be equally convincing on grounds of human health, safety, wellbeing and growth and development of human society. Addressing controversial and ethical issues in the classroom builds a multi-disciplinary approach about the topic or concept at hand.

## *2. Addressing Cultural Diversity in classroom teaching learning*

Research has indicated that academic and social engagement has indirect effects on student persistence through institutional commitment, the degree to which students were committed to staying at a particular school (Pascarella & Terenzini, 2005). Harper and Quaye (2005) emphasized a dual role wherein the students have a responsibility to be engaged in meaningful and mindful activities, while educators are responsible for providing such activities and experiences that engage them. Educators may attempt to increase cognitive engagement by applying active learning strategies in their courses. For example, Goldberg and Ingram (2001) compared student engagement and performance in two sections of a botany course. The active learning section was designed as a combination of mini lectures and activities, such as concept map-making, problem solving, and categorization tasks. Students in the active learning section performed better on the final exam and also reported being more cognitively engaged. Mazur and colleagues developed a Peer Instruction strategy, a method to engage students actively in their lecture classes. Peer Instruction is a collaborative learning method which involves asking conceptual questions throughout the class period which are answered by the students individually first and then engage in discussions with classmates who have solved the problem in different ways to come up with revised and improved solutions (Crouch & Mazur, 2001; Fagen, Crouch, & Mazur, 2002; Mazur, 2009). Jakee (2011) described providing modified lecture notes to

students that did not include the conceptual details or conclusions from the topic taught. Students filled in the important details while listening to the lecture. This promoted more active learning and lecture attendance. Fatokun and Fatokun (2013) adopted problem-based learning, which is another active learning strategy, in their chemistry and mathematics classes. This also involved integration of the two disciplines for solving the problem and interpreting the results. Thus, the instructor's attempt to design various kinds of constructive engagements for the culturally diverse learners can greatly influence their retention and better learning outcomes.

### *3. Adopting Critical Pedagogy for a Libertarian Education*

Institutions of learning cannot be politically and ethically neutral and are being influenced by the ideologies of the people who constitute them, which implies that critical teachers need to know not only the subject matter of their respective curricular areas, but also the socio-political structure of the organisation. They must be aware about a wide range of experiences that a learner could have gone through one's cultural allegiance, media, music, movies, internet, youth subcultures, power equations and identity formation and the way it operates especially in complex processes of racism, gender/class bias and so on (Kincheloe, 2005). This would certainly transform education into a more concerted and emotional enterprise rather than producing only technical intelligentsia in dearth of care, compassion and concern for fellow human beings. Critical pedagogy also deals with the contestation of the shared beliefs and knowledge structures, rather than presenting them with a narrow simplistic perspective before students, they need to be argued and debated such that the inherent complexity and multiplicity of these knowledge produced by scholars in different fields gets highlighted (ibid.). Kincheloe writes, *"An institution that would not engage students in wrestling with the moral responsibilities accompanying acquaintance with such knowledge is both intellectually and ethically impaired."* This means that learners must be predisposed to such ethical conundrums and dimensions of knowledge so as to develop their critical thinking abilities with the laid down norms of a society and also make decisions that promote happiness, justice and equality. There can be spaces created within the curriculum of higher education, that promote such an understanding of the subject matter, such as case studies, field visits, industry visits, projects, research study, etc.

### *4. Filling the gaps in Higher Education- Blending Technology*

ICT (or Information and Communication Technology) has a major role to play in realising the objectives of Higher Education. ICT and Blended Learning can help in providing equal opportunities for higher education including Technical and Vocational Education and Training (TVET) which is also one of the sustainable development goals (SDG 4),

*“Ensure inclusive and equitable quality education and lifelong learning opportunities for all, and to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship” by 2030.*

According to UNESCO’s vision for information and communication technologies (ICTs) in education, these technologies have the potential to build a world without boundaries and to create inclusive knowledge societies. The organisation has been promoting the use of ICTs both in general and as a way of transforming Technical and Vocational Education and Training (TVET) (UNESCO, 2011). ICT has a crucial role to play in expanding access, improving quality and enhancing relevance of TVET through further exploring the potential of technology, including multimedia, online learning, mobile technology, Massive Open Online Courses (MOOCs) and open educational resources (OER) (OEB News Portal, 2016). The various ICT-Based applications in teaching learning include distance education, e-learning, on-line learning, mobile learning, use of Open Educational Resources (OERs), Massive Open On-line Courses (MOOCs), Digital Repositories, Simulations, games, etc. Increasing number of teachers in higher education are using both face-to-face and on-line methods of teaching learning to support as well as complement their pedagogies.

E-portfolio is another pedagogic innovation through which students use authentic evidence to document their achievements and skills, and for many other related purposes and uses. The potential of e-Portfolios to support and benefit learning and teaching has been increasingly recognized and understood (Jafari & Kaufman, 2006). On a digital site, e-Portfolios reflect students’ problem solving, decision-making, reflection, organization, curation, and critical thinking skills. For educators, they provide forms of teaching delivery, course management, personal development and assessment. Their use in specific subject areas at university level, particularly in health care studies (Garrett & Jackson, 2006) and teacher education (Sherry & Bartlett, 2005), are well documented.

Research indicates that when ICT is effectively integrated into a high-quality environment, it can help deepen students’ content knowledge, engage them in constructing their own knowledge and support the development of complex thinking skills (Kozma & McGhee, 2003). Every technology has its specific affordances, affordability and constraints that influence what teachers do with it in classrooms. Understanding these dynamics is not so straightforward and

may require rethinking teacher education and teacher professional development (Mishra, Koehler & Cain, 2013).

Teachers must have knowledge of how to structure their lessons, select appropriate technological resources, integrate technological resources with content matter, steer the planned activities, and support the learning process. Many experienced teachers with good content knowledge may not be able to successfully integrate ICT tools in their pedagogy. On the other hand, good expertise in ICTs may not guarantee an effective use of technology in teaching of a particular subject. Similarly there could be those teachers who would have a sound content knowledge of their own subject and are aware of latest technologies available, but might not be knowing how to utilize the potential of available technology in her/his subject learning. Thus, an approach is needed that treats teaching as an interaction between what teachers know and how they apply their knowledge in the unique circumstances or contexts within their classrooms (Mishra & Koehler, 2006).

The TPACK (Technological Pedagogical and Content Knowledge) framework that was developed by Mishra & Koehler can be seen as an extension of Shulman's construct of PCK (Shulman, 1986) to explain how teachers' understanding of educational technologies and PCK interact with one another to produce effective teaching with technology. TPACK represents an understanding based on the complex interactions among content knowledge (CK), pedagogical knowledge (PK) and technological knowledge (TK) that explains meaningful integration of technology in the classroom.

According to Mishra, Koehler & Cain (2013), TPACK is the basis of effective teaching with technology, requiring an understanding of the representation of concepts using technologies, pedagogical techniques that use technologies in constructive ways to teach content, knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face, knowledge of students' prior knowledge and theories of epistemology, and knowledge of how technologies can be used to build on existing knowledge to develop new epistemologies or strengthen old ones. (p.16)

#### *5. Teaching about Teaching- Unravelling the inherent fallacy*

When one talks about pedagogies of Higher Education, then the matter of preparing new teachers cannot be left unattended to, as in this case, the focus merely on the content will not lead to

effective teaching learning practices. The present paper has already addressed the nature of pedagogy and its diverse contours, but in the context of teacher education, which is a distinct area of specialization and deliberation, the pedagogies discussed thus far may not suffice. This is because, here, the concerns are more grave and relate to educating prospective teachers about teaching. As Loughran (2006) mentions in his research work titled, “Developing a Pedagogy of Teacher Education”, teaching about teaching is a highly complex task. And, as he states, it is often a neglected sphere of endeavor in teacher education programmes, where pedagogy of teacher education is equated with modelling of the teaching skills and attitudes that is expected from the teacher interns. But, this is not sufficient, because what is needed at this level is an engagement with the nuances of teaching as a practice and profession, which includes pedagogical reasoning, uncertainties and dilemmas of practice. It also involves how teaching impacts learning, and how learning influences teaching. (ibid.). Thus, being a teacher educator, one needs to reflect upon the prevailing practices, conduct and encourage teacher interns to indulge in research activities so that they can initiate their own learning process based on their experiences.

The section above has delineated some approaches for fostering innovation in realising the aims of Higher Education. The vision of a University as propounded by the University Education Report (1962), aims at providing spaces where knowledge is constructed by the learners through active participation in the teaching learning process and taking up research activities. Universities should nurture academic freedom and serve as think tanks where problems are surmounted and new knowledge is generated. According to an Expert in the field of Education,

“University is a space where individual has a freedom to engage in intellectual activities, enjoys, is threat-free, and gives space to the learners in the overall development. I think one area where we Indians lack is communication skills; we may have good degrees, we may have a mastery over computer technology, which is because we get compartmentalised, many-a-times fluency in language is lacking. Therefore, there should be some literary activities that should be an on-going and continuous feature of any course in the form of co-curricular activities, such as theatre activities. These help to deal with one’s inhibitions and enables one to identify oneself. Such a space should be provided by the University. We should not be making book worms. So, the development of identity, confidence and the moral courage to take decisions should be the primary goal of University Education.”



Thus, the goals of University Education are multifaceted considering the present scenario, where one needs to embrace the changes and adapt or transform the Higher Education System and the pedagogies therein.

## 5. CONCLUSION

The present paper divulges the pertinent and emancipatory role played by the pedagogies in Higher Education. The paper has helped in addressing pressing issues related to subject-based pedagogies, pedagogies that cut across all the disciplinary areas and pedagogy of teacher education. The manner in which different pedagogies can be interwoven, interspersed and superseded has also been a concern of this paper. And the significance of Lecture as a pedagogy that is needed to promote intellectual culture and training of the mind can also not be undermined. It has been emphasised that content and pedagogy alone cannot lead to a comprehensive and holistic understanding of the subject matter, rather there has to be an implicit and seamless blend, which is referred to as Pedagogical Content Knowledge in the mind of the teacher. The ideas, beliefs and preconceptions of the teachers are as important as the knowledge about the content areas and these need to be taken into consideration for better teaching and learning outcomes. The goal of Higher Education pedagogies, unlike that of school education, is not just on attaining minimum literacy levels. It is on building among the learners, certain skills, attitudes, values and development of identity for creating their own niche in the society and to serve as active citizens of that society. In order to address these challenges, Higher Education needs to be linked with employability and skill generation. This will also help in enabling the individuals to become more independent and financially stable, which would ultimately contribute towards making India self-sufficient and self-reliant. At the same time, the need of the hour is to nurture certain values, ethics and attitudes among the citizens that help in building a cohesive society where cooperation, equality, humanity and empathy prevail as opposed to competition, hatred, envy and selfishness. Higher education and the institutions have to model such kind of ideals and environment, as institutions are the miniature societies and reflect the society at large. This can happen only when the pedagogies support and facilitate such growth and academic freedom. This was also envisaged by the University Education Commission to serve as a place where individuals are not bound by set knowledge structures and disciplines, but are free to explore and transgress the disciplinary boundaries to reach an authentic understanding. Thus, Pedagogy in Higher Education needs to be situated in this wider context.

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