

INCLUSIVE PEDAGOGY IN HIGHER EDUCATION

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Abstract

Concerns of equity are central to the expansion of higher education in India. The objective of the 12th Five Year Plan in the sphere of equity is to eliminate gender disparities and to significantly reduce urban-rural, inter-regional and inter-social group disparities. For the achievement of the goals of equity and inclusion in higher education system, a number of approaches, inter alia, building of capacity and improvement of infrastructure, proper implementation of reservation policy for students belonging to SC/ST/OBC and the disadvantaged, increasing the incentives offered to differently-abled students as well as those from the marginalised sections, strengthening measures to increase the achievement capacity of SC/ST students and those from marginalised sections, improving the quality of schooling are being adopted during the 12th FYP. The measures taken during 11th plan period or being taken during 12th plan period for attainment of the goal inclusiveness in Indian higher education system, as outlined above, emphasize more on access which of course is fundamental to this goal. The measures, however, do not envisage any pedagogical reforms as proposed clearly in National Curriculum Framework for School Education (2005) brought out by NCERT. This paper discusses as how to achieve inclusive growth in higher education sector through pedagogical reforms. Principles and operational aspects of a host of pedagogical models, derived from the latest learning theories/models and have immense potentials to engage all types of learners, particularly at higher education sector, including those from marginalised sections, in learning, e.g. experiential learning, problem posing, collaborative learning, critical pedagogy, culturally-situated/relevant/responsive pedagogy, concept mapping, cooperative learning, constructivist pedagogy, have been discussed in this paper.

Keywords: equity, inclusiveness, disadvantaged learners, pedagogy

Backdrop

Over the last two decades, the terms ‘inclusive’ and ‘inclusion’ have been used in educational contexts. In the school sector the term referred to the extent to which students with ‘special educational needs’ (DES, 1978) could be integrated into mainstream learning and teaching environments. Recently, many teachers and researchers have moved away from this narrow interpretation of inclusion as being concerned with only students with special needs. Alternative interpretations, such as that offered by Ainscow (1999), suggest that inclusive education should be concerned with ‘overcoming barriers to participation that may be experienced by any pupils’ (p.218). He defines it as a ‘process of increasing the participation of pupils in, and reducing their exclusion from, the cultures, curricula and communities of their local schools’. This notion of inclusion, he argues, ‘lays the foundations for an approach that could lead to the transformation of the system itself’ (p. 219). In other words, the learning environment should change, rather than the individual.

Inclusive pedagogy embraces a wide range of differences based on gender, ethnicity, socio-economic status etc. and explores their effects on individual learning. This broader view is now being used widely in the Indian higher education sector with reference to learners of all ages who come from

different social classes and ethnic backgrounds. It includes disabled students, students from different religious backgrounds, different cultural identities and sexual orientations.

Inclusive pedagogy in higher education refers to the ways in which instructional process, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all. It embraces a view of the individual and individual difference as the source of diversity that can enrich the lives and learning of others.

Enhancing Equity and Inclusion in Indian Higher Education: 12th Five Year Plan Strategies

Concerns of equity are central to the expansion of higher education in India. Historically, education in India had an elitist and upper caste-centred basis. Higher education which is at the apex of the educational ladder is even narrower at the top since fewer students from the marginalised sections and groups graduate into it, due to either non-enrolment or high drop-out rate at the school level, high cost of education including opportunity cost, and inherent social biases in the system. The objective of the 12th FYP in the sphere of equity is to eliminate gender disparities and to significantly reduce urban-rural, inter-regional and inter-social group disparities. Thus, the major emphasis of the 12th FYP is on promoting inclusiveness so as to accommodate more students from the marginalized sections into the ambit of higher education. For the achievement of the goals for equity and inclusion in higher education system the following approaches, *interalia*, are being adopted during the 12th FYP:

- Building of capacity and improvement of infrastructure which can attract and facilitate the retention of students from rural and backward areas as well as differently-abled and marginalised social groups.
- Providing for pro-active measures through proper implementation of reservation policy for students belonging to SC/ST/OBC and the disadvantaged.
- Increasing the incentives offered to differently-abled students as well as those from the marginalised sections.
- Strengthening measures to increase the achievement capacity of SC/ST students and those from marginalised sections.
- Improving the quality of schooling and retention of students from the marginalised sections through enhancing the performance of the schooling cycle.
- Monitoring of performance with respect to improving equity at the institutional level as well as higher (state and country) levels.

(University Grants Commission, 2011)

The measures taken during 11th plan period or being taken during 12th plan period for attainment of the goal inclusiveness in Indian higher education system, as outlined above, emphasize more on access which of course is fundamental to this goal. The measures, however, do not envisage any pedagogical reforms as proposed clearly in National Curriculum Framework for School Education (2005) brought out by NCERT. This paper discusses as how to achieve inclusive growth in higher education through pedagogical reforms.

Models of Learning

There are many different theories of how people learn. This section only deals with a few. The criterion for selection was that they were useful to those involved with more mature learners. In this section few of theories of learning, including, Behaviourism, Cognitivism, Constructivism, Multiple

Intelligences, Metacognition are presented with reference to their relevance to how more mature learners learn and implications for the way education should be structured for them.

Behaviourism

Behaviourism was the predominant school of thought in educational psychology in the first half of 20th century (from the 1930s until the mid 1970s). It defines learning as the changes that take place in the observable behaviour of a learner in terms of stimulus-response processes. Behaviourists were not interested in internal mental states, but concentrated their attention on what was observable and, therefore, external. According to this view, learning occurs when learner strengthens or weakens an association between a stimulus and a response. This view i.e. learning as response strengthening was based largely on the study of animal learning in artificial laboratory settings. The role of learner is to passively receive rewards and punishments, whereas the role of instructor is to administer rewards and punishments, drill-and-practice. The instructional designer role is to create environments where the learner repeatedly is cued to give a simple response, which is immediately followed by a feedback.

The relevance of behaviourism to educators of more mature learners lies in its application in changing frequently exhibited and yet unhelpful habits of thinking and acting. It is most often seen in the application of cognitive behavioural approaches to behaviour change where thinking and internal language become the focus for change.

Cognitivism

During the 50s, 60s and 70s, many psychologists became dissatisfied with the behaviourist approach due to its failure to incorporate mental events in the study of learning. Cognitivism, based largely on the study of human learning in artificial laboratory settings, viewed learning as knowledge acquisition. It is based on the idea that learning occurs when a learner places new information in long-term memory. The role of the learner is to passively acquire information, and the teacher's job is to present information, such as in textbooks and lectures. According to this view, information is a commodity that can be transmitted directly from teacher to learner. The instructional designer's role is to create environments in which the learner is exposed to large amount of information through textbooks, lectures and computer based multimedia programmes.

The major types of learning best explained by cognitivism include reasoning, problem solving, information processing and any process which requires the application of rules. This theory is very relevant to instructional design since the use of feedback to guide and support the learner to create accurate mental connections is a key component in the cognitive theory. Any instructional materials should be structured based on the learner's existing mental structures.

Constructivism

The latest catchword in educational circle is “constructivism”, applied both to learning theory and to epistemology – both to how people learn and to the nature of knowledge. The term refers to the idea that individuals, through their interaction with the environment, construct their own knowledge and meaning (Fosnot, 1996; Steffe and Gale, 1995). This metaphor of construction comes from the idea that humans are builders, shapers, and designers, who throughout history have created artifacts from pots to skyscrapers. All these tangible products were and are still being built through the process of selecting the materials, arranging or mixing the materials together, resulting in a whole that is greater than some of its parts (Spivey, 1997). However, as humans, we also create mental products or meanings as well as creating things. Mayer (1996) refers to this idea as the SOI model to highlight three crucial cognitive processes in constructivist learning: S for selecting relevant information, O for organizing incoming information, and I for integrating incoming information. Constructivism is the predominant school of thought in learning theory since the 90's. Learning is a personal endeavour. Knowledge is not received from outside, but rather constructed or interpreted by the learner.

Constructivists place a strong emphasis on the learner rather than the teacher. It is the learner who interacts with objects and events and thereby gains an understanding of the features held by such objects or events. In constructivist thinking, learning is also affected by the context and the beliefs and attitudes of the learner. The constructivist learning theory is based on the following four major assumptions

- Knowledge depends on past constructions.
- Constructions come through systems of assimilation and accommodation into our existing mental framework.
- Learning is an organic process of invention, not mechanical.
- Meaningful learning occurs through reflection and scaffolding of new knowledge upon existing framework of knowledge.

Multiple Intelligences

Over the past decade, multiple Intelligence theory has been a popular basis for reform efforts within education. It validates the belief that students represent a diversity of cognitive strengths and ways of learning, and they use diverse practices in response. Gardner has questioned the idea that intelligence is a single entity, that it results from a single factor, and that it can be measured simply via IQ tests. This theory of human intelligence, developed by Gardner, suggests there are at least seven ways that people have of perceiving and understanding the world. Gardner labels each of these ways a distinct "intelligence", in other words, a set of skills allowing individuals to find and resolve genuine problems they face. Gardner defines an "intelligence" as a group of abilities that: (i) is somewhat autonomous from other human capacities; (ii) has a core set of information-processing operations; (iii) has a distinct history in the stages of development we each pass through; and (iv) has plausible roots in evolutionary history.

While Gardner (1993) suggests his list of intelligences may not be exhaustive, he identifies the following seven:

- i. Logical-Mathematical intelligence
- ii. Musical intelligence
- iii. Spatial Intelligence
- iv. Bodily-Kinaesthetic intelligence
- v. Intrapersonal intelligence
- vi. Interpersonal intelligence
- vii. Verbal-Linguistic intelligence

(Gardner, 1993)

Metacognition

Metacognition is one of the latest theories in educational psychology. In fact we engage in Metacognitive activities every day. Metacognition enables us to be successful learners, and has been associated with intelligence (e.g., Borkowski, Carr, & Pressley, 1987). It refers to higher order thinking which involves active control over the cognitive processes engaged in learning. Activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are Metacognitive in nature.

Metacognition is often simply defined as "thinking about thinking" and it is a term most often associated with John Flavell. Flavell argued that metacognition refers to both the knowledge that a

learner has about how she or he learns best, and the regulation of one's own learning experiences. Metacognitive knowledge can refer to learners' recognition of their general learning processes, their recognition of the demands of a particular task, as well as their recognition of which strategies are most appropriate during any given task. Metacognitive regulation, on the other hand, refers to being able to recognise when one has successfully completed a task, and, crucially, how it was completed.

Metacognition often occurs when learners become aware that their cognition or ability to comprehend something has failed them, e.g. not being able to understand some textual information or a mathematical formula. The metacognitive act, then, would be interpreted as the learner's realisation, firstly, that there are limitations on their knowledge to complete a task, and, secondly, that they possess strategies for rectifying that situation. One of the reasons for seeing metacognition as increasingly important nearly 30 years after it was first coined in education is because we are approaching implementation of the new agenda of personalisation. The personalised approach to education will see learners actively involved in planning and managing their own learning goals. The ability to reflect on what and how one has learned, and then to implement plans for self-development will be critical to learners' personal success. Teachers need to be able to promote the young people in their care to become more reflective and self-evaluative, and to be able to recognise that when learning gets tough, they have strategies for tackling it.

Metacognitive skills and knowledge represent an asset for older learners. This is not to underestimate the capacity of young children to reflect upon their own language and skills, but for more mature learners metacognitive strategies form a readily available approach to learning. They are better able to monitor their own knowledge and are acutely aware of their learning strengths and weaknesses. Educators should assist older learners to apply the metacognitive strategies they already possess with greater confidence and provide them with techniques and methods to become more effective self-managing learners.

Teaching and Learning Strategies

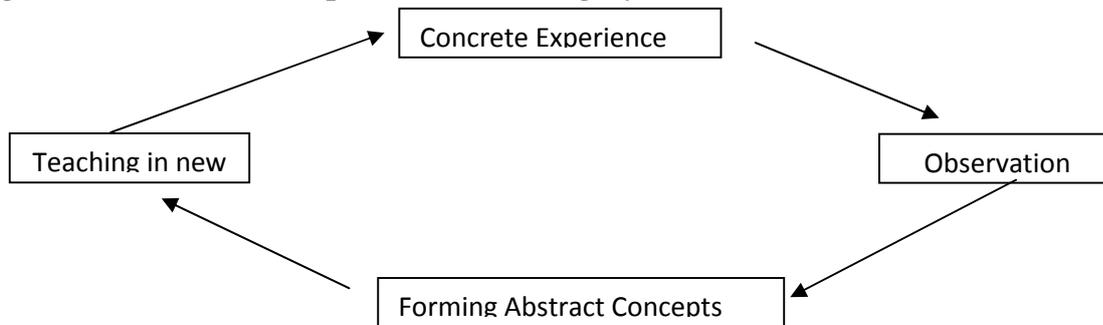
In education, teachers facilitate student learning through the use of appropriate pedagogy. The different ways to teach are often referred to as the teacher's pedagogy. When deciding what teaching method to use, a teacher will need to consider students' background knowledge, environment, and their learning goals as well as curricula. It is a common misconception at the tertiary level that knowledge of a subject is all that is required to be a good teacher; that the students should be willing and able to extract from what teacher says regardless of how it is delivered. This might be true at the higher education level, but elsewhere it is definitely untrue, it is especially untrue at the undergraduate level. A good teacher/lecturer helps students to understand the material and to understand what it means. This can be achieved by finding innovative and creative ways to make complicated ideas understandable to the students, and to fit new ideas into the context available to the student. There is a saying, "Give me a fish and I eat for a day, teach me to fish and I eat for a lifetime." This is the philosophy of a good teacher. Give your students an answer and they can solve one problem, but show students the techniques needed to find the answer for themselves and they can become self-sufficient in the field. In the following sections a range of techniques will be discussed to help students become their own teachers.

Experiential Learning

John Dewey was the most famous proponent of experiential learning, about which he has highlighted in his book *Experience and Education*, first published in 1938. Dewey, in that book has heavily criticized public education and has pointed out that the authoritarian, strict, pre-ordained knowledge approach of modern traditional education was too concerned with delivering knowledge and not enough with understanding students' actual experiences.

The authors of experiential learning such as Mezirow, Freire, Kolb and others believed that the way we process experience are central to any conception of learning. They spoke of learning as a cycle that begins with experience, continues with reflection and later leads to action (Sharma, 2006). Experiential learning is not just ‘field work’ which means connecting learning to real life situation. On the contrary, it is a theory that defines the cognitive processes of learning and asserts the importance of critical reflection in learning. Kolb, one of the exponents of experiential learning, developed a cyclic model of experiential learning involving four steps, viz. concrete experience, observation and reflection, formation of abstract concepts, and testing in new situations.

Fig 1: Kolb’s Model of Experiential Learning Cycle



According to Kolb and Fry (1975) the learning cycle can begin at any one of the four points mentioned in the model of experiential learning cycle. In reality, however, the process of learning begins with a person carrying out a particular action and then seeing the effect of that action in the situation.

Experiential learning serves as an umbrella for linking these diverse practices in a coherent whole. Similarly, experiential learning is also closely linked to a number of other educational theories, including progressive education, critical pedagogy, feminist-based education, and constructivism. The development of experiential learning as a philosophy is intertwined with the development of these other educational theories. The key idea in experiential learning involves engaging students in active roles for the purpose of learning. Students participate in a real activity with real consequences for the purpose of meeting learning objectives. Experiential learning uses various tools like games, simulations, role-plays and stories in classrooms.

Problem Posing

Problem posing lies at the heart of the survey method developed by Paulo Friere while working in adult literacy programmes in Brazil. It is a systematic approach to empowering adult learners to control their own learning. To problematise a term, a text, an opinion, or personal perspective is to construct them as challenges that encourage learners to attempt to transform their circumstances or views. Problematisation is based on a dialogue or process that takes the common knowledge about a situation and transforms that knowledge into a problem. This allows the learners to adopt new points of view, to reflect and to move towards action to emerge. Central to the method is that it should lead to planning and action which changes the learners’ context and circumstances. Rather than staying with the accepted ‘wisdom’ about what is going on, the learner evolves an alternative viewpoint on the issue. One way to problematise a statement is to get the learner to ask some simple questions about the statements. For example, with regard to the statement: ‘The civil war in Iraq is escalating.’ It is possible to ask who is making this statement or on whose behalf is it being made. Other interesting questions include why is the statement being made and why now. Finally, who gets to benefit from the statement and who is harmed? This approach helps learners question and challenge their beliefs and achieve critical consciousness. The educator works to lead students to question ideologies and

practices that they consider repressive and encourages collective and individual responses to the actual conditions of their own lives. The group is at the centre of the process to change the nature of the society.

Problem Solving

The problem solving method assumes that students are active participants in the construction of new knowledge rather than passive receivers of knowledge. The problem solving strategies give students opportunities to think rationally. The higher levels of learning, e.g. reasoning, critical reflection, imagination, which involve transfer and application of knowledge and understanding to new situations, can be achieved through problem solving. Learning through problem solving is more meaningful, permanent and transferable compared to learning through traditional expository methods.

The problem solving method has several advantages over expository methods. The active participation and personal involvement of the learners in the process of teaching and learning motivate them to learn and contribute to the feeling of self-worth. The process of problem solving includes the major steps of scientific method such as:

- Recognizing the problem
- Interpreting, defining and delimiting the problem.
- Formulating hypothesis
- Collecting relevant data/conducting experiments
- Organizing and evaluating the data
- Arriving at conclusions
- Verifying conclusions and generalization

Through problem solving approach students develop thinking, observational, and enquiry skills.

Concept Mapping

Concept mapping is a technique of graphically representing concepts and their hierarchical interrelationships in a meaningful network. Concept maps have their origin in the learning environment called constructivism. The use of concept maps as a teaching strategy was first developed by J.D.Novak of Cornell University in the early 1980s. It was derived from Ausubels learning theory which places central emphasis on the students prior knowledge in subsequent meaningful learning. Concept mapping can be used both as an instructional tool and as an evaluation tool. As an instructional tool it:

- Helps to organize and represent knowledge in a subject ;
- Facilitates information processing ;
- Facilitates deep thinking and making thinking process explicit;
- Visualizes the cognitive structures of knowledge, links and determines the relationships between textual and visual information;
- Enhances mastery and retention of facts ;and
- Facilitates meaningful learning.

Concept mapping can be used in integration with the conventional methods like lecture, discussion, teaching, and brainstorming etc. As an evaluation /diagnostic tool, concept mapping can be used to recognize the following:

- i. Inadequate understanding of abstract concepts;
- ii. Inability to relate concepts;
- iii. Difficulty in ordering the various concepts learnt in a unit/lesson; and
- iv. Lack of understanding to recognize weak links or gaps in their knowledge.

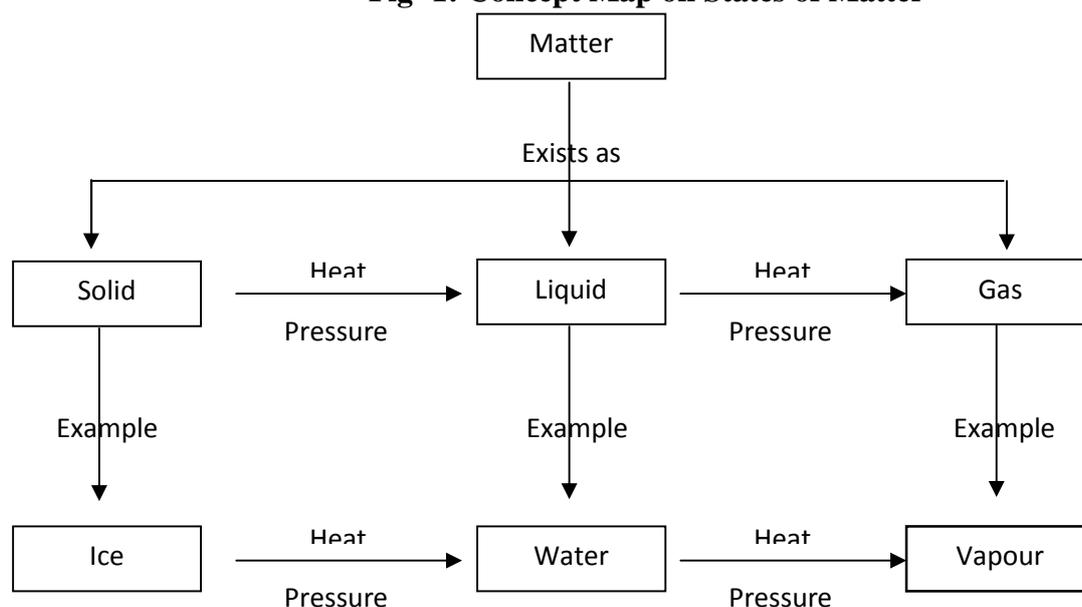
Generally, the concept mapping is a state of knowledge representation and consists of extracting concepts and their relationships from a text or other content, plotting these concepts on paper or a computer screen, and finally, naming the relationships. In concept mapping, relationship is named and written between concepts. There are three major types of concept maps, viz. (i) spider maps, (ii) chain maps, and (iii) hierarchy maps. Each of these represents a different type of structure of content.

Steps involved in Concept Mapping

The steps followed in constructing the concept maps are as follows:

- (i) Selecting of the instructional content
- (ii) Highlighting the concepts
- (iii) Arranging the concepts
- (iv) Determining relationships
- (v) Plotting the relationships
- (vi) Revising the concept map

Fig -1: Concept Map on States of Matter



Service-Learning

Service-learning is an exciting new development in education. Quite popular now in the United States, service-learning is an active approach to education which provides students with exposure to the world outside the campus walls throughout their learning experience, by presenting them not just with real world problems, but with real world clients with whom they must work. Students typically work with voluntary or non-profit organisations, which have requirements for some project, but lack either the funding or the expertise to carry out the project alone. The benefits of this approach to the student are obvious. The level of responsibility given to the student and the scope within which they

are permitted to operate are typically much greater in these less formal, non-commercial situations. The benefits to the community are also clear, as non-profit and voluntary organisations are given the services of people who are at a pre-professional and consequently inexpensive stage. Ultimately the goal of service learning is to stimulate involvement in the voluntary sector in the long term by producing cohorts of graduates who have had exposure to and experience of working with community based, non-profit and voluntary organisations. Some of the important advantages of this type of learning include:

- Students would be developing the skills needed for their future careers.
- Students synthesise the subject matter through a broader range of experiences
- Students critically reflect on their values and responsibilities as citizens
- Students gain a belief that through their actions they can make a difference
- Teachers are able to use stimulating examples of real-world problems
- It instills a sense of social, professional and ethical responsibilities in both students and teachers

Importantly for educators in sectors, which serve industry, service-learning can remove the requirement for, or reduce the reliance upon, simulated client interaction and trivial problems in the classroom. As such, it aligns with the requirement identified by professional bodies to provide students with applied project experience. It also has strong benefits in terms of developing some of the key transferable skills of learners, thus satisfying the learning outcomes of the majority of education programmes. Above all, as an active-learning approach to education, service-learning benefits the student best by providing them with meaningful, long lasting and effective learning experiences. All other goals of service-learning are secondary – but it is the impact that this form of learning has on the secondary goals, both social and professional – that makes this approach to education both popular and extremely valuable.

Active Learning

Active learning is an umbrella term that refers to several models of instruction that focus the responsibility of learning on learners. It has been suggested that students who actively engage with the material are more likely to recall information later and be able to use that information in different contexts. Discovery learning, experiential learning, problem-based learning, and inquiry-based instruction are the most often cited forms of active learning. Adopting active learning does not mean following highly structured methods or even completely eliminating the lecture format. Activities that encourage student involvement may be incorporated into a lesson plan. But this should only be done once basic instruction has been accomplished.

Active learning involves providing opportunities for students to meaningfully talk and listen, write, read, and reflect on the content, ideas, issues, and concerns of an academic subject. The classic model for the classroom generally takes the form of the teacher doing most of the talking and the student playing a passive role. This will result in the students with rote learning skills and good short-term memories getting the higher grades. Research shows that engaging students in an active way results in heightened learning experiences, more enjoyable classes and an overall empowerment of the student. If a teacher could shift the focus of his/her delivery of course material to the engagement of students with the course material, then that teacher would be promoting active learning (move from being a "sage on the stage" to becoming a "guide on the side"). The goal of the teacher should be to facilitate learning.

Collaborative Learning

Collaborative learning is an umbrella term for a variety of approaches in education that involve joint intellectual effort by students or students and teachers. Collaborative learning refers to methodologies and environments in which learners engage in a common task in which each individual depends on and is accountable to each other. Groups of students work together in searching for understanding, meaning or solutions. The approach is closely related to cooperative learning. Collaborative learning activities can include collaborative writing, group projects, and other activities. Collaborative learning has many forms: Collaborative Networked Learning for the self-directed adult learner; Youth directed collaboration; Computer-supported collaborative learning (CSCL). It constitutes a new trans-disciplinary field. In this context, collaborative learning refers to a collection of tools which learners can use to assist or be assisted by others. Such tools include Virtual Classrooms (i.e. geographically distributed classrooms linked by audio-visual network connections), chat, discussion threads, application sharing (e.g. a colleague projects an MS Excel spreadsheet on another colleague's screen across a network link for the purpose of collaboration), among many others. Two popular collaborative learning approaches are: Co-teaching and Peer Supported Learning.

(i) Co-teaching

Co-teaching/ team teaching has been defined as the collaboration between teachers in teaching. In a co-taught classroom, two teachers work together to develop a differentiated curriculum that meets the needs of a diverse population of students. The team teaching can be classified into three types on the basis of different combination of teachers in team: (i) a team of teachers from a single department; (ii) a team of teachers from various departments of a single institution; and (iii) a team of teachers from a single department of various institutions.

In the procedure of team teaching, three main steps are followed: (i) planning, (ii) execution, and (iii) evaluation. The major activities of planning stage include: determining objectives and writing them in behavioural terms, deciding content topics, identifying entry behaviour of the pupils, preparing outline for teaching and deciding the evaluation techniques etc. The major activities during the execution stage include: asking initial questions to the learners, deciding the standard of instruction, selecting methods of communicating with learners (discussion, question-answer) and interaction of the learners, reinforcing learners' activities and assigning them tasks etc. Certain tasks in the evaluation stage include: decision taken regarding the attainment of objectives and preparation by the teacher, diagnosis of the problems of pupils, and introducing necessary modifications in the planning and execution stage. The strategy allows ample freedom to the teacher in the team while planning or organizing the lessons.

(ii) Peer Supported Learning

Peer supported learning is based on the idea that 'two, three, or more, heads are better than one'. Using peers as a resource can be useful in many different situations. It is possible to learn from others in many different situations including: tutorials/seminars; web-based discussion forums; e-mail groups; in-class discussions/debates; working as a group on an assignment; meeting up for a chat over coffee.

Critical Pedagogy

"Critical pedagogy" mentioned in National Curriculum Framework 2005 prepared by NCERT is based on the core design principles accepted by the constructivist theorists and practitioners. It is based on the assumption that students are not just young people for whom teachers should devise solutions. They are critical observers of their own condition and needs and should be participants in discussion and problem solving relating to their education and future opportunities. They should be made aware that their perceptions and experiences are important and should be encouraged to think independently and have courage to dissent. This is more important for disadvantaged children,

particularly girls and *dalits*, as the worlds they inhabit and their realities are represented in school curriculum. Critical pedagogy provides an opportunity to reflect critically on issues in terms of their political, social, economic and moral aspects. It entails the acceptance of multiple views on social issues and a commitment to democratic forms of interaction. Thus, critical pedagogy facilitates collective decision making through open discussion and by encouraging and recognizing multiple views. This is important in view of the multiple contexts in which our schools function (NCERT, 2005, pp.22-23). A critical framework helps learners to see social issues from different perspectives.

Culturally-Situated/Relevant/Responsive Pedagogy

Culturally-situated pedagogy highlights and celebrates the centrality of culture in framing students' engagements with and understandings of the world, while recognising the specificity and locatedness of each student's cultural positioning as a learner, citizen, community member, and so on'. It addresses the need for teachers to acknowledge students' diversity and incorporate their pluralistic backgrounds and experiences into the learning experiences and classroom environment. In "culturally relevant pedagogy" (Ladson-Billings, 2001), "culturally responsive teaching" (Gay, 2000), "culturally-situated pedagogy" (and other similar terms) teachers "develop the knowledge, skills, and predispositions to teach children from diverse racial, ethnic, language, and social class backgrounds" (Weinstein, Curran, & Tomlinson-Clarke, 2003, p. 270). Kirk-land (2003) commented that "good multicultural teaching honors our diverse cultural and ethnic experiences, contributions and identities" (p. 131) and emphasized that teachers need to "understand the experiences and perspectives students bring to educational settings and be responsive to the cultures of different groups in designing curriculum, learning activities, classroom climate, instructional materials and techniques, and assessment procedures" (p. 134). Culturally relevant pedagogy aims to ensure that educators acknowledge and honor the diverse viewpoints of their student population and refrain from promoting homogeneous perspectives as universal beliefs. Dingus (2003) further emphasized the importance of this perspective: "No student should have to sacrifice cultural heritage, ethnic identity, and social networks in order to obtain an education" (p. 99).

Characteristics of Culturally Responsive Pedagogy

Gay (2000) describes culturally responsive teaching as having the following characteristics:

- It acknowledges the legitimacy of the cultural heritages of different ethnic groups that affect students' dispositions, attitudes, and approaches to learning and as worthy content to be taught in the formal curriculum.
- It builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived socio-cultural realities.
- It uses a wide variety of instructional strategies that are connected to different learning styles.
- It teaches students to know and praise their own and each others' cultural heritages.
- It incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools (p. 29).

Implementation of Culturally Responsive Pedagogy: What Research Says?

Summarizing previous research concerning culturally responsive literacy instruction (Au, 1993; Boykin, 1978; Boykin, 1984; Gay, 2000; Heath, 1983; Ladson-Billings, 1994; Moll, 1992; Osborne, 1996; Reyhner & Garcia, 1989) and analyzing his own research in the preparation of present and future teachers for culturally responsive instruction Schmidt (2005), has explored the following conditions for successful implementation of culturally responsive instruction:

- *High expectations*—supporting students as they develop the knowledge and skills appropriate to their ages and abilities.
- *Positive relationships with families and community*—demonstrating clear connections with student families and communities.
- *Cultural sensitivity curriculum*—connecting with the standards-based curriculum as well as individual students' cultural backgrounds.
- *Active teaching methods*—involving students in a variety of reading, writing, listening, speaking, and viewing behaviors throughout the lesson delivery.
- *Teacher as facilitator*—presenting information; briefly giving directions; summarizing responses; and working with small groups, pairs, and individuals.
- *Student control of the lesson*—talking at conversation levels around the topic being studied while completing assignments in small groups and pairs.
- *Instruction around groups and pairs*—completing assignments individually, but usually in small groups or pairs with time to share ideas and think critically about the work.

Cooperative Learning

Cooperative learning consists of instructional methods and techniques in which student work in small groups (four to six members), and are rewarded in some way for performance as a group. In a classroom, interaction among students involves three potential types of interdependence—cooperative, competitive, and individualistic. In traditional classrooms, students typically have responsibility only for them, are not allowed to help one another, and compete for grades. In a cooperative learning structure, as one pupil achieves, others automatically achieve also. Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning. In cooperative learning situation, there is a positive interdependence among students' goal attainments. Students perceive that they can reach their learning goals if and only if the other students in the learning group also reach their goals (Deutsch, 1962; Johnson & Johnson; 1989). A group member's success in creating a multi-media presentation on protection of environment, for example, depends on both individual effort and the efforts of other group members who contribute needed knowledge, skills and resources. No one group member will possess all the information, skills, or resources necessary for the highest possible quality presentation. Thus, two basic elements of cooperative learning are: (i) attainment of group goal; and (ii) individual accountability.

There are various types and models of cooperative learning, e.g. (i) Learning Together (LT); (ii) Jigsaw (JI); (iii) Students Team Achievement Division (STAD); (iv) Group Investigation (GI); (v) Team Games Tournament (TGT). In all these types, the teacher acts as a facilitator. His responsibilities are as follows:

- Assigning students to groups
- Dividing task into sub-task
- Encouraging students to ask questions for clarification
- Supervising and maintaining group goal and individual accountability
- Conduct quiz and assign scores to individual learner.

The Process

The process involved in the popular cooperative learning structures, namely Jigsaw, is as follows:

- i. Students are divided into small groups (heterogeneous) called home groups with 4-6 members each to carry assigned task. One of the members of each home group will work as recorder-cum-reporter.
- ii. The teacher will suggest learning task, common to all the groups, which will be divided into as many sections as there are members in each group. For example, the task on biography of Mahatma Gandhi might be broken into early years, schooling and so on.
- iii. The students meet in their home group and distribute among themselves the task. Each individual member in the home group will attempt to learn the assigned task as an expert by referring to textbook and available resources.
- iv. After completing the learning task in the home group each member move into jigsaw group or expert group consisting of members from the different home groups who have been assigned the same portion of the task.
- v. In the jigsaw group the students, discuss and share their material with other members of the group.
- vi. From the Jigsaw group the students then return to their home group where they teach, what they learnt from the jigsaw group, to the rest of their group.
- vii. The students make second round meet in jigsaw group to discuss and clarify their doubts if any.
- viii. The students then return to their home group and re-teach the members.
- ix. At the end recorder-cum-reporters of all the home groups present the outcomes of their groups in the class.

Thus, the jigsaw cooperative learning structure enhances cooperative learning by making each student responsible for teaching some of the material to the group (Aronson and Goode, 1980; Slavin, 1980).

The Interpretation Construction (ICON) Design Model

The ICON Design model is one of the best models that provide opportunity to learners to reflect, analyze, infer and interpret in the process of knowledge construction. The underlying principles and assumptions of constructivism such as active engagement of learners in learning situation, collaborative learning, real life situation where knowledge is anchored rich learning environment, problem oriented learning through exploration, situating learning, distributed cognition and learner centered education are well blended in this model. The learning process of the ICON design model involves observation, contextualization, cognitive apprenticeship, collaboration, interpretation construction, multiple interpretations and multiple manifestations. Realizing its importance in learning all over the world, the National Curriculum Framework (NCERT, 2005) has recommended for its wide application in school pedagogy in India. Teacher in the constructivist learning, does not transmit knowledge like a sage on the stage, rather he plays the role of a facilitator, negotiator and mediator in providing rich learning environment to learners for knowledge construction.

- *Observation* – Students make observations of authentic artifacts anchored in authentic situations.
- *Contextualization* – Students access background and contextual materials of various sorts to aid interpretation and argumentation.

- *Cognitive Apprenticeship* – Students serve as apprentices to teachers to master observation, interpretation and contextualization.
- *Collaboration* – Students collaborate in observation, interpretation and contextualization.
- *Interpretation Construction* – Students construct interpretations of observations and construct arguments for the validity of their interpretations.
- *Multiple Interpretations* – Students gain cognitive flexibility by being exposed to multiple interpretations.
- *Multiple Manifestations* – Students gain transferability by seeing multiple manifestations of the same interpretations.

Implications for policy and practice: What Research Says?

Research seems to indicate that inclusive learning and teaching will remain piecemeal across institutions unless there is strong commitment from senior management complemented by action. This means that negative perceptions are countered with robust evidence of the benefits, and that individuals take responsibility for contributing to creating an inclusive learning environment. This may require changes in recruitment practices, training and development of teachers, support staff and managers. For some HEIs it may also mean a review of the strategy and policies related to learning and teaching to ensure that equality, diversity and inclusivity are not bolted on but integrated and coherent across all aspects of the student experience. These findings correspond to those in Fuller et al. 2009, Shaw et al. 2007 and Waterfield and West 2006.

A number of common issues and key requirements for inclusive learning and teaching emerge from the synthesis of research in the field. These are outlined below as principles intended to capture the essence of the issues. The principles are broad, interrelated and interdependent. Readers are invited to interpret them according to their own contexts.

- i. The need to see students as individuals, to learn about and value their differences and to maintain high expectations of all students.
- ii. The need for teachers to create safe learning environments in which students can express their ideas, beliefs, requirements and identities freely in an atmosphere of mutual trust and respect, empathy and open mindedness.
- iii. The need to establish at the outset clear rules of what is expected from students with tight control and close monitoring in order to develop confident learner identities and behaviours.
- iv. The need for teachers to create student-focused ‘universal’ programmes, modules and lessons that engage all students meaningfully by encouraging them to draw on and apply their own and others’ knowledge.
- v. The need for teachers to anticipate, recognise and provide for individuals’ specific physical, cultural, academic and pastoral needs, particularly at critical periods (e.g. transitions, examinations).
- vi. The need for shifts in negative beliefs about, and attitudes towards, student diversity that currently inhibit the development of inclusive learning and teaching.
- vii. The need to challenge and change policies, practices, systems and standards that inhibit the participation of students in any subject or constrain teachers’ capacity to engage all their students.
- viii. The need for greater involvement of students in the negotiation of the curriculum, assessment and in the development of teachers.

- ix. The need for adequate time, resources and a safe environment in which staff at all levels can develop a shared understanding and commitment to student diversity and inclusive practice. Such understanding and commitment should be a key component of staff recruitment, training, development and reward.
- x. The need for adequate and relevant central services to support students and staff; integrating strategies for teaching and learning, widening participation and disability; and co-ordinating the efforts of academics and specialist support staff in central service centres.
- xi. The need for collection and analysis of institutional, quantitative and qualitative data for the evaluation and improvement of inclusive learning and teaching strategies, policies and practices.

Institutions and individuals will interpret and apply these principles in different ways according to their own particular situation and context but it is worth taking one of these principles and considering what it might look like in practice.

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