CHAPTER 3

REFORMS IN EDUCATION SECTOR

- Measures taken for Quality Improvement
- Reforms in Higher Secondary Education
- Theoretical foundations of new pedagogy
3.1. Introduction

Quality means degree of excellence. The quality of any product can be quantified, measured and compared with other products. But it is difficult to measure the quality of education as it is a service. According to Malcolm Frazer "Quality in education is a complex idea but above all it is about what students have learnt as a result of their interaction with their teachers, departments and university". (Craft 1992,p.9).

The concept of quality has been drawn from industry. Initially, education and industry functioned independently. In recent years, both have moved towards each other. The concept of quality standard used in industry is being considered for application in the field of education.

Several techniques and concepts have been evolved to improve product or service quality (the quality of product or service), including Statistical Process Control (SPC), Zero Defects, Six Sigma, Malcolm Baldrige National Quality Award, Quality Circles, Total Quality Management(TQM), Theory of Constraints (TOC) and Quality Management Systems (ISO 9000 and others) for continuous improvement.

Providing universal access to quality school education is the cornerstone of development and a minimum necessary condition for any progress towards making India knowledge based society. Quality is the most important topic of discussion in education today. We have realized that there are problems with today’s education system. Students are passing out from schools and colleges unprepared to meet the demands
and challenges of the society. This problem has a ripple effect on the society.

Quality assessment is a structured process for improving the output produced. It is neither magical nor complex. When people talk about improving the quality of education, they often mean improving the student’s academic grades or scores. Here, the responsibility for improving the quality of education rests with the teachers. Teachers generally focus on one aspect – helping the students to learn and retain knowledge. When quality is taken up as an isolated project in schools, it will hardly influence the overall quality of education.

3.2. Measures Taken for Quality Improvement

For improving the quality of school education, various measures have already been adopted in Kerala. The earliest of these reforms dates back to the educational reforms called District Primary Education Programme (DPEP), started in 1994 in 42 districts covering seven states of India which gradually expanded to cover more districts in different states over the last 8 years. At present there are 272 such districts of 18 states in which DPEP is being implemented. The main goal of DPEP was to provide quality education to all the children at the primary level of education. The specific objectives of the programme were to:

1. Ensure equity and access to primary education to all children in the age group of 6-11.
2. Ensure 100% enrolment and retention by 2001.
4. Promote community participation.
During the period of DPEP implementation, various activities were undertaken for improving the achievement level of pupils. These activities ranged from community mobilisation, construction of new school buildings and classrooms, providing pedagogical inputs through teacher training, improvement of textbooks and teaching learning materials, providing academic supports to schools through Block Resource Centers (BRCs) and Cluster Resource Centers (CRCs), removal of gender and caste related inequities, strengthening support to education of the disabled, and establishing alternate educational facilities for the children not having access to regular schools. For better monitoring of the progress, a new Educational Management Information System (EMIS) was also established. Research in the area of primary education was given impetus and a large number of research and evaluation studies were undertaken at the national, state and district levels. These studies were expected to provide inputs for enhancing the efficiency and effectiveness of various DPEP interventions. The major advantages of DPEP programme were;

1. Strong focus on student learning: The focus of quality learning in the classroom has been one of the most important factors of the programme. Careful evaluation and consideration of requirements in the classroom to change and support a better and more inquiry-based interaction between students and the teacher is called “Joyful Learning” which was a vital element of DPEP.

2. Decentralization and Local Empowerment: The program has been rooted in the local community. Under DPEP, the unit of educational planning became the district instead of the State,
which allowed a sharper focus on the particular needs of different communities. About 80 percent of DPEP funds are spent through local self-government bodies called *Panchayats*. In each village, school, cluster or block is empowered to look after its own needs and design innovative solutions under the decentralized vision of the program.

3. **Emphasis on Continuous Learning and Innovation**: DPEP administrative structures have also consciously tried to evolve as learning organizations, promoting experimentation, learning and correction. Despite having been approved for the project period, plans could be changed every year if a better idea emerged. As a result, new interventions were continuously introduced, based on emerging lessons of implementation, experience and analysis of newly generated data.

4. **Use of Outside Agents and Consultants**: To expose the sector to new ideas and approaches, expertise from outside the traditional system was needed. DPEP has set up new planning and oversight bodies at the national and state levels in non-governmental organizations (NGOs), private-sector experts and officials from outside the education sector. DPEP's Technical Support Group (TSG) at the national level was constituted with unprecedented flexibility to hire consultants on a long-term as well as short-term basis and to pay market rates of remuneration. Even though many states were initially skeptical of setting up parallel administrative systems, the new bodies have been successful in overcoming bureaucratic obstacles that would have otherwise hindered the programme implementation.
5. **Flexible Design and Implementation:** In the pursuit of its "super goals", DPEP has allowed wide inter-state and inter-district variations in implementation, reflecting the availability of institutional capacity, local administrative culture and local problems. As a result, leadership has emerged at various levels of the program and in different ways. There are numerous instances of teachers and head teachers doing wonders in introducing innovative methods in the school and in managing resources from the community. The style and quality of DPEP leadership at the national level also made a difference. DPEP's top administrators sought imaginative ways of maintaining the right balance between interference and support, which is critical for successful implementation of decentralized approaches.

6. **Sufficient Preparation Time before Launch:** The program provided for preparation and readiness. A large number of preparatory studies, helped to prepare and sensitize the system for implementing the program and to establish a new mode of "thinking through" problems to find more creative and deeper solutions. Another hallmark of the pre-project phase was intensive participation. More than 72,000 people participated in over 1,000 different planning meetings at the sub-district, district and state levels in order to implement the program. The discussions of baseline learning achievement data and other study findings at district, sub-district and even village levels in many cases have been powerful experiences.

7. **Constant Concern with Building Capacity:** DPEP has striven consistently to build capacity at all levels of the education system,
not only through training programs for which content and methodology have been updated, but also through participatory workshops and field visits. SSA seeks to provide quality elementary education including life skills. SSA has a special focus on girl's education and children with special needs. SSA also seeks to provide computer education to bridge the digital divide (Department of Elementary Education, 2005).

**Sarva Shiksha Abhiyan (SSA)** focuses on Improvement in quality of Elementary Education. It is a flagship programme of Government of India for the promotion of Universalisation of Elementary Education, has several features that seek to improve the quality of elementary education. The physical spaces of schools can be transformed into learning spaces only if certain basic provisioning is ensured. This provisioning includes, inter alia, an adequate number of teachers in schools, facilities for training of teachers, regular on site academic support, grants to facilitate development of teaching learning material and the like. The programme seeks to strengthen existing school infrastructure through provision of additional class rooms, toilets, drinking water, maintenance grant and school improvement grants. Existing schools with inadequate teacher strength are provided with additional teachers, while the capacity of existing teachers is being strengthened by extensive training, grants for developing teaching-learning materials and strengthening of the academic support structure. The measures taken under SSA are:

1. The programme places great emphasis on preparing the teachers for teaching, by building their capacity through a series of training programmes. The SSA provides for regular 20-day in service
training for every teacher every year, along with facilities for 30 day training for newly recruited teachers and 60 day training for teachers that have not received pre service training. Training covers several pedagogical issues, including content and methodology, to improve teaching learning transactions at classroom level.

2. Classroom transactions can be meaningful only with an optimum Pupil Teacher Ratio. Nearly 7 lakh teachers have been appointed under SSA so far.

3. Sarva Shiksha Abhiyan also provides for grants to schools and teachers for developing local context specific teaching learning materials that have the potential to improve pedagogical processes in the classroom. Nearly 35.28 lakh teachers have been provided with grants for developing Teaching Learning Materials (TLM) in 2006-07.

4. The SSA also addresses other systemic issues of physical infrastructure and incentives in the form of free textbooks for all children belonging to the SC and ST categories and for all girls. In the year 2006-007, free textbooks were distributed to 6.39 crore children. Emphasis is being laid on timely distribution of textbooks to eligible children.

5. Decentralized academic resources institutions in the form of about 6700 Block Resource Centres and about 66000 Cluster Resource Centres have been established across the country to help teachers’ performance by providing them professional support. The issue of capacity building of these institutions is
being taken up with States on a regular basis and a national level research study is also expected to be commissioned shortly, to ascertain the efficacy of these structures for decentralized academic support.

6. State, District and Block Level Resource Groups have been set up and participation of teachers in these groups is increasingly becoming evident. This has helped to produce better textbooks, Teaching Learning Materials and training modules. State level academic resource groups have been set up in 24 States, for developing a vision and perspective regarding pedagogy, teachers training etc. and making classroom transactions more activity based (Department of Elementary Education, 2005).

Some of the suggestive key indicators, which may be said to have direct or indirect effect on improving the quality of the teaching learning processes, are given in Appendix 7.

3.3. Reforms in Higher Secondary Education

The Higher Secondary (Pre-degree) course was a part of higher education in the state of Kerala. The National Policy on Education (NPE 1986) recommended adopting 10+2+3 pattern by all states in India for a uniform educational structure in all parts of the country. The NPE made special reference to the fact that attention should be given to the organization of post graduate courses and to improve the standards of training and research at University level. Consistent with the National Education Policy of 1986, the Government decided to delink Pre-degree courses from colleges in a phased manner and to introduce 10+2 system
in the high schools of Kerala. Accordingly Higher Secondary course was introduced in selected Government, Aided and Unaided high schools in the State to reorganize secondary and collegiate education in Kerala. The two-year course was named as "Higher Secondary (Plus Two) course". The process of de-linking Pre-degree from colleges has been completed by the academic year 2000-2001. Department of Higher Secondary Education (DHSE) is envisaged as a central agency of the state government seeking to promote all round development in Higher Secondary Education by establishing appropriate philosophies, adequate institutional network, effective administrative systems and well-qualified and motivated staff necessary to carryout academic and administrative responsibilities. The major reforms undertaken at Higher Secondary level in the State of Kerala are enumerated below:

**3.3.1. Revision of Curriculum and Preparation of Textbooks**

Even after delinking the Pre-degree course from Universities, curriculum and textbooks prescribed by the NCERT and Universities were being followed for the Higher Secondary course. A curriculum will be meaningful when it reflects the needs and the aspirations of the society and it should lead the new generation. Modern development in the subject as well as in the pedagogy calls for revision in the curriculum. The review of Higher Secondary curriculum was inevitable while taking into consideration these facts and the thrust areas elaborated in the National Curriculum Framework for school Education – 2000 (NCFSE). The existing curriculum was revised by an expert committee constituted by the SCERT called the Higher Secondary Curriculum Committee under the chairmanship of the Hon. Minister for Education. The revised curriculum
came into effect from the academic year 2002-03. At the first stage, the textbooks of languages were prepared by SCERT followed by the textbooks of core subjects.

3.3.2. Teacher Empowerment

Many contemporary issues have been introduced in the new curriculum, which necessitated teacher training and empowerment. Similarly, teachers promoted from high schools found it difficult to cope up with Higher Secondary curriculum and textbooks. Shifting to English as a medium of instruction was also problematic to them. Hence, the SCERT organised statewide training of Higher Secondary teachers, focusing on these areas of difficulty. Experienced Higher Secondary teachers identified the hard spots in the Higher Secondary curriculum and this formed the basis of the training module. Communicative English and adolescence psychology were also dealt with in the training programme. The five-day training programmes in two spells were held at four centres in the State. For science subjects, laboratory training was also part of the training package.

3.3.3. Kerala State Open School

Kerala State Open School (KSOS) was established in the year 1999-2000 under the SCERT, with the mission of universalisation of education, by providing greater access and equal opportunities. The inherent flexibilities and options in this system, aim to cover a large population of learners, facilitating the evolution of a learning society. It is the objective of KSOS to widen the horizon of learning by offsetting the disadvantages of the formal system, so that the adults who are employed or unemployed,
and others who cannot access the formal system due to various reasons, and drop-outs from the formal system who wish to resume studies after a gap, can all be covered within the roof of universal education. SSLC and Higher Secondary courses, job-oriented short term vocational courses and also Vocational Higher Secondary certificate courses are all on the agenda of KSOS, though currently only the Higher Secondary course is offered. Kerala State Open School was inaugurated by Sri. P.J. Joseph, Hon. Minister for Education of Kerala on 2 February 2000. Three regional centres were opened for the convenience of students at Trivandrum, Ernakulam and Thrissur respectively. The Higher Secondary course of KSOS is a two year course. A student who has passed SSLC or equivalent examination is eligible to undergo this course. The examination will be conducted by Higher Secondary Board and the certificate will also be issued by the Higher Secondary Directorate. Students can attend contact programmes organised at the study centres where they can clarify their doubts. Science students can attend practical classes at these centres.

3.3.4. Change in Pedagogy and Evaluation System

The curriculum and methodology of teaching of primary classes were revised during the academic year 1994-95 under the programme of DPEP. Such changes continued with appropriate changes warranted by the developmental status of learners, in the successive stages up to 10th standard. Extension of these benefits to the Higher Secondary education level deserves consideration.
Moreover, the existing plus two education in Kerala seems to be in a state of inertia due to many reasons. The system, which is exclusively based on success in examination and mechanical ways of instruction, constitute the main reason for this condition. Also the challenges of the time, like globalisation, decentralized development, information technology, and consumerism lope sidedness in the value system etc: helped in the creation of this inertia. This demands innovations in curriculum, pedagogy and evaluation system.

3.3.4.1. The major shift in pedagogy was:

1. Learner centered approach: There was a shift from the teacher centered learning approach to learner centered learning approach. The role of teachers has been changed as a facilitator, guide, motivator, co-learner, researcher and scaffold. The role of students will also changed and they are expected to be an active participant in the learning process by engaging in group activities by taking leadership, by sharing information and by formulating concepts of his/her own.

2. Activity oriented approach: Learning through activities will definitely make the learning effective. Hence various learning strategies were developed to make the students active in learning process. They include projects, assignments, seminar, debate, role play, case study, brain storming and discussions.

3. Life oriented approach: The education should equip the students to face real situations/problems in life. Here the duty of teachers is to create problematic situations for the child. This experience of
solving problems will help the child to solve problems of life. Both field trip and study tour gives an opportunity for the students to understand the real life situations.

3.3.4.2. Change in Evaluation System

The approach to evaluation and technique of assessment has undergone great change with the revision of curriculum and pedagogy. Evaluation has to play a significant role in making the learning process more effective by providing diverse experiences to the students, keeping in view the skills to be attained continuously by them. Learning is a continuous process and evaluation should be an integral part of this process. In the activity based classroom, learning takes place through different learning strategies. Evaluation of students is done along with these learning activities and hence evaluation is said to be continuous. Education is meant for the all-round development of an individual. So personal and social quality and achievement in other supportive areas of the scholar are also to be evaluated along with the academic performance. In this sense, evaluation is comprehensive. In order to flourish continuous and comprehensive evaluation, we make use of the following components of evaluation.

1. Continuous Evaluation (CE): Here learner is evaluated at each and every stage of learning on the basis of specific evaluation indicators. 20 scores are assigned for continuous evaluation.

2. Practical Evaluation (PE): The Practical Evaluation is conducted for 20 scores in subjects having practical. PE is conducted by an
external examiner on application level areas included in the curriculum.

3. Terminal Evaluation (TE): It is an important tool for evaluating the facts, concepts, ideas gained by the learner. It should be in written form. While preparing questions for the terminal evaluation, more emphasis should be given to the level of application, analysis, and synthesis than evaluation of knowledge and understanding. The maximum score of TE for practical subject is 60 whereas it is 80 for non-practical subject.

**Grading System**

Evaluation system of Higher Secondary Education has been shifted to grading system from marking system from the academic year 2004-05 onwards. Marking system proved unscientific in evaluating the growth and development of individual students both in cognitive and non-cognitive areas. Classification of students in terms of marks was both unjust and in defensive. It also creates mental stress and strain among the students. To overcome these limitations, a popular mode of evaluating student’s performance known as grading system was evolved. It is quite extensively used all over the world. At Higher Secondary level a 9 point scale is used starting from ‘A+’ and ending at ‘E’. Minimum grade required for promotion is ‘D+’. The score percentage and corresponding letter grades are given below in table 3.1.
### Table 3.1
Grading Pattern for Higher Secondary Education

<table>
<thead>
<tr>
<th>Score in percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A+</td>
</tr>
<tr>
<td>80-89</td>
<td>A</td>
</tr>
<tr>
<td>70-79</td>
<td>B+</td>
</tr>
<tr>
<td>60-69</td>
<td>B</td>
</tr>
<tr>
<td>50-59</td>
<td>C+</td>
</tr>
<tr>
<td>40-49</td>
<td>C</td>
</tr>
<tr>
<td>30-39</td>
<td>D+</td>
</tr>
<tr>
<td>20-29</td>
<td>D</td>
</tr>
<tr>
<td>Below 20</td>
<td>E</td>
</tr>
</tbody>
</table>


3.3.5. Monitoring and on-site Support Mechanism

Monitoring is designed as an extensive mechanism to evaluate the effectiveness of various learning activities in the class room and to provide on-site support enabling flawless evaluation. The Higher Secondary Department of Kerala has designed a specific monitoring and on-site support mechanism the objectives of which are:

1. To ensure flawless and uniform Continuous Evaluation (CE) and its recording in all schools
2. To assess whether activity based learning is implemented effectively and to provide necessary support

3. To give support by participating in class room activities.

4. To provide opportunities (like workshops, seminars etc:) to teachers so that they would gain expertise in various class room activities.

5. To settle complaints and disputes of students and parents about CE scores

A three tier monitoring mechanism is framed in the Higher Secondary level as discussed below:

**Tier one - Cluster level subject council**

This is a council of teachers of the same subject at the education district level. The cluster may be formed at the educational sub district level too, depending on the number of teachers. There should not be more than 50 teachers in one cluster. A principal nominated by the Regional Deputy Director (RDD) will be in charge of it. The cluster level subject council team shall visit each school in the cluster at least once in a term and plan the class room activities along with the teachers of the school and participate in the class room activities. The team also collects scores on continuous evaluation.

**Tier two - District level subject council and Monitoring Committee**

The committee includes one representative form each cluster level subject council. They will examine the cluster level reports and integrate them and submit it to District level monitoring Committee. A State
Resource Group (SRG)/District Resource Group (DRG) elected with the concurrence of RDD will be its convener.

**Tier three - State monitoring Committee**

Implementation and supervision of monitoring and planning activities for execution of the curriculum are the major responsibilities of this committee. State education minister will be its patron. An eminent educationist nominated by the government will be its chairperson. Director of Higher Secondary education will be its convener (SCERT, 2006).

**3.3.6. Efficiency Year**

To improve the quality of education, government of Kerala declared the academic year 2007-08 as efficiency year (Directorate of Higher Secondary Education, 2007). The main objectives of this programme were:

- Ensure 200 working days (1000 hours) during the academic year 2007-08
- Co-ordinate the activities of different educational agencies
- Formulation of school complex for co-ordinating the educational activities of a specific region with the help of local self government. It is established at three levels ie.Grama panchayat school complex, Municipal school complex and Corporation school complex.
- Strengthen the monitoring and on-site support system
- Teacher empowerment for effective curriculum transaction.
3.4. Theoretical Foundations of New Approach

The change in pedagogy, evaluation and curriculum were the leads to the new approach. The new curriculum lays emphasis on the developments of Philosophy, Psychology, Anthropology and Sociology taking place in India and European countries. These developments have helped to make a shift from teacher centered learning to student centered learning and that learning takes place through social interactions.

The new curriculum gives adequate thrust to the following:

- Multiple Intelligence
- Constructivism
- Emotional Quotient

3.4.1. Multiple Intelligence – A Means to Understand Students

According to the theory of Gardner (1999), human intelligence has different components and all these components are present in all individuals in different proportions. Some components may be more prominent in some individuals. Giving suitable environments and through continued efforts, students can improve the various components of intelligence to a greater extent.

Components of intelligence

- Verbal /linguistic intelligence
- Logical/ Mathematical intelligence
- Visual/ Spacial intelligence
• Bodily-Kinesthetic intelligence
• Musical intelligence
• Interpersonal intelligence
• Intrapersonal intelligence
• Naturalistic intelligence

3.4.2. Constructivism – Facilitating Learning

The past decades have seen a radical change in the concept of learning. The theory of Constructivism (learning theory) argues that human beings construct meaning from current knowledge structures. These arguments about the nature of human learning guide constructivist learning theories and teaching methods of education. Constructivism values developmentally-appropriate facilitator-supported learning that is initiated and directed by the learner. This is the path through which educators (facilitators) wish to approach students in constructing meaning of new concepts. Importance among these concepts is:

• Learning is the construction of knowledge.
• Learning takes place as part of problem solving
• Learning takes place by incorporating new elements of knowledge into the cognitive structure of the learner.

3.4.3. Emotional Intelligence – Means for Developing of One’s Own Feelings

Studies have shown that emotional intelligence is twice as important as IQ for outstanding performance. With that statement, the focus is now on children in schools where we educate them with one objective in mind:
their success. In the past IQ had always been associated with success, so the question now is, can EQ make the difference? According to Goleman, IQ alone is no more the measure of success; it only accounts for 20%, and the rest goes for emotional, social Intelligences and luck. The concept of emotional intelligence put forward by Daniel Goleman was used in framing new curriculum. The fact that one’s Emotional Quotient (E.Q) is the greatest factor affecting success in life is now widely accepted. The teacher who aims to focus on improving the emotional intelligence of students needs to concentrate on the following. (www.eiconsortium.org/members/goleman.htm)

- Ability to take decision
- Ability to reach consensus
- Problem solving
- Life skills

The success of educational reforms depends on the effective implementation of policies formulated by the government. Teachers play a vital role for the implementation and evaluation of reforms initiatives. Human beings are always resistant to change and it is only natural that teachers oppose the new system of education. Their resistance may be sidelined by the creation of proper awareness through training programmes and intervention of the Higher Secondary Department. But unless teachers are motivated, the entire measures taken by the government will go vain. The current initiatives on training, monitoring and evaluating the reforms process attempt at convincing teachers on the need to develop and come up to the expectation of society.