

(Penultimate draft. For favour of comments)

Position Paper on Assessment of Learning



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**State Council of Education, Research and Training (SCERT)
Hyderabad, Andhra Pradesh**

Vision of the State

The vision of AP is that ALL children should receive high quality education and become responsible citizens with an acute sense of the other. They should be aware of their environment and think about it critically. They should listen carefully and speak fearlessly. They should be able to understand what they hear and read; but they should also be able to question it. Teachers should promote these skills, provide meaningful teaching learning processes in natural and friendly environment that enable children to express themselves freely and ask questions. Teachers are collaborative learners and reflective practitioners. Parents and community should have a sense of ownership and participate in the life of the school. In a world which is becoming increasingly instrumental, materialistic and competitive, school should become a space for reflection, cooperation and promotion of human and ethical values.

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Executive Summary

Our current systems of assessment focus on rote learning and reproduction of answers from memory; their primary purpose is to give marks, grades etc. to children and to rank them in such a way that the whole project of acquisition of knowledge looks like a competition and ends up causing high levels of anxiety and fear among children and parents. Such an assessment procedure must be abandoned. Acquisition of knowledge is essentially a collaborative exercise.

Assessment must become an integral part of the teaching-learning process and should be as important for the teachers, parents and the community as for the child. It should first of all work as a feedback mechanism for the teacher and for the curriculum, syllabus and textbook makers. Teachers should begin to look at 'errors' as essential landmarks in the process of learning and restructure their teaching methods and materials accordingly. Curriculum and syllabi planners must ensure a more proactive role to classroom teachers. The community needs to participate actively in assessment processes and make the whole school system more accountable for its working. The focus of assessment should not be just academic skills but also creativity, imagination, social sensitivity, participation in co-curricular activities and sports. We must also appreciate that there are significant differences in the nature and structure and methods of different subjects and therefore they may need different assessment procedures and tools.

According to the NCF 2005 and RTE 2009, we need to ensure the implementation of Continuous Comprehensive Evaluation (CCE). The paper setting needs drastic reforms- the focus should shift from 'question setting' to 'paper setting'. Questions should be categorized according to level of difficulty, topic area competency being evaluated and usage being recorded. In the long run the system must gradually move towards taking exams when the candidate is ready rather than the convenience of the system. To reduce the stress and anxiety and adoption of more comprehensive credible system of internal assessment is needed. We may need to adopt a long term move toward open book exams. We need to eliminate the term "FAIL"; the word 'fail' should not appear on marks sheets. This should be replaced with the phrase such as unsatisfactory, better, need more work to attain defined standards.

In our assessment, we need to look for conceptual understanding, what the child knows, engaging children in meaning group or individual tasks, tasks in which they can engage and contribute something, tasks that are interesting and evoke creativity and imagination etc. The tools for assessment also will need to be varied and would include among others observations, recording, tabulation, experiments, hypothesis building and testing, field visits, portfolios, anecdotes (Record of specific details of pupil), participation in different discourses and extra-curricular activities, language, maths and science games, report preparation and presentation and performance reviews and book review etc. among others.

1. ASSESSMENT AND LEARNING

1.0 What is Learning?

It is not easy to define what is learning. For the purpose of school education and in the present context we can explain the meaning of learning first talking about what it is not. Rote, recitation, repetition, reproduction and memorizing are not learning. Solving problems by shortcut methods without understanding the problem or method is not learning. Simply performing well in the examinations by preparing a few questions is also not learning.

Learning first of all means understanding systems of knowledge and then the ability to apply knowledge, understanding and ability in different contexts. It means being able to choose the way forward, express and project oneself with confidence. Learning is a continuous process. Learning happens with interactions and explorations and should help a student in becoming an autonomous learner. Knowledge is constructed on the basis of previous experience and knowledge. During learning the child internalizes the concepts, gives examples, reasons, classifies things, formulate the rules, establishes relationships, predicts the consequences, formulate hypothesis etc., The processes of learning enable the child to apply knowledge from one context to the other. The entire process of knowledge construction is learning. Learning means children's deeper understanding of concepts, development of skills, competencies and abilities. Children construct knowledge in the process of learning and apply it in daily life situations and gain new experiences; it is a continuous process.

1.1 What is Assessment?

Assessment is considered as a process of estimating ways of children's learning and development. Assessment is not aimed at what aspects children have to learn but it assesses the children learning achievement in various areas and helps teachers, parents and children to plan for further improvement. Assessment and learning are mutually dependent and both cannot be assessed comprehensively through marks or ranks. Assessment is an integral part of learning. Assessment provides direction to the teacher to plan for appropriate teaching learning processes. Assessment also provides information on learning gaps among the children in different subject areas, teaching, learning processes, organization of learning experiences TLM used etc. The process of learning will be incomplete without assessment of learning. The learning never becomes meaningful, complete and comprehensive without making assessment as central part of learning. Therefore, the questions like why assessment and 'what is to be assessed?' are central issues in the assessment process.

1.2 Why Assessment?

We must address assessment from the old question 'Why Assessment?'. This question has many known answers. One part of the answer that is very often given relates to collecting feedback for different individuals and for different purposes. For example, (i) it could be for giving feedback to students on their learning with the hope that they will improve their efforts (ii) it could be for teachers to make them appreciate the learning levels of their students and draw up some inferences about the process they are using for teaching-learning in the classroom. (iii) It could be for examining the quality and the nature of textbooks or (iv) it could be to get feedback on the nature and extent of the curriculum. These are the four obvious aspects that can be examined based on the performance in the assessment exercise but there are other aspects as well. It is obvious that there would be different demands from the assessment procedure and the nature of the tools if it has to answer the above purposes clearly. The feedback for the textbook and curriculum necessitates a different kind of assessment of students from the one that is meant for feedback to teachers. There can be other dimensions of assessment, unrelated to the assessment of students, the assessment of the teaching-learning material but related to the nature and scope of curriculum. It would be appropriate to discuss assessment of the first two aspects and look at the points emerging from the assessment of students in different processes including tests.

If we reflect on the processes of learning and teaching and the nature of the schools, we would realise that there are many other parameters that affect the performance of students. Some concern decisions at the level of policy and structure and include transfers, salary structure, monitoring processes, respect in the system for the teacher and other aspects that emanate from the nature of administration. These also include the personality of the superior officers and the way of relating to the Headmasters and teachers. We need to address the question: How many of these connections do we focus on when we analyse the performance of students? It is relatively easy to describe the achievements in a certain performance test and to declare that the averages in a certain State are better than in the other but it is extremely difficult to understand why this is so. It is also extremely tough to try and build an understanding of this and a credible theory that explains the results obtained. It is obvious that the nature of student assessment and the recording of information could be very different when we give importance to different aspects of assessment.

1.3 What to Assess?

Assessment is a comprehensive process which assesses the overall development of the child, functioning of systems and gives directions for the future planning. Therefore, it is essential to think of what is to be assessed?

a) Progress in children learning achievement

The present evaluation system focuses on the accumulation of information through rote learning by children. Parents, teachers and children believe that learning can be assessed through testing of information. There is difference between information and knowledge and knowledge can be expressed / shared through self writing, performance, demonstrating the skills, argument, dialogue etc., Assessment of children's learning and development in any comprehensive way can never be through testing of information through memory. But it can be done through various other processes.

Therefore, the position paper has a thrust on assessing the following items/areas.

- Concepts – Conceptual understanding
- Skills
- Competencies / Abilities
- Interest
- Attitudes
- Creativity
- Values
- Games, Sports and expressive arts – participation in creative activities.

Concepts – Conceptual understanding

Generally children memorise facts, principles and generalizations and reproduce them as such during the examinations. Such assessments never assess children's abilities like imagination, understanding, creativity etc., Understanding of concepts includes providing suitable examples, comparison, raising questions, reasoning through cause and effect etc. Therefore, assessment of conceptual understanding includes all the above.

Skills

The popular understanding of skills includes physical skills and is limited to the psycho motor domain. In fact the assessment of knowledge based skills is through observation, experimentation, imagination, hypothesizing, classification, generalization, developing models etc. The drawing skills focus on correctness, speed, precision etc. This provides clarity to the teachers in providing appropriate learning experiences.

Competencies

Children possess natural and innate abilities by birth. The question is how far these innate abilities are being used by the children while learning the concepts and interacting with nature. The innate abilities include analysis, synthesis, evaluation, giving reasons, generalization, estimation, rational thinking etc. Development of these abilities based on the nature of learning experiences provided to the children, ensuing their participation and involvement. Assessment must assess extent of development of these innate abilities among children and provide further understanding to the teachers for necessary further action to improve. The curricular subjects provide rich sources for providing a variety of learning experiences reflecting the nature of the subjects along with using appropriate Teaching Learning Material (TLM) and promote development of innate abilities among the children to the fullest extent.

Interest

Assessment shall include methods to understand children's interests in various subject specific areas and skills. Understanding of children's interest across curricular areas may be helpful in providing appropriate career guidance options. Therefore, proper assessment tools may be developed and used for this purpose.

Attitudes

Attitudes play an important role in the development of human personality. Fostering right attitude through curricular experiences within and outside the school is one of the important objectives of school education. Therefore it is necessary to assess children attitudes towards education, society etc. The individual attitudes however positive or negative have their own impact on individual development and social development etc.

Creativity

Children are naturally creative and endowed with creative abilities by birth. The curriculum shall include activities and programs to augment the natural creativity among the children. Different subjects in the curriculum i.e., Languages, Science, Mathematics, Creative Arts etc., provide ample scope for developing creativity among the children. Therefore, comprehensive assessment shall invariably include activities for assessing the children's creativity. This gives an understanding and scope for planning for a variety of activities or judging the activities being implemented to develop creativity.

Values

Development of values among children is one of the important Aims of Education in addition to development of knowledge, attitudes and analytical skills. There is so much discussion in the society that the values and ethics are being vanishing by the day leading to unrest, corruption and social disorder. Erosion of moral, human and constitutional values and any respect for freedom, equality, fraternity etc., are seldom visible today. People say that failure of schools in developing appropriate value system during formative period of childhood is the key reason for the existing violence and social disorder. Therefore the curriculum must address development of appropriate value system among the children through various curricular experiences. The assessment must include assessment of values among children through variety of assessment tools and procedures. Assessment gives information to the teacher to plan appropriate activities for developing suitable values.

Participation in Games, Sports and Cultural Activities

Participation in Games, Sports and Cultural Activities and enjoyment is the right of every child. The co-curricular areas such as organization of games, sports, cultural activities and other creative activities such as Art, Music, Drawing etc., are as important as curricular areas such as mathematics and science for the holistic development of children. The assessment of children's performance in these activities gives information as to what extent children are participating in these activities; if some children are not participating, we need to explore the reasons behind it.

b) Assessment of Teaching Learning Processes

Assessment throws light on the effectiveness of the Teaching Learning Process and their organization both inside and outside the classrooms. Assessment of TLP, TLE and other school based programmes is a must for improving the quality of learning experiences being provided in the schools.

c) Teacher Appraisals

The children's learning outcomes may also tell us about teacher performance in conducting appropriate TLP based on teachers' professional expertise and their preparation. The quality of good teacher includes expertise in content knowledge, pedagogical knowledge and knowledge in learning assessment and interpersonal skills and communication. Continuous teacher preparation and developing their professional expertise for effective organization of curriculum with appropriate TLP and TLM is a must to ensure children learning achievement and development in a holistic manner.

Therefore, we need regular teacher appraisals to see to what extent teachers are competent to perform their professional duty and motivate children towards learning with appropriate learning tasks. It is important to work out certain accountability norms and make teachers and other functionaries responsible for children's learning outcomes.

1.4 Students Assessment and Community

One purpose of student assessment is to make parents aware of what their children have learnt and also demonstrate to the community that children do learn something when they come to the school. The community and the parents should feel free to appreciate or criticize what is happening in school. They can also make suggestions for improvement. There have been many examples of modules which require assessment of students in front of the whole community but the full import of this has not been studied or analysed. It is also not very clear whether the focus of this process should be to build confidence in the community that the students are learning or it should be to show that they still have a long way to go. The choice of one of these two would impact the setting up of the procedures and the results considerably. These attempts at involving the community have been there at a very small scale. There has been no large scale attempt of involving the community in the process and purpose of assessment.

Assessment outcomes have not been used as feedback for textbooks, curriculum or administrative policy; it is quite clear that this feedback, which is neither constructive for the children nor for the teachers, is for somebody else. We need to examine who should be the prime recipient of this output. It is also important to examine the implications of using this data for generalizing over States and over large chunks of area to draw common universal conclusions.

1.5 The other purposes of assessment

Assessment in our country performs another very important purpose. Most assessments are used for ranking children, ranking institutions and simultaneously sorting out children into categories for helping the system decide their future paths. Even in elementary schools, the assessment data is used to weed out those children who have not performed very well. This cannot be the primary purpose of assessment in education. The nature of the assessment needed for providing constructive feedback to individual student or a group and the community should be very different. The assessment of that kind has to motivate them and to help them. The filtering out assessment has also to be different from the feedback for a teacher that helps her think as how to improve his/her classrooms. Our present assessment procedure does not appreciate this sufficiently. The

nature of tools made is quite inappropriate for the purposes that they are stated to be used for.

In discussing assessment as well as helping teachers construct new questions and tools we do not go over these issues. Discussions center around glib terms like formative evaluation, summative evaluation, comprehensive and continuous assessment and so on. It is clear that an exercise of continuous and comprehensive assessment would need the focus on trying to understand what children know, as much as it could try to focus what they still have to learn. The discussions in interactions usually stay around importance of giving grades rather than marks and ranks but the major point is yet deciding the right and wrong answers. At best the main focus of assessment can be described as an attempt to get a feel of where any child is placed and therefore the patterns of answers and responses are not observed. It is these patterns, particularly where the answers are not as per the expectations of the teachers that indicate the gaps and the need for emphasis. Therefore plead for a serious re-examination of the assessment process in which the emphasis should be on analysing the answers given by children for different questions and tabulating them to get a feel of the range of the answers and the nature of the departures from each other.

Assessment by the Teacher

This assessment is different from the large bench marking, base line or project based assessments. It needs to be rooted in the teaching-learning process of the classroom.

It is clear as mentioned earlier also that a teacher should not make an assessment for the objective of ranking children or declaring them unable to learn. The two purposes that can be fulfilled by this assessment of the effort and understanding of children are (a) review of teachers own performance (b) the assessment of teaching-learning methods, materials and curriculum. This includes textbooks, expected syllabus outcomes, suggested methodology etc.

There is no process in place at the moment that encourages this. No easily usable analytical tools are available for the teacher to observe her own classroom interaction and processes of relating to the students. The only mechanism available is of having someone examine her delivery, her writing on the blackboard, her following of the teaching plan, and her manner of introducing and summing up. None of these include the children and expect them to add to the discussion. The parameters to observe have to be based on involvement of children, the nature of their participation, the extent of their learning and

the development of multiple capabilities in them. There is an inadequate preparation for this and appropriate modules that are simple and usable do not exist.

1.6 Helping and Supporting Children

Many suggestions have been made to support students who are lagging behind. Instructions are issued to tell the teachers what to do. They inform him/her that children should be provided help to cover up deficit whenever some of them are lagging. But how the nature and reasons for the deficit can be understood is never discussed. At best what gets tested is the ability of children to retain information and definitions or solve known questions. In the instructions issued, it is not envisaged that over time skill, concepts, facts etc will develop at rates among different children. There is no discussion of the expectations from the teachers as the backlog of learning increases. No clear instructions or suggestions are issued about the way to keep the records and about the nature of questions to be asked. It is not very clear to the teacher what finishing a unit implies. The key works following assessment even when we talk of continuous and comprehensive assessment are remedial teaching and helping children catch up. The focus is always on the so-called slow learners. The design of the assessment is to identify weak 'sick and unwell' children lagging behind and to give them extra work. It is not to uncover how they think and scaffold their process of learning.

The performance of children has many aspects that influence it. The expectations of the curriculum from children and the nature of textbooks are some of these. At the moment we have no way by which we can use the feedback from what children are able to do in the tests as an indicator to inform the curricular designer or the textbook writer about the extent to which children can be expected to interrelate concepts, abstract ideas and formulate conceptual structures in their mind. Teachers are neither trained nor encouraged to give feedback on the materials and no support is provided to them to analyse interaction between the textbook and the children critically. The process in which teachers are involved to review syllabus and textbook are restricted to finding typographical errors and making grammatical corrections. The overwhelming evidence and experience that teachers have is not sought to be concretized into useable view point.

1.7 The Requirements from Assessment

We can go on in greater detail about the nature of these assessments and the principles that need to be observed when pursuing them. The results from students' performance in our large monitoring systems in States should be analysed for bringing out patterns in administrative functioning of officers and the relationship of these patterns to students learning and performance. They should be analysed for the extent of content in terms of information, skills, concepts etc. that has been included. If we analyse the answer scripts of children we can learn many other things as well. These are essentially in terms of what most children have learnt, where they are making mistakes, what is the nature of mistakes they are making, what could be the possible reasons for these mistakes and so on. Obviously this process needs to be repeated for different sets of children and at different times. It cannot be aimed as an interaction to rank their learning ability as individuals or as a school. It is clear that the performance in tests should not lead us to make the false conclusions that the child is dull, she is a slow learner, has deficient background or she is incapable of making efforts etc. It should also not lead us to conclude that teachers do not want to teach, do not want to work and need to be policed. If assessment has to add to learning, the test instead of focusing on what they do not know should attempt to find what children have learnt, what could be the process by which they have learnt, what changes need to be made in the curriculum textbooks and the strategy and so on.

We also need to have some process for reviewing performances of teachers. The obvious question is how do we set parameters for it. All attempts so far have been limited to the comparison of performance of children in their final examinations, in particular, board examinations. This has obvious limitation. The effort through the Minimum Levels of Learning Programme included this strongly. The programme quite arbitrarily proposed that a certain level of abilities would have been necessarily learnt to a certain level of competency by a certain percentage of children. Not only did this gloss over the tremendous variations across teachers, across communities, villages, schools, clusters, blocks, districts and the States', it also did not provide a clear notion of what learning meant and how to 'test' whether the particular item of competency has been achieved or not. MLL was proposed as a basis to modify the curriculum including the expectations, the textbook, the learning process and the assessment. This idea, however, has gaps in terms of a reasonable definition of competencies that are overarching and like goals. They cannot be the details of the syllabi.

The purpose of assessment is to be an indicator of the learning and not be restricted to what has to be learnt. It cannot define the syllabus. And the purpose of learning is not merely to perform well in an assessment test. We need to always be aware in our monitoring exercises and assessment procedures that they should not be directed at finding failure but rather at understanding processes and analysing the data to find mechanism by which learning can be improved. The aspects that are to be examined in such processes would include the curriculum and material development processes as well as the administrative systems. Greater care needs to be taken in defining 'competencies' and constructing questions and tests as tools to examine learning. Our current exercises largely have memory based or algorithm based questions.

2. PRESENT STATUS AND CHALLENGES

2.0 Introduction

The present system of education revolves around the examinations. Parents, teachers, students, school authorities, public representatives, all are anxious about getting ranks and marks in the board examinations only. The present system of education is information loaded and bookish. The examination system also assesses the same. Assessment is reduced to examining only the academic skills. We are not assessing the over all development of the child, but assessing rote memory skills, recording and reproducing skills. Therefore, before taking a stand on effective assessment procedures let us see present status and challenges of assessments.

2.1 Present Status and Challenges

- Encourages rote memory
- Marks oriented
- Education system becomes exam oriented
- Textbook, content oriented, information testing
- Less space for thinking, analysis and self expression
- Creates lot of stress, anxiety and fear among children, parents and teachers.
- It does not test the ability and competencies of learners.
- Some of the areas of subjects and co-curricular aspects are neglected because they are not being tested.
- Exams are broadly used for blaming and labeling the children.
- Exams become an end product. They are not used for any insights into thinking about the curriculum, syllabus, textbooks, teaching learning process etc.
- Board exams are not conducted in a child friendly manner.
- Implementation of CCE has become a business proposition and its true spirit is lost.
- There is more rigidity less scope for flexibility.
- Less usage of ICT in examination system.
- Unscientific evaluation processes are used in board exams.
- No transparency, lengthy process in obtaining answer sheets.
- Creating unhealthy competition which takes children away from enjoying their childhood and creativity.
- Entire Teacher Learning Process becomes exam oriented. Interactions, brain storming sessions disappear.

- Importance of textbooks gradually decreasing.
- Lot of variation in children performance when compared in school evaluation and external evaluation.
- Nature of questions is not open ended, mostly depends on paper – pencil tests.

2.2 What SSC Board Exams Text?

In the state of Andhra Pradesh conducting SSC Board examinations is a prestigious task for entire school education department and especially for the government of Andhra Pradesh. Even the District Collector believes that getting better rank among other districts if possible 1st rank of their district gives them credential for their performance. Bureaucrats, politicians, headmasters, teachers and parents show keen interest in getting best result by designing 40 days programme, special study materials to make children well equipped with ready-made answers. SSC Board conducts examinations by imposing Section 144 at examination centers, under tight police security. (No police security at examination centers in the states like Kerala) The process of examination goes on easily for 15 days. The students have to write 11 papers for 6 subjects. Measures will be taken to arrest leakage of examination papers, mass copying by appointing observers and flying squads. And after examination they try to release results within 45 days. There is lot of exercise down to earth in conducting and declaring of the examinations. But there is not much care taken in preparing “reliable” examination papers to test defined competencies and broader circular objectives, even within the cognitive domain. The examination papers remain seriously problematic in the following ways:

1. Repetition of identical (or very similar) questions from year to year. These questions give scope for question banks and study materials instead of textbook reading. Students read only FAQs but not the textbook content.
2. Giving much scope for very short answers, short answers and essay type questions with ambiguous phrasing of questions or questions phrased as write a “note on”, “Describe” etc., gives no scope for critical analysis and expression.
3. Except Hindi all other subjects are divided into two papers. Each paper carries 50 marks. (Subject 35+objective type 15 marks). They are designed to test a detailed memorized knowledge of textbook rather than the competencies and core concepts. There is no scope for thoughtful reflection on test items.

Question paper sets from the most recent March 2011 of class X grade exams conducted in the State by SSC Board were collected for detailed study.

Irrespective of subjects in each paper 1 mark, 2 marks, 4 marks questions in part - A for 35 marks and other 15 marks in part-B (mainly MCQs, Fill in the blanks and match the following type) will be given. This is the fixed structure of question paper.

These papers are against the way natural learning takes place. Only textual information is tested in all the languages i.e., Telugu, Hindi, and English. In all the languages, questions on letter writing, essay and comprehension there are fixed test items they again and again repeat. The teachers will give the notes to write a Letter and an Essay, the students will reproduce the same.

In the case of Letter writing in all the three languages the nature of letters will be like this, "Invite your friend to your sister's marriage", write a letter to your friend about the movies you have seen, write a letter to the authorities for providing facilities in your village. In the case of Essay writing topics like environment and population, National Integration, benefit of education, AIDS, Library, Discipline, etc., from this bunch only questions will be given. Students read it from the study material and reproduce the same. The answer scripts from all the schools are almost the same. It indicates how the creative expression of the children is chopped down with these test items.

Passages chosen to test English comprehension routinely cater to students from a particular class which is fluent in English, urban and conversant with western practices. Note the extract provided below.

(Q. 22 of English medium English Paper – II – March 2011)

Q. 22. Read the following advertisement which appeared in a newspaper.

Essay Data Entry Job (Visakhapatnam)

Hurry! Golden opportunity to earn easily from home by simple posting of advertisement for us. Earn up to Rs. 18,000 + (per month).
Enroll TO DAY and Start earning

To learn more about your job profile visit us at
www.easyjob4earn.com or email us at info@easyjob4earn.com

Reply to: anirbandas_1234@yahoo.co.in or

Contact: +919007466506

Write a letter to the address above, applying for the job. State your qualifications along with other details which you consider would be in your favour.

Would this make much sense to a rural student? In place of postal address only e-mail address was given. Students will be confused with this. Rural children may not know about e-mail. They only know about postal address. More over the name of data entry job also not familiar to many rural students. Their knowledge about jobs should be different. This is nothing but denial of social justice. Social justice demands that rural and small town population be given (bows ever belatedly) the opportunity to benefit from the newer engines of economic growth.

Class X science examination paper also has some specific patterns. Paper-I of science, which deals with physics and chemistry has very vast syllabus. Paper – II Biological Science is having very less syllabus. But both the papers are assigned equal marks. To gain good marks certain definitions, principles, formulas, values of quantities, diagrams, uses, examples, classifications etc., are memorized by heart by the students. The nature of questions in the examinations also revolves around these only. Some of examples of March 2011 Paper – I and Paper – II are given below.

‘Distinguish between inertial and a non-inertial frame of reference? Mention some of the trivalent and pentavalent elements? Define magnetic flux density and intensity of magnetic field? What is external fertilization? What is mucous gland? Give an example? Write a brief account of adrenal glands?’

All these questions do not give any scope of exploration and problem solving ability of children. They test only memorized facts of text book. They are also not given any scope for the application of knowledge in real life situation. They also suffer from ambiguous phrasing of questions or questioned phrased as in ‘Write a brief account of X or Y(which forces the students to pour all they remember from the textbook on that topic).’

There should be a shift away from answers usually requiring little more than familiarity with often –obscure and peripheral statements like what is mucous gland? Give an example? It is nothing but zooming on transient information.

Observe the following 4 marks questions.

- Q(19) **What** are the differences between asexual reproduction and sexual reproduction?
- Q(20) **What** are the modes of HIV transmission?
- Q(21) **What** are the effects of Kwashiorkor on children?
- Q(22) **What** first –aid will you render for fractures?

Monotony appears in framing the questions. All these questions start with what? The answer to what?, is nothing but testing the textual information. These questions do not give any scope for thought and reflection. Questions are not thought provoking and not challenging? Instead of 'What are the effects of Kwashiorkor on children? The question may be reframed like 'Give 4 precautions to prevent effects of Kwashiorkor on the children?' Instead of 'What first-aid will you render if you see a fracture?' The question may be reframed like as, 'While you are passing through the road a cyclist falls down and hurts his leg badly. How would you help him immediately?'

All the mathematics questions were drawn from the exercises of the text book, without changing even the numbers. Mathematics teachers focus mainly on drilling sums which appears again and again in exams. There are some specific chapters like Sets, Functions, Matrices, Statistics, etc., which are easy for children for their practice. The chapters which need lot of reasoning, logical thinking and correct representation of data (linear programs, Trigonometry, Analytical Geometry) they leave them under choice. Even the child does not know anything from these chapters they can score cent percent marks. The sums given over a period of 5 years are repeated again and again. So teachers and students focus on that and get good marks; they even leave a greater part of the syllabus of the subject. In Mathematics also they ask definitions. See the example below.

Paper – I

Q: 1) Define implication and write the truth table.

This type of questions test only memorized facts. The following are some of the Frequently Asked Questions (FAQs).

Q: 1) If $a^{\frac{1}{3}} + b^{\frac{1}{3}} + c^{\frac{1}{3}} = 0$, show that $(a+b+c)^3 = 27abc$.

As they repeat, the teacher asks the child to learn by heart step wise or practice it several times without knowing the process and the reasoning lying behind the steps. This is quite against the nature of mathematics. This gives scope for sustained drill and produces a culture that does not test core concepts and competencies of mathematics.

In Social Studies also the situation is not different. The test items test only memory of the students eg: Q:20- Paper – I, 'Describe the election procedure in India.' For this question the students reproduce the information learnt by heart from the textbook. If this question is framed as 'Analyse and write about the elections in your village carried out as per the election procedure of India', then the student will express his opinion by comparing and contrasting with the original election procedure and the elections carried out in the

village. Let us see another example of Paper – I Q. 17 – ‘What are the aims and organizational set up of League of Nations?’ To answer this, students list out a bunch of aims. It is only information. If it is changed as, ‘Why League of Nations failed to acquire its aims?’, then the students think and reflect on the reasons of failure.

Even in Map pointing they will give A.P., India and World maps as last question in which students have to identify certain places.

Thus all examination questions focus largely on rote learning and leave very little space for reflecting thinking.

2.3 National Curriculum Framework – 2005 (NCF-2005)

NCF-2005 makes it clear that the ‘one-exam-fits-all’ policy is not child centred and we need to introduce flexibility in our examination system. It should also keep pace with the changing times. We need to encourage ‘oral testing and group work evaluation’. According to NCF 2005, “Open-book exams and exams without time limits are worth introducing as small pilot projects across the country. These innovations would have the added advantage of shifting the focus of exams from testing memory to testing higher-level competencies such as interpretations, analysis and problem-solving skills’ (p. 115). NCF focuses on the following issues of assessment:

- School based assessment.
- Implementation of Continuous Comprehensive Evaluation (CCE).
- Paper setting needs drastic reforms- the focus should shift from ‘question setting’ to ‘paper setting’. Questions should be categorized according to level of difficulty, topic area competency being evaluated and usage being recorded.
- Use of multiple choice questions widely because reliability of quick evaluation, avoiding copy, coverage of entire syllabus.
- Exam systems need to be more flexible.
- Do not expect everything of every body in each and every subject.
- In the long run the system must gradually move towards taking exams when the candidate is ready rather than the convenience of the system.
- To reduce the stress and anxiety and adoption of more comprehensive credible system of internal assessment.
- A long term move toward open book exams can be envisaged.

- Eliminate the term word “FAIL”; the word ‘fail’ should not appear on marks sheets. This should be replaced with the phrase such as unsatisfactory, better, need more work to attain defined standards.
- Elimination the pass, fail concept by permitting repeated retakes.
- Transforming and honesty in mark / grade reporting.
- Capacity building of examiners.
- Usage of ICT.
- Board Examinations in India need serious re-examination.

2.4 RTE-2009

Right to free and Compulsory Education Act – 2009 insists on no board examinations for the classes up to VIII class. It is also stressed on the following.

- Implementation of CCE.
- Tension, fear free examination system.
- Assess the children ability to understand the knowledge and apply in new situation.
- Proper valuation and recording.
- Sharing the results with parents in PTA/SMC meetings.
- Conducting special classes to those who are lagging behind.
- No board exams up to VIII class.

2.5 A.P. Experiences – Some Innovations in Assessment

Under DPEP and SSA quality initiatives the following reforms in assessment procedures are practiced in Andhra Pradesh. They are:

- In addition to paper pencil test, oral test, project work, experimentation and performance have been introduced.
- Nature of subject, nature of learning taken into consideration in the process of evaluation.
- Nature of test items have been changed to open ended and analytical; competencies based test items are developed.
- Exams have been conducted with teacher generated question papers.
- In place of marks, grading system has been adopted.

- Competency wise levels of the children identified and practice of further improvement provided accordingly.
- Sharing of children performance with parents.
- In addition to examinations to assess continuous programme of the children portfolios, anecdotes, innovative activities (post box, wall magazine, children diary, teacher diary etc.) have been introduced.
- Competency wise monthly basis children performance tracking mechanisms have been evolved.
- Every school maintains a special register to record children's performance.
- ICT is being used in tracking children performance.
- To improve the school performance identification the process indicators and grading the schools accordingly.

Need for Reforms

In the light of present status and challenges and previous experiences, there is a need for reforms in assessment procedures.

- To reduce the burden on children
- To avoid stress, phobia, tension among children, parents and teachers.
- For more meaningful, child friendly and development oriented system
- To avoid monotonous evaluation / exams.
- For external resources for assessment
- Organization of board examination in more scientific and meaningful manner.
- To assess the all round development of the child and plan for further improvement.
- To create a policy for CCE.
- To fulfill the needs of social justice.
- To improve the quality of question papers.
- To bring flexibility and decentralization in the system.
- Space for full disclosures and transparency in grading, marking and reporting system.

- Spirit of RTE-2009 and NCF-2005.

2.6 Where do we want to move from here:

- Assessment away from testing rote memorisation
- Assessment away from labelling as failures
- Assessment away from looking for only a few abilities
- Assessment away from finding what children do not know
- Assessment away from ranking children as first, second ...last.
- Assessment away from making students compete with each other.

2.7 Move towards

- Assessment to look for conceptual understanding
- Assessment towards finding what the child knows
- Assessment towards engaging children in meaning group or individual tasks
- Tasks in which they can do something
- Tasks in which they can contribute
- Tasks that challenge children slightly but not swamp them
- Tasks that are interesting and require creativity
- Tasks in which they are simultaneously learning.
- Assessment for including all in education
- Assessment for making all children feel they can learn

2.9 Needs for that to happen

For these things to happen, we need to do many small and some really big things. We need to change teacher attitudes, systems of evaluation, report cards, reporting systems, get support from the community, have strong PTAs among other things. We also need to understand children better; appreciate they learn language and learn to structure space on their own. We also need to appreciate great diversity obtaining among them and different strategies they use to learn and express themselves. We need to avoid saying such things:

- Two months have passed she still does not know anything.
- She has no 'sanskar' how will she learn.
- She does not want to make an effort.
- Look at her friend she is so quick but that one...

3. NATURE OF KNOWLEDGE AND ITS IMPLICATIONS FOR ASSESSMENT

3.0 What is knowledge?

To answer this question, we quote from NCF-2005 (p. 25) at some length. It says that, “knowledge can be conceived as experience organized through language into patterns of thought (or structures of concepts), thus creating meaning, which in turn helps us understand the world we live in. It can also be conceived of as patterns of activity, or physical dexterity with thought, contributing to acting in the world, and making sense of things. Human beings over time have evolved many *bodies of knowledge*, which include a repertoire of *ways of thinking, of feeling and of doing things*, and constructing more knowledge. All children have to re-create a significant part of this wealth for themselves, as this constitutes the basis for further thinking and for acting appropriately in this world. It is also important to learn to participate in the very process of knowledge creation, meaning making and human action, i.e. work. Conceiving knowledge in this broad sense directs us to the importance of examining knowledge in terms of not only the 'product', but also the underlying principles of how it is created, how it is organized, who accesses it, and what it is used for. It suggests that in the curriculum, there must be as much focus on the process of learning, on how learners engage with and reconstruct knowledge, as on the content of what is learnt.

If, on the other hand, knowledge is regarded as a finished product, then it is organized in the form of information to be 'transferred' to the child's mind. Education would concern itself with maintaining and transmitting this store - house of human knowledge. In this view of knowledge, the learner is conceived of as a passive receiver, while in the former there is a dynamic engagement with the world through observing, feeling, reflecting, acting, and sharing.

The curriculum is a plan to develop capabilities that are likely to help achieve the chosen educational aims. The range of human capabilities is very wide, and through education we cannot develop them all. The concern is therefore with those that are necessary and significant in relation to our aims, which offer potential for further development, and for which we have some pedagogic knowledge.” (NCF-2005)

Knowledge is constructed in a social context. For various subjects the nature of knowledge is different. It is discussed in detail in the next section.

3.1 Nature of Knowledge in Different Subjects and its Implications for Assessment

The nature of different subjects and their knowledge systems are different. Learning takes place as per the nature of subject and nature of the child. Therefore, the assessment systems also have to be different for different subjects. Variety of ways may be selected for the assessment of the knowledge of various subjects.

Languages

The position we subscribe to in the case of language has been most eloquently stated in NCF 2005 and its Position Papers of Indian Languages and English. This is largely true of other subjects also. We reproduce the main points as they are:

- All children unless they suffer from some mental deficit acquire one or more languages before the age of four effortlessly if a caring environment is assured. The fact that children can internalize the complex structure of human language at the levels of sounds, words, sentences and meaning at such a young age shows that they are born with an innate Language Faculty.
- Language is generally regarded only as a tool for communication by most common people. It is viewed by professional linguists as a pairing of lexicon and a set of syntactic rules where it is systematically governed by different rules at the levels of sounds, words and sentences. But again this does not give us a complete picture. Language should be examined in a broader framework so that it can be useful for teachers, teacher trainers, textbook writers, curriculum designers and educational planners.
- It is difficult for us to imagine either individuals or societies without language. Language is actually constitutive of our identity and helps us to relate to other members of the society and nature. The representation of both society and nature in our minds is mediated through language.
- Language is the unique characteristic of human beings. It is the vehicle of thought. We use it for thinking, problem solving, play, dreaming, interpreting, communication of emotion and to share information. We use it not only for talking to others but also for talking to ourselves. We should also appreciate that language is closely tied to our social attitudes and to the power relations in society.

- It is extremely important to understand that all children become linguistic adults by the age of four. No parents or relatives consciously teach languages to their children. Children acquire extremely complex and rich systems of rules that govern language at the level of sounds, words, sentences and meaning. Not only that, children also acquire the communicative competence to use suitable language in appropriate contexts.
- It should be clear from the above that children are born with an innate Language Faculty to learn languages. We may note that many children learn not just one language but all the languages that are there in their environment. It therefore follows that if we can combine innate language faculty with rich exposure and caring and loving environment language learning will automatically take place.
- The awareness that there is an innate language faculty has important pedagogical consequences; given adequate exposure children will acquire new languages with ease if we provide sufficient opportunities for rich exposure and careful reflection. Our teaching should therefore focus more on meaning than grammar.
- Nobody teaches language word by word or sentence by sentence but children acquire knowledge informally by participating in meaningful situations. We should not expect an instant translation of input into output in language acquisition. Children will speak when they are physically and cognitively ready to do so and when there is a suitable context to say something. Mechanical and meaningless drilling that forces children to reproduce rote-learned language is a waste of effort.
- Language acquisition progresses in a spiral or cyclic mode and not in a linear and additive mode.
- Language is acquired not through repetition but through recurrence of linguistic facts in need based and meaningful discourses.
- Language is acquired not through isolated words and structures but through clusters of linguistic expressions involved in the reception and production of discourses.
- Language acquisition can take place only in a collaborative environment [cf Vygotsky, Bruner] where the child gets ample opportunities to get involved in interpersonal and intrapersonal communication.

- Teachers and parents must have patience. It is important for them to understand that in the beginning there may be lot of input required and children may not show much output. There is always a period of silence in the process of acquisition. Once the child is cognitively and physiologically ready, output is always greater than input.
- There is no order in language learning for e.g. sounds - words – sentences i.e. there is no linear order of this kind. Child acquires language holistically *not* from parts to whole. A child participates in a comprehensive discourse and from there goes on to create individual systems of sounds, words, sentences and meaning.
- Child internalises the meanings of the words through contexts in which they are embedded, participating in meaning making process.
- Child can produce an infinite number of sentences with limited and known vocabulary as the situation demands.
- The child needs a comprehensible and challenging input. Comprehension is essentially a mental process. There may be several things that help an individual while she is listening to other languages (things like the context, the communicational expectancy familiar words, gestures and so on)
- Questions given in the examinations generally test rote-learning.
- Current examination system particularly in languages addresses only the issues of content and rote learnt grammar and does not pay attention to the imagination and creativity of the child.
- Assessment is only done through written form. Speaking skills and listening comprehension are often ignored. Test items of the examination are limited to questions, fill in the blanks, match the following etc.

Mathematics

- Mathematics as an expression of the human mind reflects the active will, the contemplative reason and the desire for aesthetic perfection. Its basic elements are logic and intuition, analysis and construction, generality and individuality.

- Mathematics is the result of the human mind's ability to abstract from life. Created by the mind to count, numbers have no relationship to the individual characteristics of the objects being counted.
- Mathematics does not limit itself to such abstractions. It uses such abstractions to build many more abstractions, for e.g. even numbers, odd numbers, prime numbers are abstractions, building on the abstraction of numbers. Thus, Mathematics learns from human experiences, but its growth and progression is not dependent on them; what it relies on is logic and creativity of the human mind.
- Mathematics studies number and space and the network of relations obtaining between them.
- Mathematics uses both deductive and inductive reasoning to build itself. When statements or propositions are based on a set of observations and experiences, drawing on patterns observed and generalizing from them, such reasoning is called inductive. The basis of an inductive generalization is thus a collection of empirically verifiable statements.
- Mathematics uses both deductive and inductive reasoning to build itself. When statements or propositions are based on a set of observations and experiences, drawing on patterns observed and generalizing from them, such reasoning is called inductive. The basis of an inductive generalization is thus a collection of empirically verifiable statements.
- When reasoning is deductive it uses a given set of statements which we assume (premises or definitions), self – evident truths (axioms and postulates) and logic.
- Two forms of reasoning need to go hand in hand. We observe a phenomenon, notice a pattern in it and inductively generalize from that. Then we can attempt to establish it deductively (i.e., to prove it), using the available body of knowledge as base. Hence for the subject to advance there must be an opportunity for knowledge obtained to be organized, linked and gradually introduced. This is true at every level of learning of the subject, from school to research.
- The distinction between inductive and deductive reasoning also underscores a subtle difference between Science and Mathematics; for in Science most reasoning is inductive.

- Assessment is a major area of concern in the Indian education system. Whatever be the quality of teaching, textbooks, classroom, school leadership and so on, in the end it comes down to assessing the child.
- It is important that assessment should be based on more than just computational ability and committing to memory many formulas and solved problems; an assessment system must also test for conceptual understanding.
- One's ability to ask questions, to pursue questions and to explore gets blocked as a result.
- We need to change modes of assessment (mathematical abilities and the inner growth of the child should be the focus, rather than procedural knowledge or knowledge of facts and formulae). We also need to change Board examinations to reduce failures in Mathematics and focus on real mathematical abilities rather than rote learnt formulae and sums.

Science

Knowledge creation in science is through observation of phenomenon, experimentation, observations again, establishment of relations, cause and effect relationships, exploration and discovery. The natural inquisitiveness, urge to find out answers to the problems, questioning the observations etc leads to the development of knowledge in science. Thus science is not memorizing the facts, principles, theories and reading discipline knowledge for the sake of information but to question, build hypothesis, collect data, analysis, drawing inferences, this is the scientific method. Therefore, science learning should focus on undertaking discovery, creation of knowledge through various investigative processes. This may be questioning the existing knowledge or creation of knowledge. Therefore, the assessment procedures should reflect processes of learning in addition to product of learning. The assessment will be incomplete if the testing is through paper – pencil (written test).

The following assessment methods / tools may be used in assessing children performance in science.

- Observations and Recording
- Experimentation and Recording
- Project works
- Field base investigations

- Discovery through exploration
- Drawing, model making and explanation etc.

Social Sciences

The knowledge in Social Sciences establishes relationships across the Geography, History, Economics and Social and Political aspects.

- A number of disciplines (like history, geography, economics, political science, etc) each with their own distinct methodologies and perspectives constitute Social Sciences. While respecting the distinctiveness of each, it is also necessary to develop inter-disciplinary perspectives to arrive at a holistic understanding of social issues.
- Social Sciences study different aspects of human life to understand social phenomena and also help us in determining normative priorities and policies. They therefore cannot be divorced from the debates on 'what ought to be'. Thus Social Sciences strive to simultaneously nurture subjectivities and a broader impersonal vision of the world. Thus, they seek to foster sensitivity and empathy on the one hand and a high degree of rigour in studying social issues, on the other. They study society by using rigorous methods which are both quantitative and qualitative. In quantitative approach social phenomena are studied through quantifiable evidence where in statistical procedures are adopted to create valid and reliable findings; generalisations are made after studying many cases. In qualitative approach social phenomena are studied through direct observations, direct and indirect interaction with participants, analysis of texts and documents etc.
- The methods employed range between surveys or cross-sectional studies of in-depth analysis of individual units, contemporary issues to interrogation of historical documents.
- Another important feature of social sciences is that they always advocate multiple perspectives approach as human phenomena cannot and should not be understood from only one point of view. Any social phenomena affect people differently depending upon their social standing. Thus multiple perspectives approach gives voice to diverse points of view. In doing so it can be said to operate on a democratic principle. Multiple perspectives approach is more

holistic and comprehensive as identification and utilization of various sources / points of view will help in development of analytic and critical thinking.

- Since Social Sciences involve such a high degree of subjectivity built into their inquiry, it is imperative to critically examine the subjectivities that shape them. Thus an important part of social science inquiry is an inquiry into itself, i.e. an inquiry into the history of the disciplines themselves.
- While Social Sciences have the common characteristics outlined above, the different disciplines coming under it have developed vibrant and divergent methodologies and perspectives. The very idea of grouping them together under the nomenclature of 'Social Sciences' is a rather recent one.
- History as a discipline focuses on understanding social change over time and not only seeks to explain that change but also to understand how the change affected different social groups differentially and how that change was perceived and portrayed down the ages. Since history seeks to uncover the past by interpreting the sources of information, it places great value upon critically evaluating and using the sources of information.
- Geography seeks to understand spatial patterns in social phenomenon in general and to explain spatial variation. An important component of this investigation is the relation between the natural environment and society.
- This has brought geographic studies of regions and regional development to the fore once again away from its previous focus on resource distribution and physical determinism. Geography has thus been transformed into a dynamic Social Science discipline with immense contemporary relevance.
- Spatial variation is typically depicted on a map and the skill of interpreting and making maps of varied kinds is essential part of the training that geography education provides. However, maps need to be seen more than a mere skill of depicting information. Cartography is deeply embedded in the history of Geography and its social contexts. The major drive behind mapping the entire earth comes from the colonial need to access resources of the entire earth and gain control over all the peoples of the world.

- 'Social-Political Life': This is a relatively a new theme in school curriculum which seeks to provide inputs to the budding citizens to understand the socio-economic and political world in which they live in. It thus draws from a number of Social Science disciplines like sociology, economics, political science etc. It also takes up the major challenge of addressing normative issues like plurality, equity and justice. It thus combines in itself a dual objective of developing basic tools of social, political and developmental analysis and fostering the humanist values enshrined in the Constitution of India.
- Evaluation should not be focused on just one aspect such as ability to retain and recall information. It is necessary to bring a range of skills such as reasoning, extrapolating, exploring causal factors, comparing, summarizing textual information, surveying, discussing, representing information, etc.
- CCE should necessarily be an 'open book' and collective affair even in the secondary stage the possibility of having an open book evaluation should be explored. However, open book evaluation requires a very creative task setting which focuses on the basic objectives of social science teaching.
- Core of Social Science education lies in strengthening the subjectivity of the learner so that she or he may enrich her or his own unique contribution to the society. Thus evaluation in Social Sciences has to engage with the issue of judging subjective response of the students. It is pointless to insist on all children to memorize the same answer and writing them down in the exams in the same manner.

What do we need to do?

- Special orientation is to be given to teachers on continuous comprehensive evaluation and its procedures.
- In addition to exams and assignments, pupil participation in the class, peer group work, participation of children in co-curricular activities etc. are also to be used as assessment tools.
- Imagination, creativity, achievement levels, usage of content knowledge should be assessed instead of content based and memory based test items such as questions, fill in the blanks, match the following....
- Test items that provoke thinking and self expression should be given, For example,

1. What would you do if you were in the place of Rabbit?
 2. What would Rabbit do if it happens to face an elephant?
 3. Extend the story or conclude the story.....
- We can use the following as evaluation tools in the assessment procedures.
 - Portfolios.
 - Anecdotes (Record of specific details of pupil)
 - Participation in different discourses and extra-curricular activities
 - Language games
 - Report preparation and presentation
 - Participation in various language development activities.
 - Performance reviews and book review etc.
 - Assessment should be based on the objectives of language teaching such as language items, empowerment of language skills, expression skills, literary interest, positive attitudes, aesthetic feeling, culture and customs, translating skills encouraging and appreciating creative writing etc.
 - In brief, teaching and assessment procedures should ensure the growth of cognitive, social, aesthetic and moral aspects of a child's personality.

4. PROCESS OF ASSESSMENT

4.0 Continuous and Comprehensive Evaluation (CCE)

Assessment is the most important aspects in the entire Educational processes. It provides information on the progress of children learning achievement and also influences the teaching learning processes. But unfortunately the present assessment procedures exert pressure and fear on children and as well as parents. The schools mostly deviated from their crucial purpose of achieving important educational aims and developing children in a holistic manner and remained confined to preparing children for examinations. In this context, NCF 2005 and RTE 2009 recommended for appropriate curricular and examination reforms and for the implementation of continuous and comprehensive evaluation. The CCE refers to assessment of physical and mental development along with development of knowledge skills and various competences. This requires a variety of assessment tools and procedures. The assessment results help us in developing an effective implementation plan for the improvement of children learning outcomes and other developmental aspects.

The examinations being conducted at school level at regular intervals i.e., unit test, quarterly test, annual test, etc., never gives exact information on all aspects of children development and learning. It is unscientific and incomplete to expect and implement paper pencil tests to assess all sorts of competences being developed among children.

The holistic development of children can be assessed through the process of continuous and comprehensive evaluation. The school processes may also become part of CCE. The CCE leads to

- Reduced mental stress and fear of exams among children.
- Assessment will be complete and comprehensive.
- Teacher work for children development through comprehensive plan.
- Appropriate changes in teaching learning processes.
- Identification of learning problems / issues.
- Provides clarity to the teachers on how they teach and how to provide individual concentration for the children with learning difficulties.
- Assessment will become continuous through formative evaluation and helps teachers to adapt suitable strategies for teaching children who are lagging behind in certain subject specific areas.

Therefore implementation of CCE requires appropriate capacity building of teachers and educational supervisors, teacher educators etc. Following procedures are required to be taken up at school level for effective implementation of CCE.

- Implementation of project works, assignments along with oral and written test.
- Assessment is continuous under CCE. Therefore observation of children, participation in learning processes and assessment of their expressions and reactions is a must as a part of continuous evaluation. However certain weightages may be given for the performance of children for the formative evaluation in the board/annual examinations.
- The present process of selective preparation for exams by choosing certain units or certain questions may be discouraged by introducing the CCE as discussed above.

Challenges

Though prominence is given for school level and school based assessment, certain challenges are to be faced in its implementation which are as follows:

- Lack of comprehensive awareness among teachers on CCE and lack of proper and effective training.
- Lack of appropriate resource at school level for the implementation of CCE.
- Habituation of children, teachers and parents for the traditional examination processes such as memory based tests etc., is also a stumbling block for the implementation of effective assessment procedures.
- School based assessments lack standardization, reliability and validity and the results cannot be compared across the schools.
- Teachers feel additional burden for the implementation of various assessment tools, processes on a continuous basis through teacher made tests and recording.
- Maintenance of records on the performance of children comprehensively from time to time and inform parents may be felt as burden by the teachers and it may become mechanical over time.

- Teachers are not getting appropriate support, encouragement and guidance in this regard.
- The lack of knowledge and idea on CCE among the supervisory and monitoring staff leads to ineffective guidance, monitoring and supervision.

Assessment sources

- Assessing children's progress by way of analysis of day wise home work, activity sheets, participation in group work, etc.
- School based display of children's work i.e., children drawings, preparing tables, collection of information, classroom discourses, etc., are the sources for assessment of children performance.
- Model making, participation in quiz competition, elocution, essay writing, school based exhibitions, cultural activities, conduct of school days are the effective sources for the assessment of children competences in a holistic manner.
- The activities being implemented in the schools like wall magazine, children dairy, post boxes, children clubs, etc., are the rich sources for assessing the children performance and progress.
- The importance of school based tests may be enhanced by providing certain weightage to exams in the board examinations.
- School level experiments, field visits, practicals, investigation projects, etc., provide direct experience to the children and develop process skills such as observation, imagination, estimation, etc. These activities are the sources to test children knowledge in an experiential way.

Action Points

Following are the action points for the effective implementation of CCE at school level.

- Developing proper awareness and importance of CCE to the teachers, parents and supervisors.
- Capacity building of the teachers for developing appropriate assessment procedures i.e., oral, written, performance, projects, etc., as per the nature of the subject/curricular area and development of appropriate tools for assessment knowledge of scoring – marks/grades etc.

- Development of appropriate class specific/teacher specific plan and discussion with colleagues and parents and its implementation.
- Planning for an implementation plan for CCE and scheduling which includes tests, projects, field experiments, display, creative expressions, etc, and inform children and parents.

The Schools may consider the implementation of the following Processes:

- Children undertaking at least one project per month in each subject.
- Reading at least 25 books in an academic year by every student and write book review.
- It is a must for every child to participate in quiz, elocution, essay writing.
- Undertaking at least 5 experiments/ investigations and record / document in the classrooms or outside the classrooms and give demonstration.
- Maintaining the child wise portfolios and recording the progress/comments on quarterly basis.
- Maintaining anecdotal records and record performance on quarterly basis.
- Providing 40-60% weightage to children performance of the school based tests in the board examination.
- Efforts to make educational supervisors and administrators as professionals in a sustainable way.
- Introduction of continuous monitoring and on job support to the teacher for effective implementation of CCE.
- Identification of good practicing institutions and individuals practical CCE and demonstration of successful practices to the teachers and supervisory staff.
- Recording children's progress in various areas is a must on the part of the teacher on a continuous basis so as to plan to support children.
- Replacing marks with grades, describing children performance rather than giving marks is a better option and provides clarity to the children and as well as parents on learning achievement across competences.

- Plan for conducting assessment online, based on the readiness of the children providing at least two chances per child in an academic year for testing himself/ herself. This may be taken up if schools are provided with computers.

The proposed school based CCEs comprehensive and more scientific and on the same time it is challenging too. However, implementation of CCE shall do away the examination stress, fear and anxiety among children, staff and parents. For this purpose, the teachers should be motivated, prepared and empowered along with supervisory staff.

4.1 Participatory Assessment

At present mostly the assessment of children performance is through individual teacher. This may be partially replaced by Participatory Assessment i.e., participants in the group/projects etc., by observing work done by the children, assignments, answer scripts, etc., way of this empowers children and assessment will become transparent. The performance of children in projects, group works, assignments, etc., can be assessed through participant children.

4.2 Peer Assessment

The assessment of answer scripts of one student by the other student will be more effective and improves the participatory levels and confidence levels of children.

4.3 Assessment through Community Members

Community members shall be involved in assessing the children learning achievement. Therefore, parents and community can play an important role in observing the children progress across the concepts and learning areas. The school can organize demonstration of children performance in reading, writing, and arithmetic before the parents and community parents on quarterly basis and make schools accountable to the community over children learning achievement.

5. TOOLS OF ASSESSMENT

5.1 Over all Assessment

At present assessment processes are mostly confined to the conduct of unit and terminal examinations assessing children performance in various subjects through written tests. As a result of scientific and technological development and growth of knowledge in various fields, new knowledge and resources on conducting assessment evolved in different subject specific areas. The ICT made available variety of resources for assessment being practiced across the globe. Different sorts of assessment procedures and resources make assessment more comprehensive and meaningful. Therefore identification and use of different methods of assessment in school education is a must in the present context and challenges. The various improvised assessment procedures may be used for not only assessing the information and the knowledge acquired by the children but also how effectively the students can apply acquired knowledge in real life situations. The selected assessments procedures in schools are as follows:

1. Text book based oral & written tests
2. These tests are re-conducted unit wise, and terminal in nature

5.2 Processes of Assessment in Different Subject Areas

The curriculum in school education constitutes various subjects such as languages, mathematics, science, social studies and other co curricular activities like health and physical education, work experience, art education, value education, etc. Every subject has its own nature and definite procedures for assessment of knowledge. The assessment of learning reflects the ways of knowledge construction and teaching learning processes, teaching learning objectives of that particular subject. The tools of assessment and resources also vary across subjects. The assessment shall focus on the achievement of subject specific expected objectives/outcomes. Therefore, in this background it is better to discuss the subject specific nature and resources for assessment.

Languages

Language is a source for thinking. Generally it is believed that children use language for expression and for listening and grasping. But creativity, comprehension, description, feeling, improving interest in the languages, imagination, personality development etc., also forms an important aspects of language learning.

Achievement of language objectives by the children is generally assessed through text book based questions and retrieval of information mostly through written tests. But this is an incomplete part of assessment of language abilities among the children.

Following are some of the assessment methods, processes and resources to be used in the assessment of language abilities among children in school education.

- Reading of children literature, library books, newspapers, etc., and understanding them and expression in their own words.
- Listening and understanding of news, lectures, talk and conversations from electronic media and in the social situations and reflect appropriately.
- Reading the given text, analysis of the text, giving title to the text, comprehending the text, writing summary of the text, book review, analyzing the nature of the characters etc.
- Comprehension of given stories, songs, poems, etc., and extending them. And rewriting them in their own way.
- Understanding the words in the given text and using them appropriately in the given context.
- Changing the text from one discourse to other discourses i.e., story to poem to dialogue etc.
- Understanding the given text in posters, pamphlets, advertisements, cartoons, etc., and reproducing them in different contexts.
- Performing, dramatization, character acting, local art forms, also can be used as assessment sources / tools.

Mathematics

Mathematics becomes increasingly abstract as we go from primary to higher classes. Much focus is given to logical proof of various problems in mathematics. The proofs with inductive and deductive reasoning are important aspects in mathematics learning and logic. Understanding various mathematical concepts, problem solving using different methods/algorithms, creating relations between numbers recognizing the patterns, theorization, expression in mathematical languages applying mathematical principles in real life situations to solve problems are the important aspects of mathematics learning at school level.

Therefore, the following resources and methods may be used in assessment of Mathematics.

- Activities relating to concepts.
- Teaching learning material available from local environment – different shapes and sizes etc.
- Mathematics games and puzzles.
- Understanding the mathematical problems and providing explanations for problem solving.
- Analyzing the results and recording correct information.
- Solving problems from newspapers, magazines and text books.
- Writing problems based in the day to day life and solving them.
- Preparing information tables, analyzing the tables, drawing the graphs, showing the relations and explaining.
- Undertaking maths projects.
- Developing hypothesis for the day to day problems and issues and proving or disproving the hypothesis based on collected information, inference and making generalizations.
- Analysis of mathematics being used by the Artisans in different traditional occupations – different mathematical methods being used by them.
- Using computers and going for online tests.

Science

Science by nature is related to observations, investigations, conducting of experiments, etc. Therefore, science learning shall include participation of children in different processes of investigation, observations and acquisition of different skills. The school science shall develop conceptual understanding, observation skills, analysis of information, hypothesizing for the problems/questions raised, and developing theory through inductive and deductive reasoning. Therefore, learning of science never is limited to explaining text book information but expose them to undertake investigations, explorations, out side the school in their environment duly implementing various teaching learning methods and improved assessment procedures.

The assessment procedure in science shall include:

- Raising questions and finding answers.
- Observation of different issues in the local environment and recording.
- Questioning the observed phenomenon and hypothesizing.
- Conducting experiments by using available science equipment in schools.
- Undertaking projects in science.
- Conducting field level investigations and explorations.
- Promoting discovery through experimentation and investigations.
- Developing models, drawing diagrams and explaining.
- Tabulation of observations and analysis.
- Children writings, tables, illustrations, developed material, etc are also sources for assessment.

Social Studies

The purpose of social studies for its introduction at school level is to understand various movements, local issues, social institutions and interaction of human beings with nature etc. This is a source for children to analyze and think critically towards social issues and improves the cognitive abilities i.e., analysis, synthesis, evaluation, critical thinking, creativity, etc.

The methods of social studies are used to study the society in a scientific way. The methods may be both qualitative and as well as quantitative in nature. Utilization of social studies methods for the study of communities and social issues provides correct and reliable results and leads to valid generalization.

Following are some of the methods and resources used in the assessment of children's performance in social studies:

- Information collection from individuals and institutions and tabulation and analysis.
- Analysis of evidences, reports, charts, information tables and studies.
- Collecting information from historical monuments and documents.
- Analysis of social, political and economic issues based on newspapers and magazines and being observed in society.
- Analysis of contemporary economic and social issues.

- Identify similarities and differences among the people living in different geographical areas and in terms of socio-economic areas and identifying geographical region/places in the maps.
- Identifying natural resources and needs of the people living in various geographical locations through maps and globes.
- Conducting projects, surveys and interviews.
- Using environmental charts, census charts, literacy data, day to day consumable rates as sources for analysis and reporting.

Co-Curricular Activities

Comprehensive Evaluation includes not only curricular areas i.e., languages, maths, science but also co-curricular areas viz., health and physical education, arts, crafts, work experience, etc. The assessment of co-curricular areas needs to be focused for holistic development of children. Generally, the co-curricular areas cannot be assessed through paper pencil tests and marks.

Following are the sources for assessing co-curricular areas.

- Recording children performance through audio-video equipment.
- Display of material developed by children – drawing, art, illustrations, models, etc.
- Conducting exhibitions by children, participating in cultural activities – song, dance, yoga, etc.
- Using rating scales.
- Creative writings, creative expressions, demonstrations.
- Anecdotes, portfolios etc.

The resources for evaluation as discussed above under various curricular and co-curricular areas may be used in addition to collaborative activities, group works fairs, melas, children clubs and conduct of different activities on school days and other important days sharing the experiences. The innovative activities may be conducted in schools for children participation and expression such as post box, children dairies, wall magazine, children note books etc., The creative expression of children, children interest, attitudes, etc., can be assessed through the above activities.

6. Recording, Reporting and Sharing

Recording of the progress of children's learning achievement is one of the important areas in the process of assessment. The results should be analyzed with children and future plans made accordingly for further development. Similarly information on progress of children performance over base line may also be shared with parents at regular intervals. RTE ACT 2009 categorically says for conduct of CCE correction of answer scripts, recording the progress and sharing during the parents meeting and organizing special training program for the children who are backward in academics.

6.0 Situational analysis

Following observations may be made about the implementation of CCE in AP:

- Non correction of answer scripts in certain schools and awarding marks and grades.
- Maintenance of progress cards and sharing with parents is not at expected levels.
- Verification of valued answer scripts by the children, discussion on the answer scripts, sending them to the parents are rare phenomenon.
- Awarding marks or grades without reading the answers written by the children.
- Expecting pre-determined answers in the form of key being followed in the examinations and no weightage for understanding of children perspective through their answers and valuing it.
- The assessment tools being used for assessing different abilities, interests and attitudes are not up to the mark and do not help for assessing these abilities in expected ways.
- No transparency in the maintenance of school records pertaining to children progress and no welcoming climate to parents to access school records.
- Getting answer scripts of board examination become more procedural and complex and involved with expenditure.

6.1. Improved Process

Keeping in view the gaps as discussed above, the following actions are required to improve the process of **Recording, Reporting and Sharing**.

- Recording children progress competency wise and make it more transparent and open for children and parents.
- Furnishing progress reports to the parents after each terminal test and same may be discussed with children in the class rooms.

- Assessment of children performance shall become a source for teachers for assessment of learning and also assessment for learning i.e., understanding to what extent children understood the concepts and identifying the learning difficulties and gaps and plan for providing appropriate learning experiences.
- The progress reports shall not only constitute progress in curricular subjects such as languages and non languages but also pertaining to children development in physical and as well as other areas such as interests, attitudes, values, etc., i.e., comprehensive development of children.
- Encouraging children for self appraisal by way of providing exercises, activities in the text books as being followed in text books of Kerala Government.
- Simplifying the procedures for making answer scripts of board examination accessible to students along with marks/grades awarded so as to provide a chance to students to question in case if he or she feels injustice.
- Using ICT to make children progress available online.

7. RECOMMENDATIONS

1. Evaluation shall be made as continuous process with due weightage to the learning experiences, performance gained by the student in the academic year. CCE should NOT become another tool for ranking and create fear and anxiety among children and parents.
2. Due weightage to formative evaluation, teacher based observations and judgments on regular basis followed by three terminals as summative evaluation.
3. Provision for documented evidence of children performance in the form of assignments, portfolios, projects, anecdotes with due weightage.
4. Pupil's assessment should be diagnostic in nature, which helps in identifying the learning gaps against the required competencies pertaining to the particular unit or grade.
5. It is mandatory to test the class specific required competencies at the beginning of the academic year and plan to achieve these required competency in order to enable the child to participate in the regular classroom based Teaching Learning Process. In no case the children shall be exposed to class specific curricular activities unless the child achieves required class specific competencies.
6. Transparency in sharing the children learning, by parents and public through public demonstration of children's work and access to school records, answer scripts for parents.
7. Initiations to educate children and parents on innate potentiality of every child and building the confidence among them that they can learn any subject provided they get appropriate support in achieving the required basic competencies at their own pace.
8. Nature of questions in examinations should be open ended, analytical which gives space to child to think and express on his/ her own.
9. In no case the answers shall be reproduced from the text book as it is by way of memorization, which leads to develop pressure and stress on children about memorizing the content.
10. The assessment tools should test the children's ability in applying the acquired knowledge in new situations and problem solving. The test items should reflect this and teachers shall be trained in developing test items reflecting these ideas.

11. There shall be frequent external survey on children's learning achievement during internal assessment by Teacher Education Institutions (TEI) / NGOs to establish how far schools varying across the field on a standardized test.
12. The test items must reflect the objectives of the concerned subject and reflect its true nature and spirit.
13. The method / process of knowledge creation in various subject specific areas shall be represented in developing test items. Thus testing of both learning outcomes and process of knowledge creation are essential.
14. As per RTE-2009 there shall be no board examinations up to class VIII and the board examinations at class X shall be made more process oriented and continuous and comprehensive in nature.
15. Examination reforms should be aimed to reduce fear, stress and anxiety about examinations and among children, parents, teachers and facilitate the children to express their learning experience and performance freely without any stress or fear.
16. 50% weightage to board examinations and remaining 50%weightage shall given to projects, assignments, experiments, etc., due weightage shall be given to creative areas health and Physical Education, Art, Craft, Work, Experience, Values and education etc.,
17. Introducing grading system in place of marks which reflects learning competency of child in different subject areas.
18. Commissioning open book system in the identified subjects like Languages and Social Studies from class-V onwards.
19. Defining and developing learning outcomes for children in the form of attainment targets class wise and subject wise and develop awareness about expected learning outcomes among children, parents and teachers.
20. Steps to be initiated for transformation from paper pencil test to online and on demand test using ICT.
21. Enable children and teacher to use ICT for self learning, self evaluation and exposure to online tests in specific subject's areas through web based teaching and learning strategies.
22. Promoting online multilevel test reflecting the increased complexities in each subject area.

23. Instituting sound monitoring mechanism on the effective implementation of assessment procedures i.e., developing teacher based test items, correction of pupil's work, assignment / answer sheets, sharing of children's performance.
24. Redefining and expanding the roles of district common examinations board in the light of RTE. Developing model test items, facilitating online testing, conducting external evaluation studies, surveys, developing supporting mechanisms to schools and teachers. Conducting base line and end line tests and showcasing and canvassing of successful practices and trends.
25. Access to get answer scripts of board exams for those who want to get it. It should be made available.
26. The right to question the valued scripts for not awarding or low grading of properly written answers should be welcomed.

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CONSTITUTION OF INDIA PREAMBLE

WE, THE PEOPLE OF INDIA, *having solemnly resolved to constitute India into a SOVEREIGN, SOCIALIST, SECULAR, DEMOCRATIC, REPUBLIC and to secure to all its citizens JUSTICE, social economic and political*

LIBERTY *of thought, expression, belief, faith and worship*

EQUALITY *of status and opportunity and to promote among them all*

FRATERNITY *assuring the dignity of the individual and the unity and integrity of the nation.*

IN OUR CONSTITUENT ASSEMBLY this twenty –**sixth day of November, 1949**, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**