

Akhil Bhartiya Shiksha Samagam

**Report on
Session 16: A Roadmap for Competency-Based
Assessment: PARAKH**



JULY 2023

GOVERNMENT OF INDIA

A Roadmap for Competency-Based Assessment: PARAKH

1. Introduction

Delhi, Pragati Maidan, July 30, 2023 – On the momentous occasion of the 3rd Anniversary of the announcement of the National Education Policy (NEP) 2020, a two-day Akhil Bhartiya Shiksha Samagam 2023 was organized at Pragati Maidan from July 29 to July 30, 2023. The event, which encompassed all aspects of education, including school, higher education, and skill development, featured a significant thematic session titled " **A Roadmap for Competency-Based Assessment: PARAKH.**"

Competency-based education (CBE) is an approach that focuses on the development and demonstration of specific skills, knowledge, abilities, and dispositions, rather than solely relying on rote memorization. The primary purpose of assessment is also to support and accelerate learning. As NEP in para 4.34 enunciates, the aim of assessment from summative and primarily tests rote memorization skills needs to shift to more regular, formative & competency-based, promote learning and development for students. In addition, it , tests higher-order skills, such as analysis, critical thinking, and conceptual clarity. Competency-based assessments (CBA) are designed to assess a learner's knowledge, skills, and values in a specific domain or field. These assessments aim to provide a comprehensive and objective understanding of the proficiency level of the learner and her/his ability to perform various tasks. The strengthening of competency-based assessment at each level is aligned with the larger goal of promoting quality education and skills for better employability for the country's workforce.

The flow of the session shown in the table below

S. No.	Activity	Chair/Panelists
1.	Welcome by Moderator	Prof Sridhar Srivastava, JD, NCERT
2.	Introduction by Chair	Sh. NS Kalsi, Chairman, NCVET

3.	Panellist/Speaker 1	Sh. TG Sitharam, Chairman AICTE
4.	Panellist/Speaker 2	Sh. Sridhar Rajagopalan, Co-Founder Educational Initiatives
5.	Panellist/Speaker 3	Dr Pratibha Kohli, Principal Maharaja Agrasen Model School, Pitampura
6.	Open Discussion	Interaction with Audience
7.	Closing remarks	Sh. Sanjay Kumar, Secretary, MoE
8.	Facilitation of speakers	
9.	Session In-Charge	Sh Rahul Pachori, DS, DoSE&L, Ministry of Education

2 Major points of discussion and issues

2.1 A road map for competency-based assessment: PARAKH

The session was spearheaded by **Sh. Kalsi. Chairperson, NCVET** by unwrapping the term competency as the proven ability to use the acquired knowledge, skills, or personal and social abilities, in discharge of responsibility roles in productive activities. It is the ability to do perform a task based on acquired knowledge resulting in a skill required to do job well. The purpose of assessment is generation of ability-based profile of a learner, showcasing his/her capacities across a full range of learning, thereby making it imperative for assessment practices to be reformed around competency based that focuses on knowledge, abilities, skills and dispositions, instead of grades/marks obtained on paper pen based traditional tests. Therefore, assessment is aptly known as CBA. CBA is closely linked to skills requisite for employability hence promotes vocational education and skill development and moves towards realizing the goals of creating a skilled workforce and boost job opportunities envisioned for the National Skill Development Mission.

The session further deliberated upon the various enabling conditions that can support the assessment reforms towards CBA. Development of National Credit Framework (NCrF), National Higher Education Qualification Framework (NHEQF), National Skill Development Mission (NSDM) & National Curriculum Framework are to name a few. The major points of discussion were National credit Framework; assessment types such as diagnostic, formative, summative, Ipsative, norm-referenced, criterion referenced, peer to peer randomized, industry validated, AI based, self-assessment, recognition of prior learning and game based assessment; assessment methodology for CBA; CBA in VET and skilling in line with National Skill Qualification Framework; guidelines for CBA in Vocational Education Training (VET) & Skilling; and road map for CBA in teaching and examination.

The specific action points envisaged in the road map includes

- transformation of course curriculum into competency-based pattern
- development of learning teaching material, pedagogy practices, for imparting CBE
- capacity building of institutions and stakeholders
- preparation of norms, standards, guidelines for CBA
- building new culture of assessment
- development of assessment criteria, tools, and question bank
- development of digital infrastructure and technology
- effective implementation mechanism for PARAKH and NCrF

2.2 National Assessment Centre for Student Learning: PARAKH

NEP 2020 in para 4.41 envisages PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), as a standard-setting body that fulfills the basic objectives of setting norms, standards, and guidelines for student assessment and evaluation for all recognized school boards of India, guiding the State Achievement Survey and undertaking the National Achievement Survey, monitoring achievement of learning outcomes in the country, and encouraging and helping school boards to shift their assessment patterns towards meeting the skill requirements of the 21st century in

consonance with the stated objectives of this Policy. This Centre will also advise school boards regarding new assessment patterns and latest research, promoting collaborations between school boards. It will also become an instrument for the sharing of best practices among school boards, and for ensuring equivalence of academic standards among learners across all school boards.

National Assessment Centre, PARAKH has been set up in NCERT as an independent constituent unit of NCERT dated 8th Feb, 2023, to fulfill the basic objectives of setting norms, standards, guidelines and implement activities related to student assessment along with other tasks as mandated by Para 4.41 (stated above) of NEP2020.

The scope of work for PARAKH encompasses

- Large Scale Assessments like National Achievement Survey (NAS) to check the educational health of system aiding in improvement.
- Helping schools to shift their assessment patterns towards meeting the skill requirements of the 21st century in consonance with the stated objectives of the Policy.
- Setting norms, standards, and guidelines for student assessment and evaluation for all recognized school boards of India to encourage equivalence and intra-board parity
- Capacity building and conducting area specific researches

At the national level PARAKH is to support and strengthen the implementation of CBA through curriculum design, CBA framework, learning outcomes, assessment design, teacher training and students centric learning. SCERT's are anticipated to collaborate in this endeavor via curriculum development, assessment framework, teacher training, systemic support, and quality assurance. Further down the line, the DIETs need to provide classroom support, enhance feedback and improvement and to establish effective monitoring and evaluation mechanisms in the light of CBA.

2.3 Competency-Based Assessment: Some illustrations

The implementation of CBA has become ineluctable given the workplace needs. The workplace skills have been shifting from less routine tasks to cognitive tasks and recently AI has accelerated this trend. It was further highlighted that in the backdrop of AI and Chat GPT as easy means to project performance by learners, the training of teachers is essential in conducting the CBA. CBA is nothing but providing opportunity to every learner to showcase their own learning without fear and comparison. Unlike traditional assessment modalities, while implementing CBA we need not pass or fail a student. Some may need more chances and support. Performance assessment should focus on providing opportunities to demonstrate knowledge and learning for holistic development. A robust ecosystem is to be built so that each learner is provided continuous handholding and prepared for on demand assessment.

A CBA initiative being implemented by AICTE, the Student Learning Assessment (SLA) PARAKH was presented by **Sh. TG Sitharam, Chairman, AICTE**. This is designed to measure the various factors that affect the skill development of students in technical institutions across India and to measure the benchmark levels and gains in the academic and aptitude skills by the students. The vision and mission are to evaluate the technical students for their overall qualitative growth during study for the best fit employment opportunity that fits optimally with the skills the students have gained. AICTE- SLA (PARAKH) was launched on 7th January 2022 by MoE, for assessment of students and faculty members in all AICTE approved institutions in the field of engineering, computer applications, management at UG/PG and diploma levels. Emerging areas and skills aligned to industry like robotics, block chain, Quantum computing and higher order thinking skills along with ability to perceive and implement innovative out of box solutions also find its place here. 1000+ professionals were engaged in developing the question bank comprising 1.28 lakh questions that are updated at regular intervals. Till date 4242 institutions, 39530 faculty members and 614708 students have registered on AICTE-SLA (PARAKH) and 384043 assessments have been conducted.

Assessment matrix has six levels. Level one (L1) comprises of remembering and remembering the facts. The focus of L2 is on understanding the meaning behind facts and L3 is about applying rules, facts, concepts, and ideas. L4 takes care of analysis that is breaking the information in sub-parts and L5 evaluates judging the value of information or ideas. The

L6 aims at creation that is combining parts to make a new whole. Each learner gets multiple opportunities to succeed, without negative markings, therefore AICTE-SLA PARAKH is not an examination, it is a learner friendly assessment of competencies with students having 100 % chance to succeed. Two modes of assessment are available –assessment by institute and self-assessment.

Some of the key elements highlighting the effectiveness of SLA PARAKH are the robust framework with multiple assessment reports based on regular assessments. The resulting reports are analyzed in a detailed manner and have effectively aided in understanding gaps in learning and planning interventions. This will ensure that CBA under PARAKH ensures 100% chance of success of any interventions to strengthen.

The future plan is to –

- upgrade question bank to 5 lakh questions by 2024
- restructuring of subjects and topics
- include biotechnology and chemical engineering
- separate window for assessment of knowledge in emerging areas
- exploring the possibility of SLA (PARAKH) application to hotel management/ design/planning/applied arts &crafts

The second expert panelist on school assessment **Shri. Sridhar Rajagopalan of Ei** (Educational Initiatives, Bengaluru), shared the experiences related to Eklavya School and how CBA is being implemented in the school. He elucidated the difference in question items which are competency-based form the traditional questions. Competency based questions assess learners' thinking and higher order skills, instead of memorization of facts. For example, what is the gravitational pull on the moon as compared to earth, is simply based on memory and information. While a competency-based item is more towards application of the fact, using critical and analytical thinking skills. “You're standing on the moon holding a pen, and you let it go. What will happen to the pen?” is one way of modifying the item to be more towards CBA. He shared a similar case of PISA question on slope face investigation on understating the vegetation difference based on conceptual clarity and application of concepts. Popular misconceptions around a concept can be utilized to frame CBA items

resulting in deeper conceptual clarity and application. Used thoughtfully technology can help the shift towards CBA.

CBA has its application at all levels including the Foundational Literacy and Numeracy (FLN). CBSE has initiated Structured Assessment for Analyzing Learning Levels (SAFAL) for class 5 onwards, with the aim to provide diagnostic information about students' learning to schools. The board examinations are also gradually changing to CBA through case-based questions and authentic real-life contexts. PARAKH can be beneficial as a technical assessment platform facilitating the shift to CBA. This may address the major issue, at hand, that is grade inflation in board examination scores that is no-where near the desired bell curve.

Key Messages—

- Assessment modalities need to change to make our children future ready
- CBA promotes thinking instead of memorizing and provides fair chance of success to everyone by including questions for all levels of difficulties
- Implementation of CBA is to begin at the level of FLN to give good start to the system from foundation upwards
- PARAKH has the potential to build systemic capacities and addressing the concern of standardization across various boards in India
- Many lessons like use of scale score and percentiles, assessment through independent external assessment agencies and parents' advocacy, are to be learnt and implemented in India as a whole.
- The ongoing piloting of SAFAL in CBSE schools for 3,5 and 8th Students have also contributed to learning as to how can the overall CBA frameworks can be strengthened. A Key learning has been the need to strengthen the skills and training the teachers to take part in assessment by enabling them to frame questions contextually. This will improve the effective adaption of CBA seamlessly.

The last panelist **Dr. Pratibha Kohli, Principal, Maharaja Agrasen Model School** raised the pertinent issue of how students need to be CBA ready from the school level itself. She also shared the implementation modality of CBA at school level through the example of her own

CBSE affiliated school. She shared how the school opted to change the teaching-learning practices itself before moving towards CBA. In the school students are exposed to a particular curricular content with the help of numerous examples, daily life connections, competency-based grouping, learning is personalized and multiple pathways of learning are provided to the students. The school has experimented with CBA in the area of language learning. The example cited was from Sanskrit. The learning outcomes in Sanskrit was converted into measurable competencies for speaking, reading, and writing Sanskrit and the anticipated mastery level of learning was defined. Assessment modalities were brainstormed and CBA implemented in a conducive environment. CBA is about the shift from rote memory to thinking, analysis and applicability to daily lives. Competency Based Education (CBE) is closely linked to the CBA and is manifested as map reading skill in social science, solving mathematical numerical at own pace, problem solving in science, comprehending texts, reading between the lines, learning a language, and using it in daily life with ease and so on. The various core skills closely associated with CBA are skills to collaborate, communicate, think creatively and critically.

The recording and sharing of assessment with learners also need to go beyond marks and grades. In order to provide detailed and constructive feedback of each child to their parents, Holistic Progress Cards (HPC) as per the guidelines under NEP2020 have been prepared at foundational level. The HPC provides a 360-degree, multidimensional report showing students all round performance over a period in the cognitive, affective, and psychomotor domains. The child will gain more strengths, opportunities, skills given detailed and timely feedback through these report cards. AI -based software can also be developed to help track learners' growth.

In addition to the above the speaker had emphasized on need for training and preparing teachers for CBA in aligning the curriculum, grade level assessment criteria and on being able to administer contextual CBA.

3. Way forward for Competency Based Assessment

3.1 Role of PARAKH, NCERT:

At the National level, PARAKH needs to strengthen and support the implementation of Competency-Based Assessments which would involve the following steps:

- **Curriculum Design:** Need to collaborate with educational experts and stakeholders to design competency-based curricula. These curricula would define the specific competencies (knowledge, skills, attitudes) students are expected to demonstrate by the end of each grade or educational level.
- **Competency Based Assessment Framework:** The competencies are then organized into an assessment framework that outlines the progression of skills and knowledge from one grade level to the next. This framework provides a clear pathway for students to develop their abilities and skills.
- **Learning Outcomes:** Clear learning outcomes are defined for each competency, describing what students should be able to do to show proficiency in that area.
- **Assessment Design:** PARAKH to design assessments that would assess students' competencies at the Foundational, Preparatory, Middle, and Secondary stages. These assessments can take various forms, including performance tasks, projects, portfolios, etc.
- **Teacher Training:** PARAKH will organize training programmes for the teachers to understand the competency-based approach and how to design and administer assessments that align with the defined competencies and learning outcomes.
- **Student-Centric Learning:** With CBA, there is often a shift toward more personalized and student-centric learning. Thus, enabling students to progress at their own pace and removing the learning - burden.

3.2 Roles of SCERTs:

- **Curriculum Development:** SCERTs play a crucial role in designing the competency-based curriculum for the state. They work with subject matter experts, educationists, and teachers to define the competencies and learning outcomes for each grade level.
- **Assessment Framework:** SCERTs are responsible for developing the assessment framework, which includes guidelines for designing competency-based

assessments. It needs to be ensured that the assessments align with the defined competencies and accurately measure students' proficiency.

- **Teacher Training and Support:** SCERTs should organize workshops, training programs, and seminars at the district level for teachers to help them understand the new competency-based approach. They need to provide resources and support to teachers to effectively implement CBA in their classrooms.
- **Quality Assurance:** SCERTs need to monitor and evaluate the implementation of CBA in schools across the state. They should conduct quality assurance checks to ensure that the assessments are fair, unbiased, and effectively measure student competencies.

3.3 Roles of DIETs:

- **Teacher Training:** DIETs would engage in building teachers' capacity to implement competency-based teaching and assessments effectively.
- **Classroom Support:** DIETs to work closely with BRCs, CRCs and teachers in classrooms to provide support, resources, and guidance in implementing CBA in their day-to-day teaching practices.
- **Feedback and Improvement:** DIETs collect feedback from teachers and schools regarding the implementation of CBA. They identify challenges and areas for improvement and communicate this information to the SCERTs and other relevant authorities.
- **Monitoring and Evaluation:** DIETs may also play a role in monitoring the progress of CBA implementation at the district level and reporting back to the SCERTs.

Mr. Sanjay Kumar, Secretary Education, MoE, as special invitee to the session raised various fundamental and pertinent concerns providing food for thought on CBA and PARAKH as mentioned below —

- Is CBA a recent shift? Did it not exist say fifty years back? A forceful implementation of CBA, in future, may get translated yet another rote learning to be mastered to score better making it imperative to be implemented mindfully and systematically.

- In the absence of NISHTHA, DIKSHA also we all have done well and that is why we are standing where we are. With the advancement of technology many aspects around us have changed. However, the human touch of a teacher and good teaching cannot be replaced by anything or anyone. In the process of relying and implementing too many systems in education we should not end up undermining the personal relationship of a teacher and student which is crucial in ensuring educational outcome at an individual level.
- There is a dire need to create a mechanism to bring together the existing fragmented boards and ensure parity across the nation. A national assessment body like PARAKH as envisioned in NEP can play a significant role to bring the school boards together to a common platform and deliver consistency in results envisioned across education system of the country
- School education must work hand in hand with higher education and for this there is a pressing need to build synergies among various stakeholders working at diverse levels.

4. Conclusion

There is an urgent need for learning to shift from the traditional rote memorization to holistic development of children through Competency-Based Education (CBE) and Competency-Based Assessment (CBA). This would require re-alignment of assessment tools to include learning outcomes, capabilities, and dispositions. With advent of technologies, AI tools and redefined nature of work from less routine tasks to higher order skill based cognitive tasks, this shift in assessment practices has become a matter of urgency and an ineluctable need. The need for capacity development and collaboration among states was highlighted owing to the challenges in development and framing of competency-based items. The role of PARAKH, for school education, as an institution would be to set standards of assessment, develop competency-based assessment framework, a CBA item pool, encourage collaboration among various state/UTs school boards and higher education institutions along with bringing equivalence among boards. To summarize, there is a need to promote competency-based education and assessment culture, from the fundamental levels of

schooling to higher education. The department of school education as well as higher education must synergize along with various other stakeholders to ensure this shift in the methodology of assessment in the overall education sector.

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