Impact of Competency-Based Education under NEP 2020 on Students' Learning Outcomes

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Abstract:
The National Education Policy (NEP) 2020 in India is a significant change in the direction towards outcome-based, learner-centered and competency-based education as opposed to content-based and rote-oriented education. The paper discusses how competency-based education (CBE) within the scope of NEP 2020 will influence the learning outcomes of students in the Indian school education system. Its policy focuses on the basic literacy and numeracy, the conceptual knowledge, critical thinking, problem solving, flexibility in learning directions, and reforms in assessment systems where application is given more importance than memorization (Government of India, 2020). The article is conceptual and policy-analytical in that it critically examines NEP 2020, the National Curriculum Framework of School Education 2023, and the NEP-led assessment reforms, NIPUN Bharat, changes in the competency-based examination introduced by CBSE, and the scholarship on competency-based education at large. It is argued in the analysis that CBE has the potential to develop learning outcomes through a positive alignment of curriculum, pedagogy, and assessment on demonstrable competencies and not on seat time or syllabus coverage. It is particularly applicable to enhancing background skills, advanced thinking, student agency and transfer of learning to real life situations. Nonetheless, the paper also concludes that the enabling conditions of the effectiveness of CBE include teacher preparation, the assessment literacy, school leadership, classroom resources, and equitable implementation between regions and between school types. These supports are necessary to ensure competency discourse is not policy but classroom reality. The conclusion of the paper is that NEP 2020 has provided a robust policy framework to transform learning outcomes in India, but a sustained increase will take place when coherent implementation, well-established assessment frameworks, and continuous teacher development are in place.

Keywords: Competency-based education; NEP 2020; learning outcomes; school education; assessment reform.

1. INTRODUCTION

Quality of education is no longer evaluated by the volume of material taught but what the learners can literally know, do, apply and become. The trend has contributed to the worldwide attention of competency-based education (CBE) model, which structures teaching-learning practices in terms of competencies of a certain type and evidence of proficiency. Instead of basing learning on the hours spent in classroom, CBE focuses on proving knowledge, practice, abilities, and dispositions by performing significant assessment activities (Levine and Patrick, 2019; Karaoğlan Yilmaz et al., 2021).

The National Education Policy 2020 is one such step towards such transformation in India. Experience, holistic, integrated, inquiry-based, learner-centered, and discussion-based Pedagogy NEP 2020 explicitly recommends experience, holistic, integrated, inquiry-based, learner-centered, and discussion-based pedagogy. It further provides that education should connect the present level of learning outcomes and what is needed in the 21st century that places more emphasis on basic literacy and numeracy, critical thinking, problem-solving, ethical growth, and creativity (Government of India, 2020).

Since then, the policy vision was operationalized with the help of reforms like National Curriculum Framework of School Education 2023 (NCF-SE 2023), NIPUN Bharat, PARAKH and the changes in examining patterns of CBSE. These reforms are trying to match curriculum, pedagogy, and assessment to competency-based learning. To illustrate, PARAKH emphasizes the importance of regular, formative, and competency-based assessment, whereas CBSE has made competency-based questions a larger percentage of questions in board examinations (PARAKH, 2024; CBSE, 2023).

Simultaneously, national surveys still reveal evidence that schooling does not necessarily imply learning. The necessity to go beyond enrolment and syllabus completion into measurable learning achievement, particularly in reading, numeracy, and conceptual understanding, is discussed by ASER 2024 and national assessment systems (ASER Centre, 2024; PARAKH, 2023).

It is against this background the focus of the current paper is how competency-based education under NEP 2020 can inform the learning outcomes of students, the ways in which this can be achieved, and what conditions will enable success upon the implementation in Indian schools.

2. RESEARCH OBJECTIVES
1. To examine the conceptual foundations of competency-based education under NEP 2020.
2. To analyze the relationship between competency-based education and students' learning outcomes.
3. To identify the policy mechanisms through which NEP 2020 promotes competency-based learning in schools.
4. To assess major implementation challenges affecting the realization of competency-based education in India.
5. To suggest strategies for strengthening the impact of competency-based education on student learning outcomes.

3. RESEARCH HYPOTHESES
H1: Competency-based education under NEP 2020 has a positive impact on students' learning outcomes by improving conceptual understanding, application, and higher-order thinking.
H2: The effect of competency-based education on learning outcomes is significantly mediated by teacher preparedness, classroom pedagogy, and assessment practices.
H3: Schools with stronger alignment among curriculum, teaching methods, and competency-based assessment are likely to show better student learning outcomes than schools with weak alignment.

4. CONCEPTUAL BACKGROUND
The concept of competency-based education is anchored on the fact that students develop based on their ability to exhibit specific competencies as opposed to spending the stipulated learning time. Generally, CBE consists of explicit learning objectives, adaptable learning routes, formative feedback, performance-based evaluation, and learner agency of learning (Levine and Patrick, 2019). It is also observed by scholars that CBE is directly connected to mastery learning, outcome-based education, and student-centered pedagogy, but the fact that the terms are easily mixed often makes the implementation complicated (Karaoğlan Yilmaz et al., 2021).

NEP 2020 embraces this competency broad orientation with the focus on both the foundational and higher-level competencies. It claims that learning should cultivate literacy, numeracy, critical thinking, problem solving, ethical reasoning, creativity and socio-emotional abilities, to place learning outcomes in the context of the holistic, as opposed to the examination-based, results (Government of India, 2020).

5. LITERATURE REVIEW
The competency-based education has also received admiration in other countries as an emerging solution to the shortcomings of conventional content-based and examination-focused models. According to scholars, CBE is a model where progression is determined by the demonstrated mastery, learning expectations are

clearly stated, assessment is part of the instruction, and differentiated support is provided to the students to reach common outcomes (Levine and Patrick, 2019). In this respect, CBE is not only a curricular adjustment but a systemic redesign that will include curriculum, pedagogy and assessment.

CBE according to theoretical discussions enhances learning due to the clarity in goals, focus on application and the better placement where students are free to learn at their pace with constant feedback. According to Karaoğlan Yilmaz et al. (2021), modern CBE is highly student-centered and often provides the use of portfolios, performance-based activities, and formative assessment. Older outcome-based reforms have been criticized as having conceptual ambiguity and a fractured implementation process, whereas newer models are placing more emphasis on deeper learning, personalization, and mastery.

The authors Patrick and Sturgis (2013) believe that competency education is particularly helpful to overcome the age-grade schooling constraints of the so-called one-size-fits-all. It promotes equity by putting the focus on what is shown to be learning, since students who require further time and feedback are not automatically considered weak, the system is supposed to respond to the needs of learners. This observation holds great importance in India where the disparity in school performance, teacher encouragement, and home performance conditions usually leads to disproportionate results.

The Indian policy situation has been shifting towards this pattern. NEP 2020 clearly aims at substituting rote learning with experience and inquiry-based learning and competency-based learning. It puts a strong focus on foundational literacy and numeracy as national imperatives and connects school education with wider national interests of creativity, employability, ethical growth, and lifelong learning (Government of India, 2020).

This vision can be operationalised in the form of NIPUN Bharat that seeks to achieve foundational literacy and numeracy at Grade 3 and PARAKH that advocates regular and formative, competency-based assessment. These reforms suggest that the understanding of learning outcomes can be viewed as not just marks but as observable skills with which the students could exhibit reading, numeracy, reasoning, communication, and problem-solving abilities (Department of School Education and Literacy, 2021; PARAKH, 2024).

Such reforms are also supported by the latest developments in assessment in India. The materials of the National Achievement Survey underline the importance of large-scale testing to comprehend the level of learning, and ASER 2024 still predicts the disconnection between schooling and real learning, especially in the primary subjects (PARAKH, 2023; ASER Centre, 2024).

However, literature also warns that CBE does not necessarily increase results. It relies on the capability of teachers, competency exactness, efficient evaluation instruments, school management, and classroom materials. Unless teachers are afforded the opportunity to move away to the world of textbook completion and high-stakes testing, language of competency can be implemented at the surface without altering classroom practice. Thus, the entire literature points to the fact that CBE under NEP 2020 can positively influence learning outcomes, although only in the case of coherent and sufficient support with sufficient implementation and sensitivity to equity.

6. RESEARCH METHODOLOGY
This paper uses a **qualitative, conceptual, and policy-analytical research design**. It is based on a review of primary policy documents and selected scholarly literature relating to competency-based education and student learning outcomes.
6.1 Sources of Data
The study draws upon:
- National Education Policy 2020
- National Curriculum Framework for School Education 2023
- NIPUN Bharat guidelines
- PARAKH examination and assessment reform materials

- CBSE circulars on competency-focused assessment
- NAS and ASER materials
- Peer-reviewed and scholarly literature on competency-based education

6.2 Method of Analysis

A **thematic analysis** approach is used to examine:

1. The conceptual meaning of competency-based education
2. Policy provisions under NEP 2020
3. Expected impact pathways on learning outcomes
4. Implementation constraints
5. Implications for school education in India
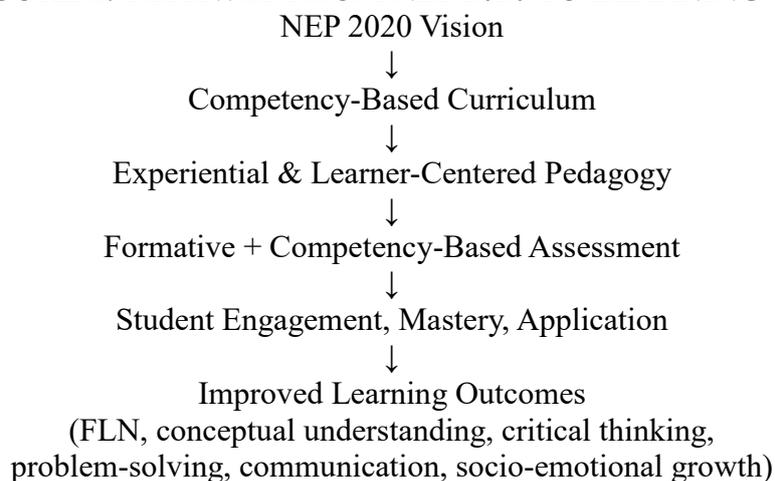
6.3 Nature of the Study

This is not a field survey or statistical impact evaluation. It is an **analytical research paper** that synthesizes policy and literature to explain how competency-based education under NEP 2020 is expected to influence student learning outcomes.

7. Table 1: Major Features of Competency-Based Education under NEP 2020

Dimension	Traditional Approach	Competency-Based Approach under NEP 2020	Likely Effect on Learning Outcomes
Curriculum	Content-heavy, textbook-driven	Outcome-focused, integrated, flexible	Better conceptual clarity
Pedagogy	Lecture and memorization	Experiential, inquiry-based, learner-centered	Improved engagement and understanding
Assessment	Summative, recall-based	Formative, application-oriented, competency-based	Better problem-solving and transfer of learning
Progression	Time/grade-based	Mastery-oriented	Reduced superficial learning
Learner Role	Passive recipient	Active participant	Greater agency and motivation
Teacher Role	Content transmitter	Facilitator, mentor, assessor	Improved individualized support

This alignment is consistent with NEP 2020's emphasis on experiential pedagogy and PARAKH's competency-based assessment reforms.

8. CONCEPTUAL FIGURE 1: PATHWAY FROM NEP 2020 TO LEARNING OUTCOMES

NEP 2020 Vision
↓
Competency-Based Curriculum
↓
Experiential & Learner-Centered Pedagogy
↓
Formative + Competency-Based Assessment
↓
Student Engagement, Mastery, Application
↓
Improved Learning Outcomes
(FLN, conceptual understanding, critical thinking,
problem-solving, communication, socio-emotional growth)

This figure shows that the effect of NEP 2020 on learning outcomes is indirect and mediated through curriculum design, pedagogy, and assessment alignment.

9. ANALYSIS AND DISCUSSION

9.1 Competency-Based Education and Foundational Learning

Among the most powerful contributions of NEP 2020 is the fact that it insists on foundational literacy and numeracy as the precondition of all other learning. This is also institutionalized by NIPUN Bharat which aims at universal foundational competencies at the early grades. A competency-based method is specifically adequate at this point as it only considers the fact that children can read intelligently, express meaningfully, and even do some simple numeracy instead of simply reading grade-level textbooks (Government of India, 2020; Department of School Education and Literacy, 2021).

9.2 Higher-Order Cognitive Outcomes Improvement.

According to NEP 2020, critical thinking, creativity, and problem-solving are to be developed during education. This is strengthened by PARAKH and CBSE reforms which put more emphasis on case-based, source-based, and application-oriented questions in assessment. These alterations can transform classroom instruction because the assessment has a vast impact on teaching. Examples that reward analysis and application are more likely to lead to school abandonment of rote preparation in Favor of conceptual learning (PARAKH, 2024; CBSE, 2023).

9.3 Agency and Individual Learning in students.

One of the advantages of CBE is the fact that it identifies the diversity of learners. Not all the students learn equally and in the same manner. The competency-based models facilitate repetition, feedback, remediation, and demonstration of mastery using various forms of evidence. This may enhance motivation and fear of failure particularly to the disadvantaged students who may be subjected to one-shot examinations. CBE is constantly linked to student-centered education and more significant interaction by international scholarship (Levine and Patrick, 2019; Karaoğlan Yilmaz et al., 2021).

9.4 Evaluation Reform as the Content Engine.

Assessment reform is a key to success of competency-based education. NEP 2020 and PARAKH directly acknowledge that in case the assessment system continues to favour memorization, classroom activities will not change significantly. The emphasis on regular, formative, and competency-based assessments and redesign of board examinations of PARAKH is thus the key element of the theory of change therein. The growth in the number of competency-oriented questions at CBSE is a significant move since it operationalizes the policy intent on the scale (CBSE, 2023; PARAKH, 2024).

9.5 Persistent Challenges

The quality of implementation determines the real effectiveness of the policies on the learning outcomes despite the sound policy architecture. To start with, a lot of teachers need a serious level of professional development to create competency-based lessons, monitor student achievement, as well as to employ the formative assessment successfully. Second, schools that have too many students in the classroom and have fewer resources might not be able to offer personalized support. Third, policy wording and classroom culture can be mismatched; instructors might still be motivated to complete textbook assignments and excavate exams. Fourth, inequity is a prominent issue: urban, better-resourced schools can be more adaptable to changes than the rural or under-resourced schools, thus creating disparities unless the support is differentiated. The results of ASER and national evaluations indicate that India has a learning crisis with it, i.e. capacity building on a systemic level should be involved in the competency reforms (ASER Centre, 2024; PARAKH, 2023).

9.6 Implications for Learning Outcomes

Overall, competency-based education under NEP 2020 has the potential to improve learning outcomes in at least four ways:

- by strengthening foundational learning,
- by promoting conceptual and applied understanding,
- by improving higher-order thinking and real-life problem solving,
- and by making learning more inclusive and learner centered.

However, these gains are conditional rather than automatic. Competency-based education works best when the system ensures curriculum clarity, teacher capacity, valid assessment, and institutional support. In this sense, NEP 2020 should be seen as a transformative framework whose actual educational impact will depend on implementation fidelity.

10. Table 2: Expected Impact of CBE on Different Learning Outcomes

Learning Outcome Domain	Expected Impact of CBE	Mechanism
Foundational literacy	High	Repeated practice, early diagnosis, mastery focus
Foundational numeracy	High	Competency progression, contextual tasks
Conceptual understanding	High	Application-based pedagogy and assessment
Critical thinking	Moderate to high	Inquiry, case-based learning, analysis tasks

These expected effects are consistent with NEP 2020's multidimensional view of educational development.

11. EDUCATIONAL IMPLICATIONS
The analysis has several implications that are practical. To begin with, teacher training and education should be designed based on competency mapping, formative assessment, rubric design and classroom observation. Second, the assessment systems are to shift to the phase of not only a one-time summative testing but to projects, portfolios, oral assignments, and application-focused questions. Third, school administrators must endorse instruction change by establishing cooperative teacher cultures. Fourth, implementation should be equity-based; schools with marginalized learners should have better academic support, material, and mentoring. Lastly, diagnostics should be based on the data of NAS, PARAKH, and ASER and not on ranking alone so that policy can be responsive to the real areas of learning deficit.

12. SUGGESTIONS
1. Competency standards should be translated into simple classroom-ready learning indicators.
2. Teachers should receive continuous professional development on competency-based pedagogy and assessment.
3. Board and school examinations should further expand performance-based and application-focused tasks.
4. Schools should integrate remediation and flexible support for students who have not yet achieved mastery.
5. Monitoring frameworks should track actual learning outcomes, not only policy compliance.

13. CONCLUSION
One of the most remarkable changes that have ever occurred regarding Indian education is competency-based education under NEP 2020. It places a new definition of quality in education, based on evidence of learning as opposed to syllabus coverage, seat hours, or performance in rote examination. With the focus on basic literacy and numeracy, conceptual knowledge, critical thinking, creativity, and holistic development, NEP 2020 provides a strong tool to enhance the learning outcomes of students. The policy instruments like NIPUN Bharat, NCF-SE 2023, PARAKH and competency- earth-based assessment transformations introduced by CBSE show that this trend is not just rhetoric but getting institutionalized.

Meanwhile, the paper demonstrates that competency-based education is not self-implemented. Its success is based on the teacher readiness, assessment reform, curricular clarity, school leadership and equitable implementation. Under such circumstances, CBE can enhance baseline learning, greater learning, and upper-level thinking. In their absence, reforms in policies may not produce any change in terms of learning outcomes. Therefore, in transforming policy into classroom practice, the actual effectiveness of competency-based

education through NEP 2020 will be determined by the success with which India implements policy into practice.

To sum up, competency-based education is highly likely to change student learning outcomes in India although such change takes long-term commitment, capacity building among the professionals, and systemic alignment of curriculum, pedagogy, and assessment.

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