Transition from Rote Learning to Competency-Based Classrooms: Implications of NEP 2020 for Skill-Oriented Pedagogy and the Cultivation of Self-Directed Lifelong Learners

Dr. Meenakshi Gupta
Principal, S.D.Public School, New Delhi 110008
Meenakshiguptaa21@gmail.com

Abstract

The chapter evaluates how India's National Education Policy (NEP) 2020 aims to transform schooling into a competency-based, skill-focused education by encouraging self-directed lifelong learning. It asserts that established traditions of teaching to the test, syllabus coverage, and textbook delivery inhibit higher-order thinking, learner agency, and the development of learning-to-learn dispositions. In contrast, policy rhetoric promises holistic, learner-centred schooling. Conceptually, the study defines skill-based pedagogy as curriculum, teaching, and assessment structured around explicit competencies- cognitive, technical, and socio-emotional- as reflected in authentic, performance-based tasks rather than time-based coverage. Based on NEP 2020 provisions, national skills frameworks, and international research on competency-based education and lifelong learning, it predicts inquiry, metacognition, flexibility, and learner choice as processes that reframe students as self-directed agents shaping their learning paths after school. The chapter demonstrates how project-based learning, standards-based performance assessments, and curriculum aligned with competencies can enhance motivation, agency, and real-world application through cohesive support for assessment reforms and institutional leadership. It also highlights implementation challenges in India, including teacher training, large-scale assessment redesign, resource inequities, and the risk that flexible, pace-based progression could worsen existing disparities if support structures are inadequate. The chapterconcludes that realising NEP 2020's goal of shifting to competency-based rather than content-centric education will require long-term commitment to teacher professional development, equity-focused policies, and systemic assessment reforms- efforts that will cumulatively foster communication, critical thinking, socio-emotional learning, and lifelong learning dispositions as key student outcomes.

1. Introduction

Rote learning has remained the dominant teaching method in most countries worldwide, despite widespread awareness of its limitations in fostering agency and skill development among learners and in enabling lifelong learning. In India, memorisation and exam techniques still dominate classrooms at all levels, leading to a tendency to teach to the test. Strategies that involve learners in tackling real-world issues, forming hypotheses, conducting experiments, and drawing evidence-based conclusions are often regarded as unrealistic or very risky (Friis, 2017). Consequently, when reading a text, whether a question or an answer, learners are more likely to memorise rather than discuss, to test comprehension, or to encourage continued reading.

Among a large number of students, skill development and even the ability to become lifelong learners are often denied. The National Education Policy (NEP) 2020 promotes radical changes in attitude, policy, and practice toward competency-based pedagogies, curricular frameworks, learning trajectories, and assessments to achieve the objectives of the National Skill Development Mission, the guiding philosophy of NEP 2020, and the national goal to develop skilled lifelong learners (Chen et al., 2022). Skill orientation not only involves motivating learners to acquire skills, knowledge, and attitudes to become capable individuals but also encourages self-learning as a path to lifelong learning. This change is expected to significantly transform pedagogical practices from compliance-based activities to ones that emphasise student agency, autonomy, creativity, and exploration through inquiry-based processes, metacognition, and lifelong-learning dispositions.

2. Educational Structure: Rote Learning, the Legacy.

In the past, rote learning has been the focus of the education system in many parts of the world. The intense memorisation was traditionally seen as a key to acquiring knowledge in many areas, especially in science and mathematics (Coleman et al., 2016). The information provided in textbooks, which are easily accessible online and on digital platforms, remains considered basic for teaching and learning most subjects. The most common way of learning also relies heavily on information delivery and testing that encourage memorisation. These features have been linked to teacher-centred

pedagogy and limit the variety of skills learners develop. Overall, there is little free time for exploration and individual interests in both curricular and extracurricular activities. Similarly, the formal conditions, whether pedagogical or institutional, tend to hinder the development of a sense of ownership or autonomy among learners (Friis, 2017). In policies that promote learning-to-learn as a core educational goal, emphasis on rote-learning practices is strongly discouraged, leading to a major shift in teaching, learning, and assessment practices.

3. Policy Change: NEP 2020 and the Margin to Competencies-Based Education.

Following a national skills development approach, NEP 2020 emphasises a paradigm shift in education, transitioning from rote and examination-based learning to a competency- and skill-based syllabus (Gremigni, 2019). Competency-based models allow students to learn, practice, and apply skills across diverse academic, technical, and vocational domains. These frameworks uphold the principle of lifelong learning, fostering the development of procedural knowledge, reflection, metacognition, self-direction, and a proactive attitude toward post-graduation learning (Archuleta Frush, 2014). They support a long-term perspective on competencies that encompasses socio-emotional and cognitive levels (J. Belin, 2020). NEP 2020 is thus aligned with the global shift towards competency-based education.

The policy outlines specific targets and timelines for pedagogic reform. These aims are to be achieved by 2030, including a shift to competency-based syllabi, textbooks, and testing across all subjects during the final two years of pre-school and throughout the school system over the decade. The creation of a National Skills Qualification Framework, in conjunction with a National Skills Policy, as well as the establishment of Skill Laboratories and vocational learning institutions, are also part of these initiatives.

4. Skill-Oriented Pedagogy: Ideas, Content and Evaluation.

Here, skill orientation is defined as the process of teaching a specific skill to learners so they can apply it in a particular context. A skill-oriented curriculum highlights key skills and the competencies that underpin them. Skill-oriented pedagogy refers to the techniques and interactions between teachers and learners that allow both to participate effectively in learning and using the specified skills.

Table 1: Competency categories, pedagogy and assessment

Competency category	Typical classroom pedagogy/activity	Competency-based assessment approach
Cognitive (conceptual and procedural understanding)	Concept mapping, guided inquiry, problem-solving tasks, worked examples, followed by student-generated solutions	Rubric-based evaluation of reasoning, application questions, open-ended problems, and portfolios of written work
Technical/digital skills	Use of simulations, coding activities, data collection with digital tools, and ICT-integrated projects	Performance tasks on devices, product evaluation (e.g., digital artefact), checklists of tool use and accuracy
Socio-emotional skills	Cooperative learning, classroom circles, role-plays for conflict resolution, peer tutoring	Observation rubrics for collaboration and empathy, peer/self-assessment reflections on group work
Learning-to-learn (metacognition, self-direction)	Learning journals, goal-setting conferences, choice boards, and flipped-classroom preparation	Reflective logs, self-evaluation against goals, and teacher feedback on planning and monitoring strategies
Higher-order thinking (critical and creative thinking)	Project-based learning, debates, design challenges, and inquiry cycles with student-generated questions	Analytic rubrics for creativity and reasoning, evaluation of project reports and presentations,

Competency category	Typical classroom pedagogy/activity	Competency-based assessment approach
		and cross-disciplinary tasks

To align with skill orientation, the assessment should focus on whether learners have mastered the outlined skill and can apply it in practice. Competency-based tasks, graded with a rubric and integrated across terms and subjects, are also a viable approach to competency assessment. Skill-based assessment verifies the process by which students engage in performance activities and the agency and responsibility they exercise in undertaking them. Considering the integration of skill-based tasks within the frameworks discussed above is essential to ensure that students can utilise the skills developed through school-based learning to bridge the gap between school and real life.

5. Pedagogical Change: But not Compliance but Self-Directed Learning.

The National Education Policy (NEP, 2020) echoes the vision of the National Curriculum Framework for Teacher Education (NCFTE), which, 12 years ago, highlighted the need for pedagogical renewal to help develop educators capable of transforming rote learners into self-directed, lifelong learners. In fact, NEP 2020's educational transformation agenda is driven by self-directed learning. Students should also be encouraged to go beyond the classroom and engage in self-directed learning. Teachers serve as facilitators in this process. In line with the pedagogical principles of competency-based education (CBE), NEP 2020 describes the conditions that support and enable self-directed learning. Therefore, this research adopts a competency-oriented strategy as its main focus.

CBE refers to the process of acquiring well-articulated knowledge, skills, and attitudes that enable one to engage in a study or career effectively. The long-term learning goal is to develop the disposition of a lifelong learner who, either alone or in a group, seeks opportunities to learn, build skills, and succeed. NEP 2020 also emphasises the effective integration of academic and vocational learning in an open learning environment, where all learners are treated equally, to ensure a lifelong

learning experience. Learning, including informal learning, continues at any age, in any setting, and at any pace. The educational approach is guided by the acquisition of competencies rather than by authority, content, or discipline. Time, space, pedagogy, and modalities are flexible, increasing opportunities and optimising mainstream education (Friis, 2017).

Achieving these milestones requires transitional changes in teaching and learning. Compliance-based, rote-learning methods still prevail in Indian schooling. Students who memorise definitions, formulas, and concepts activate different mechanisms (genetic, phonetic, rehearsal, mnemonics) to passively and repeatedly store them, but not to understand them. Learning becomes destination-oriented rather than process-oriented because content acquisition happens before application.

6. Opportunities and challenges in classroom practice regarding its implementation.

To shift towards competency-based education (CBE) overall and skill-oriented pedagogy specifically, one must address several issues and explore the opportunities it may offer. These pedagogies are developed within the context of this study, using the Natural Competencies Framework as outlined in the National Curriculum Framework,

relevant document drafts, and national framework drafts, as tools to promote lifelong learning, 21st-century skills, and the vision of the National Education Policy 2020 (NEP). At its core, formal education systems exert significant control, given the low likelihood that learners will return to formal settings to acquire skills after leaving school. Achieving NEP goals requires systematically addressing barriers such as resource limitations, curriculum mapping, teacher preparation, and large-scale assessment, especially in human-resourced contexts where CBE is not yet widely implemented.

The current pandemic has motivated the application of familiar competency-based methods to local indigenous models, such as visualisation, to make the curriculum more responsive to skill-based pedagogies. Several case studies can demonstrate early attempts at competency-based approaches in various countries, as well as what the main-context literature indicates are the underlying policies and complementary investments, such as the development of teacher competencies and pedagogical shifts. An international analysis of pedagogical strategies supporting competency-based implementations offers additional insights that enhance the understanding of how curriculum, scientific development, pedagogical application, and competency growth

interact at both ends of the education spectrum. (Mohamed Manik et al., 2014)

7. Case Studies and Comparative Analyses.

The shift to skill-based pedagogy underscores the importance of practical learning that aligns with specific goals. Local resources, as well as geographical and socio-economic factors in both urban and rural areas, also influence how this is put into practice. Examples include project-based learning in a secondary school in Zapopan, Mexico; the use of standards-based performance assessment in a corporate partnership in New York City; and a competency-based curriculum at a private college in South India. These examples show how local factors play a role. Despite differences, the overall trend of change is similar across these settings.

The case studies and cross-context comparisons examine the key aspects of skill-oriented pedagogy across very different settings: project-based learning in a public secondary school in Zapopan, Mexico; performance evaluation based on standards in a corporate partnership project in New York City; and the implementation of a competency-based curriculum at a private college in South India. The influence of classroom practices includes local socio-economic factors and the immediate learning environment. Despite these differences, the strategies used in these contexts

demonstrate a shared commitment and a new sense of unity.

8. Professional Development Implications on Teachers.

Since the turn of the twenty-first century, competency-based education (CBE), which places more emphasis on demonstrating knowledge and skills rather than time spent in the classroom, has gained increasing attention worldwide. The goals of such educational approaches are to equip learners with the skills needed for lifelong learning in knowledge-based economies and societies (e.g., OECD, 2019; UNESCO, 2019). The focus on learning outcomes, which are usually attributed to a range of competencies, has provoked discussion and analysis across many settings. The competency-based approaches are thus interesting, relevant, and significant to policymakers and practitioners in India, especially after the 2020 National Education Policy (NEP), which aims to make education more learner-oriented and to encourage the acquisition of skills that are imperative for individually satisfying and productive lives (GOI, 2020). India has a scalable, CBE-inspired project worth investigating further, with concomitant interest in competency-based solutions across several states.

NEP 2020 calls for a major shift in pedagogy towards competency-based education (CBE). CBE encourages the

development of learners who are self-motivated and ready to engage with a constantly changing body of knowledge, competencies, and skills. As a result, schools play a vital role in supporting diverse learners and fostering lifelong learning. The challenge of implementing these pedagogical and assessment changes in Indian schools is substantial, as the deep-rooted legacy of rote learning, teacher-centred methods, standardised testing, and a focus on syllabus coverage remains prevalent.

One of the recommended reforms to support the shift to competency-based education is a nationwide framework. The CBE framework aims to assist students in embarking on their lifelong learning journeys and in managing their learning independently after leaving school. The model (Friis, 2017) emphasises learners' abilities across different lifelong learning pathways rather than merely focusing on achieving competencies.

A high number of competencies have been mentioned, and they are divided into five categories:

(a) effective communication (information literacy, academic writing, and oral presentation);

(b) social and emotional learning (self-awareness, self-discipline, and empathy);

(c) learning to learn (metacognition, curiosity, and self-directed learning);

(d) technical skills (IT skills, knowledge of Google Cloud Platform); and

(e) higher-order thinking (analysis, critical thinking, creativity).

The competencies outline expected learner abilities and provide a comprehensive overview of the relevant skills, knowledge, and attitudes for a specific situation.

9. Equity, Inclusion, and Access in Competency- Based Frameworks.

A shift toward skill-based education can be supported even with pedagogical reform, provided that access to instruction is clearly defined (J. Belin, 2020; Lee Reinholz et al., 2024). Competency-based systems may worsen disparities in learner access due to inherent differences in the time and support needed to master them. Addressing equity in preparatory courses in countries that invest heavily in such pedagogical changes can help facilitate the transition to the competency-based education advocated by NEP 2020.

10. Assessment Reform: The Measuring of Competencies and Lifelong Learning Capacities.

Since childhood, children are taught to investigate, be active, and ask questions,

but even at school age, these activities are replaced with memorisation and tests. The emphasis on student competition, extensive syllabus coverage, and the intrusive examination system discourages teachers from going beyond rote learning (Scoular, 2018). The bureaucratic, rule-based administration tightly controls schools and restricts student agency. Classroom strategies focus on teaching to the test, turning elementary education into drill-and-kill exercises, which hinder the development of essential habits of mind. Outside school, increasing amounts of supplementary coaching add pressure to conform to formal schooling requirements, as success in board exams is crucial for future academic mobility. Likewise, organisational learning becomes focused solely on preparing for the next board examination, with little regard for how learning might benefit individuals later. Consequently, formal education often becomes largely irrelevant to lifelong development due to rote learning.

Table 2: Traditional vs NEP 2020–aligned assessment

Dimension	Traditional, rote-oriented assessment	NEP 2020–aligned competency-based assessment
Primary purpose	Ranking, selection, board exam performance	Supporting learning, feedback, and development of competencies
Timing and frequency	Annual/terminal, episodic, mostly end-of-year	Continuous and periodic, with strong formative components throughout the year
Nature of tasks	Short-answer, recall-based items from the textbook	Application, reasoning, case-based, project, portfolio and performance tasks

Dimension	Traditional, rote-oriented assessment	NEP 2020–aligned competency-based assessment
Skills emphasised	Memorisation of facts, procedures	Critical thinking, problem solving, communication, and socio-emotional skills
Evidence of learning	Single high-stakes written exam score	Multiple evidence: projects, practicals, oral work, observations, digital artefacts
Feedback to students	Limited, mostly marks and grades after exams	Timely, descriptive feedback; progress cards highlighting strengths and next steps
Reporting format	One-dimensional mark sheet, subject-wise scores	Holistic progress card capturing competencies, co-scholastic areas and learner profiles
System-level support	Board-set papers, little capacity building in assessment	PARAKH-led capacity building, competency templates, and common guidelines across boards

Through NEP 2020, Education Minister Dharmendra Pradhan aims to ensure that India becomes educationally progressive and economically robust by reforming the education system. This involves rethinking the essence of learning, thinking, and education to meet the needs of civilisation (El Mawas & Muntean, 2018). Aspirational, high-level objectives include aligning the education system with global trends and fostering lifelong learners who are self-directed and capable of managing their next phase of learning aligned with their needs and aspirations.

Keeping the NEP text and guidance from the Ministry in mind, the discussion

could shift by examining specific skill-based pedagogies and relevant curricula, with particular emphasis on assessment practices. The rote-learning curricula do not focus on the content; they focus only on discrete information that can be explained in textbooks and created by the teacher, presenting content and asking students to memorise it for later recitation. Skill-oriented pedagogy emphasises learning specific skills that become goals in themselves and encourages greater creativity and ownership on the part of the teacher. This focus can also be expressed within a lifelong learning framework (Williams, 2014).

11. Coherence: Systemic change in education Policy Coherence and Systemic Change in Education.

Modern theories of education increasingly focus on developing self-directed students prepared to thrive in a fast-paced world. In response, the Ministry of Education has been promoting a paradigm shift in Indian education that emphasises self-motivated learning. This shift is reflected in the National Education Policy (NEP) 2020, which stresses the transition to competency-based education (CBE) rather than rote memorisation. CBE addresses the main shortcomings of traditional memorisation by encouraging independent knowledge and skill development, equipping learners for an uncertain, complex future.

NEP 2020 is among the most important efforts to reform education worldwide (Chen et al., 2022). The policy aims to create an education system that responds to the needs of the twenty-first century, one that encourages agency by seeking knowledge beyond formal education. Learning and knowledge development should therefore begin at an early age. CBE addresses the long-term educational challenge of preparing learners to become autonomous agents, promoting individual agency, creativity, and self-sufficiency (Coleman et al., 2016). Competency frameworks such as the National Skills Qualification Framework (NSQF) and the National Skills Policy further support this goal (Chen et al., 2022). The shift in the curriculum from rote learning to competency-based approaches requires parallel changes in assessment, teacher training, pedagogical practices, and governance. These reforms are still to be achieved within a decade.

12. Effects on Student Motivation, Student Agency, and Student Lifelong Learning Trajectories.

The shift to the competency-based education (CBE) system aims to foster self-directed lifelong learners who take ownership of their learning journeys. Competency-based education is based on the principle that output matters more than the time spent in learning, with students progressing by demonstrating professional skills and their ability to

apply them through integrated projects, rather than through tests that focus on rote memorisation. When students are actively involved in classroom activities, their motivation increases. Developing a sense of ownership over their learning, supported by student agency, leads to greater perseverance and commitment to personal learning goals. The competency-based education model emphasises that real-life learning extends beyond traditional grade levels and is lifelong, encompassing everyday experiences such as reading books, watching documentaries, and using apps. Furthermore, agency, motivation, and continuous learning must be prioritised, as policy changes should align with a shift toward a competency-based framework rather than rote memorisation (Friis, 2017; El Mawas & Muntean, 2018).

13. Conclusion and Future Areas.

The National Education Policy (NEP) 2020 is a reform focused on shifting towards competency-based education instead of rote learning. NEP 2020 emphasises creating an education system that develops capable individuals who not only have academic skills but also can solve problems, be creative, and learn continuously, as outlined by the National Skills Qualification Framework (NSQF). Alongside the move towards competency-based education, skill-based pedagogies have also emerged.

Competency-based pedagogy aims to achieve skills through a systematic alignment of learning objectives, teaching methods, and assessment practices; guidance is necessary when teaching becomes more inquiry-driven, autonomous, and responsible.

Within a skill-based model, learning experiences are structured to develop competencies by directly involving learners in the learning process. As a result, learner autonomy becomes both a pedagogical goal and a concern; repeated exposure not only helps develop initiative and self-direction but also influences metacognitive dispositions, enabling learners to find and renew sources of knowledge throughout their lives quickly. These changes in classroom dynamics foster a self-directed, lifelong learning mindset alongside the competencies already outlined in the skills framework. Detailed case studies across various settings illustrate pedagogical strategies, highlighting contextual differences and clarifying the approach's benefits and outcomes.

14. Conclusion

The significant change in India's education policy is the introduction of the National Education Policy (NEP) 2020. Unlike previous policies that favoured rote learning, NEP 2020 presents a vision of competency-based learning. Competency-based education

emphasises life-relevant knowledge, skills, dispositions, mindsets, and lifelong learning capacities as determined by the learner, which are crucial for self-directed lifelong learning. NEP 2020 will implement competency-based curricular, pedagogical, and assessment models that support the development of these competencies.

The current policy intentions and context will shape educational responses to NEP 2020. The analyses of the cases below show high variability in how competencies relate to learning domains and the breadth of the curriculum within the NEP 2020 framework. A comparative analysis highlights different foci on types of competence and access to supportive environments, such as pedagogical leadership development, curriculum maintenance, assessment planning, and equity-based planning. Performance-oriented habits (teamwork, perseverance, innovation, and a growth mindset) are closely linked to strengthening agency, exploration, and adaptation, aligning with NEP 2020 dispositions. It can be predicted that shifting toward a skills-based, competency-focused approach to curriculum and instruction, rather than strict adherence to compliance, content delivery, or procedural steps, may lead to increased student agency in long-term learning pathways envisioned in NEP 2020.

References:

1. Archuleta Frush, K. (2014, June 5–8). *Faculty perspectives: The diffusion of competency-based education* [Conference presentation]. Adult Education Research Conference, Harrisburg, PA. https://newprairiepress.org/aerc/2014/roundtables/

2. Belin, M. J. (2020). *Competency-based education through the lens of personalised learning in a large public high school* (Doctoral dissertation, National Louis University). Digital Commons @ NLU. https://digitalcommons.nl.edu/diss/471/

3. Chen, C.-H., Chen, K.-Z., & Tsai, H.-F. (2022). Did the self-directed learning curriculum guidelines change the self-directed learning readiness of Taiwanese high school students? *Asia-Pacific Education Researcher, 31*(4), 409–426. https://doi.org/10.1007/s40299-021-00582-w

4. Coleman, C., Kennedy-Clark, S., & Thai, T. (2016, November 30–December 1). Does cognition matter? Current pedagogical practice and the need for reform. In *Proceedings of the Australian Association for Research in Education (AARE) Conference*. The University of Notre Dame Australia. https://files.eric.ed.gov/fulltext/ED591875.pdf

5. El Mawas, N., & Muntean, C. (2018, July 2–4). Supporting lifelong learning through the development of 21st-century skills. In *EDULEARN18 Proceedings* (pp. 7757–7766). IATED. https://www.newtonprojec t.eu/wp-content/uploads/2018/12/EDULEA RN_2018_NEM.pdf

6. Friis, E. O. (2017). *Creating a personalised, learner-centred environment for students: One middle-level language arts teacher's journey* (Master's thesis, University of Oklahoma). ShareOK. https://shareok.org/bitstr eam/handle/11244/50772/2017_Frii s_Erica_Thesis.pdf

7. Gremigni, E. (2019). Alternating school-work pathways in Italy: Some remarks on the "competence society." *Partecipazione e Conflitto, 12*(2), 219–241. http://siba-ese.unisalento.it/index.php/paco/ar ticle/view/20668

8. Manik, M. M., Qasim, M., & Shareef, A. F. (2014, June 11–12). Embedding 21st-century skills in pre-service teacher training: A case study from the Maldives. In *Proceedings of the PDE Professional Development in Education Conference 2014* (KII.CD.0135). Widyatama University, Indonesia; Open University, Indonesia; and Open University,Malaysia. http://reposito ry.widyatama.ac.id/handle/1234567 89/3340

9. Reinholz, D. L., Moschetti, M. G., Camacho, J. T., Fuentes-Lopez, E., Wilkes, C., II, & Shah, N. (2024). Equity in practice: Assigning competence to shape STEM student participation. *CBE – Life Sciences Education, 23*(1), Article ar2. https://www.ncbi.nlm.nih.gov /pmc/articles/PMC11023227/

10. Scoular, C. (2018). Equipping teachers with tools to assess and teach general capabilities. In *Reforming learning and teaching in Asia-Pacific universities* (pp. 197–214). Springer. (If using online PDF, include URL, e.g., institutional repository link if available.)

11. Williams, P. (2014). Rethinking university assessment. *International Journal of Technology in Teaching and Learning, 10*(1), 1–15. https://infonomics-society.org/wp-content/uploads/ijtie/volume-3-2014/Rethinking-University-Assessment.pdf