

Research Paper

Vocational Education through Open and Distance Learning: Opportunities, Challenges, and Emerging Perspectives

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ABSTRACT

Vocational education has emerged as a critical instrument for enhancing employability, social inclusion, and lifelong learning in contemporary knowledge societies. In India, recent policy reforms, particularly the National Education Policy 2020, have accorded renewed emphasis to the integration of vocational education across all stages of schooling and beyond, with a strong focus on flexibility, parity of esteem, and learner mobility. Within this policy context, Open and Distance Learning (ODL) has gained prominence as a viable and inclusive mode for delivering vocational education to diverse learner populations, including out-of-school youth, working adults, women, and learners residing in geographically remote areas. This paper presents a conceptual and policy-oriented analysis of vocational education delivered through the ODL mode, drawing upon key national policy documents such as the National Education Policy 2020 and the National Curriculum Framework for School Education 2023. The paper examines the opportunities offered by ODL, including expanded access, flexibility, scalability, and alignment with lifelong learning goals, while also critically engaging with challenges related to practical skill acquisition, learner support, digital divide, assessment, and quality assurance. The discussion highlights emerging perspectives and policy-aligned pathways to strengthen vocational education through ODL, emphasizing blended learning models, institutional collaboration, and systemic coherence.

Keywords: Vocational education, Open and Distance Learning, Open schooling, NEP 2020, NCFSE 2023, lifelong learning

Vocational education occupies a central position in contemporary educational discourse due to its potential to address persistent challenges related to unemployment, underemployment, and skill mismatch. In developing economies such as India, where a significant proportion of the population is young and aspiring for meaningful livelihoods, vocational education is increasingly viewed as a strategic instrument for national development. Historically, vocational education in India was positioned as a separate and often subordinate stream, largely detached from mainstream schooling and higher education. This structural separation contributed to issues of low social acceptance, limited progression pathways, and inadequate enrolment.

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A decisive policy shift is evident in the National Education Policy 2020, which reconceptualises vocational education as an integral component of holistic education. The policy explicitly mandates large-scale vocational exposure, stating that *“by 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and timelines will be developed”* (NEP 2020, para 16.5). This provision reflects a systemic commitment to mainstreaming vocational education rather than treating it as a residual or remedial pathway. Scholarly literature supports this policy shift by highlighting the growing relevance of alternative delivery modes for vocational education. Mutambanengwe and Dambudzo (2019), in their evaluation of Technical and Vocational Education and Training (TVET) in Open and Distance Learning institutions, argue that ODL has emerged as a strategic response to the limitations of face-to-face vocational systems, particularly in contexts marked by resource constraints and learner diversity. Their study underscores that while ODL expands reach and access, it also raises critical pedagogical and infrastructural questions that must be addressed systematically.

Within this evolving educational landscape, Open and Distance Learning emerges as a crucial modality for operationalising the ambitious targets articulated in NEP 2020. ODL institutions have historically played a vital role in democratising education by reaching learners excluded from conventional systems due to socio-economic, geographical, or personal constraints. Their learner-centred, flexible, and scalable pedagogical approaches position them as key enablers in expanding vocational education access. This paper situates vocational education through ODL within the broader framework of educational reform, employability, and social inclusion, adopting a conceptual and policy-oriented lens.

Policy Context: Vocational Education and ODL in India

The policy landscape governing vocational education and ODL in India has undergone significant transformation in recent years. The National Education Policy 2020, notified by the Ministry of Education, provides a comprehensive framework for reimagining education in alignment with the demands of the twenty-first century. One of its most significant thrust areas is the vocationalisation of education, with a clear emphasis on experiential learning, employability, and dignity of labour.

NEP 2020 explicitly calls for the integration of vocational education with general education, stating that *“the development of vocational capacities will go hand-in-hand with the development of ‘academic’ or other capacities”* (NEP 2020, para 16.5). This assertion is particularly important in challenging the long-standing academic-vocational divide and in establishing parity of esteem between different forms of knowledge. The policy further mandates that vocational education *“will be integrated in the educational offerings of all secondary schools in a phased manner”* and *“encourages collaboration with ITIs, polytechnics, and local industry through hub-and-spoke models”* (NEP 2020, para 16.5).

Flexibility and learner mobility are foundational principles of NEP 2020. The policy recognises Open and Distance Learning as a key mechanism for achieving these goals, particularly in the context of lifelong learning and continuing education. By emphasising multiple learning pathways, credit transfer, and recognition of prior learning, NEP 2020 creates a supportive policy environment for vocational education delivered through ODL modes.

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Empirical and conceptual studies conducted prior to NEP 2020 anticipated many of these reforms. Fozdar and Kumar (2008), in their analysis of vocational education through ODL in India, highlight that open universities and open schooling systems have historically functioned as alternative skill-development platforms for working adults, school dropouts, and in-service learners. Their study notes that ODL-based vocational programmes have been particularly effective in expanding outreach, although issues related to standardisation and recognition persist.

The National Curriculum Framework for School Education 2023 operationalises the vision of NEP 2020 at the curricular level. Vocational education is accorded distinct curricular recognition under *Part B, Chapter 9: Vocational Education*, marking a significant departure from earlier curriculum frameworks. The NCFSE 2023 explicitly articulates the broader educational value of vocational learning, noting that “*vocational education helps students learn and respect the value of work, respect for all and their capabilities regardless of background, and respect for the environment*” (NCFSE 2023, Chapter 9). This curricular recognition is significant, as earlier studies such as Pant and Verma (2008) observed that vocational education delivered through distance modes often suffered from weak curricular integration and limited articulation with mainstream education. The explicit positioning of vocational education within the NCFSE 2023 addresses this historical gap and provides stronger legitimacy to vocational programmes offered through ODL.

Conceptual Framework of Vocational Education through ODL

Vocational education through Open and Distance Learning can be conceptually understood as the provision of skill-oriented and employment-focused education through flexible, learner-centric, and technology-enabled modes. Unlike conventional vocational training, which is often bound by rigid schedules and physical infrastructure, ODL emphasises openness, accessibility, and self-paced learning. This conceptual orientation closely aligns with the lifelong learning framework emphasised in NEP 2020.

Learner autonomy forms a core principle of ODL-based vocational education. Learners engage with self-instructional materials, multimedia resources, and digital platforms, enabling them to regulate the pace and sequencing of their learning. This is particularly relevant for adult learners and working professionals who seek to acquire or upgrade vocational skills without disengaging from employment. Modularisation and credit accumulation further enhance flexibility and progression.

However, research on fully online vocational teaching cautions against assuming that flexibility alone ensures effectiveness. Cox and Prestridge (2020) argue that vocational education involves inherent tensions between competency-based requirements and student-centred online pedagogies. Their study highlights the need for carefully designed instructional strategies that balance learner autonomy with structured guidance, particularly in skill-intensive domains.

Inclusivity constitutes another critical conceptual dimension. By decoupling learning from fixed locations and rigid timetables, ODL-based vocational education addresses barriers related to geography, age, gender, and socio-economic status. This aligns with the social justice orientation of NEP 2020 and the learner diversity acknowledged in NCFSE 2023.

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From a pedagogical standpoint, vocational education through ODL necessitates innovative approaches that integrate theory with practice. The NCFSE 2023 conceptualises vocational knowledge as encompassing not only job-specific skills but also collaborative and ethical dimensions, noting that vocational learning “*includes knowing how to work with people in teams... and develops sensitivity towards the environment, collaboration, integrity, waste management, and other values*” (NCFSE 2023, Chapter 9). This broader conception underscores the need for thoughtfully designed ODL pedagogies.

Opportunities of Vocational Education through ODL

One of the most significant opportunities offered by vocational education through ODL is expanded access. ODL enables participation of learners who are unable to engage with conventional vocational institutions due to constraints related to time, location, or personal responsibilities. This is particularly important in achieving NEP 2020’s target of exposing 50 percent of learners to vocational education by 2025 (NEP 2020, para 16.5).

Flexibility is another major advantage. Vocational learners often include working adults, women with caregiving responsibilities, and school dropouts, all of whom benefit from adaptable learning schedules. ODL allows learners to balance education with work and family commitments, thereby improving participation and retention. This flexibility directly supports NEP 2020’s emphasis on multiple learning pathways and lifelong learning.

International evidence supports the argument that ODL can enhance learner engagement when supported by appropriate institutional mechanisms. Yates, Brindley-Richards, and Thistoll (2020), in their study of distance-based vocational education in New Zealand, demonstrate that structured learner support, timely feedback, and targeted interventions significantly improve student engagement and course completion rates. This suggests that engagement challenges in ODL are not inherent but contingent on design and support systems.

Scalability and cost-effectiveness further strengthen the case for ODL. Once developed, self-learning materials and digital resources can be disseminated to large learner populations with relatively low marginal costs. This is particularly relevant for a country of India’s scale, where expanding vocational education through conventional institutions alone may be neither feasible nor affordable.

ODL also supports continuous upskilling and reskilling, which are essential in a rapidly changing labour market. By enabling learners to re-enter education at different stages of life, ODL contributes to workforce adaptability and resilience, reinforcing the policy vision articulated in NEP 2020.

Challenges in Implementing Vocational Education through ODL

Despite its promise, vocational education through ODL faces significant challenges. A primary concern relates to the acquisition of practical and hands-on skills, which are central to vocational education. Many trades require access to equipment, workshops, and real-world work environments that cannot be fully replicated through distance modes.

Studies consistently identify this limitation. Mutambanengwe and Dambudzo (2019) observe that insufficient practical supervision and limited access to training facilities can

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compromise skill acquisition in ODL-based TVET programmes if alternative arrangements are not institutionalised.

The digital divide poses another major challenge. While ODL relies on technology, unequal access to devices, internet connectivity, and digital literacy can exclude learners from rural and marginalised backgrounds. Without targeted interventions, ODL risks reinforcing existing inequalities rather than mitigating them.

Learner support services also remain a concern. Vocational learners require academic guidance, mentoring, and career counselling. In ODL contexts, limited face-to-face interaction can affect motivation and persistence. Strengthening support systems is therefore critical.

Research conducted during the COVID-19 period further highlights these challenges. Ahmad and Idrus (2021) found that TVET learners experienced heightened stress, disengagement, and learning difficulties in online distance environments, underscoring the need for psychosocial support and adaptive instructional strategies.

Assessment and certification present additional concerns. Alias, Alavi, and Selamat (2022), in their systematic review of vocational training methods, note a significant research gap regarding the assessment of competency-based outcomes in ODL contexts, particularly for practical skills. This raises important questions about quality assurance and credibility.

Way Forward and Emerging Perspectives

Strengthening vocational education through ODL requires blended learning models that combine distance-based theoretical instruction with face-to-face practical training through local centres and industry partnerships. Such models resonate with NEP 2020's emphasis on institutional collaboration and experiential learning.

Emerging research points to the potential of immersive technologies in addressing practical training gaps. Studies on virtual and simulated learning environments, including web-based virtual workshops, suggest that such tools can partially bridge the gap between theory and practice when physical access is limited. While these technologies cannot replace hands-on experience entirely, they can serve as valuable preparatory and supplementary tools.

Capacity building of educators and academic counsellors is equally important. Delivering vocational education through ODL demands specialised pedagogical competencies, including digital material development and facilitation of practice-based learning.

Technological innovations such as simulations and virtual labs can partially address practical training challenges, though they should complement rather than replace hands-on experience. Policy coherence across education, skill development, and labour sectors will further enhance the effectiveness and acceptance of ODL-based vocational education.

CONCLUSION

Vocational education through Open and Distance Learning represents a strategic pathway for realising the inclusive and flexible education system envisioned in NEP 2020 and NCFSE 2023. The explicit policy mandate to expand vocational exposure, coupled with

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curricular recognition of vocational education's holistic value, provides strong justification for leveraging ODL as a delivery mode.

The reviewed studies indicate that while ODL significantly expands access and flexibility, its effectiveness in vocational education depends on the availability of practical training arrangements, robust learner support systems, credible assessment mechanisms, and institutional readiness. Integrating empirical insights with policy frameworks can inform more responsive and sustainable models of vocational education through ODL.

While challenges related to practical training, digital access, learner support, and quality assurance persist, they are not insurmountable. With blended models, strengthened institutional mechanisms, and sustained policy support, vocational education through ODL can contribute meaningfully to employability, social equity, and lifelong learning in India.

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Conflict of Interest

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