Designing for Diversity: A Qualitative Content Analysis of Heutagogy Features in India's MOOCs under NEP 2020

Jerin P G[1*], Dr. Smitha S.[2]

[1*]Research Scholar, School of Pedagogical Sciences, Mahatma Gandhi University, Kottayam
[2]Assistant Professor, School of Pedagogical Sciences, Mahatma Gandhi University, Kottayam

ARTICLE INFO	ABSTRACT
	The National Education Policy (NEP) 2020 positions flexibility, learner autonomy, and inclusive access as central pillars of higher education reform in India, with the Academic Bank of Credits enabling students to accumulate and transfer credits across institutions. SWAYAM, India's national Massive Open Online Course (MOOC) platform, is a key instrument for operationalizing these reforms, offering credit-eligible courses across disciplines through a four-quadrant design of video lectures, readings, self-assessments, and discussion forums. Grounded in the principles of heutagogy—self-determined learning emphasizing agency, adaptability, and capability development—this study investigates the extent to which credit-eligible SWAYAM courses embed diversity-oriented design features. Using Mayring's (2000) structured qualitative content analysis, a purposive sample of fifteen courses from multiple disciplines and national coordinators was examined. A coding framework derived from heutagogical literature (Blaschke, 2012) (Hase & Kenyon, 2000) addressed six dimensions: learner agency and choice, self-reflection and metacognition, flexibility in pathways and pacing, authentic and contextualized learning, capability development, and learner-generated content, with inclusivity markers such as multilingual accessibility and institutional support integrated within each dimension. Findings reveal notable variability across disciplines: management and professional courses often demonstrate greater flexibility and opportunities for learner choice, while several STEM courses follow rigid, content-heavy structures with limited adaptability. Multimodal delivery was common, but multilingual integration, adaptive assessments, and culturally contextualized materials were less consistently implemented. The study contributes evidence-based recommendations for MOOC designers, national coordinators, and policymakers to strengthen alignment between course design and NEP 2020's vision of equitable, flexible, and self-determined learning.

Keywords: MOOCs; SWAYAM; NEP 2020; Heutagogy; Academic Bank of Credits; Inclusive Design |

Introduction

The rapid growth of Massive Open Online Courses (MOOCs) has reshaped higher education worldwide, enabling scalable, flexible, and often free access to learning opportunities. In India, this shift is being guided by the National Education Policy (NEP) 2020, which emphasises learner autonomy, multidisciplinary flexibility, and inclusive access as central pillars of reform (Ministry of Education, 2020). A key policy mechanism supporting this vision is the Academic Bank of Credits (ABC)—a digital repository that allows learners to accumulate credits from diverse sources, including MOOCs, and transfer them across higher education institutions.

SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds), launched in 2017, is India's national MOOC platform and a critical enabler of NEP 2020's objectives. Operated through a network of national coordinators such as NPTEL, UGC/CEC, IIM Bangalore, and IGNOU, SWAYAM offers credit-eligible courses across disciplines using a four-quadrant instructional model: (1) video lectures, (2) downloadable reading

materials, (3) self-assessment activities, and (4) discussion forums (*Swayam Central*, n.d.). This design aims to merge large-scale delivery with pedagogical interactivity, making higher education more accessible for diverse learner populations.

While SWAYAM's policy framework and technical infrastructure are well established, the realisation of NEP 2020's inclusivity and flexibility goals depends heavily on course design. Here, the concept of heutagogy—self-determined learning—offers a valuable lens for evaluation. Originating from Hase and Kenyon (2000), heutagogy moves beyond pedagogy and andragogy by emphasizing learner agency, adaptability, and capability development. In practice, this can mean providing choice in learning pathways, opportunities for reflection, flexible pacing, authentic tasks, and learner-generated outputs (Blaschke, 2012)

Existing literature on Indian MOOCs has focused largely on enrolment patterns, learner satisfaction, and policy-level adoption. However, there has been little systematic evaluation of whether credit-eligible SWAYAM courses embody heutagogical design features aligned with NEP 2020's vision. Without such analysis, policy aspirations for learner-centred, inclusive education risk being undermined by rigid or inaccessible course structures.

This study addresses this gap by conducting a qualitative content analysis of a purposive sample of credit-eligible SWAYAM courses, examining the presence and depth of heutagogical dimensions. By aligning the analysis with both NEP 2020's inclusivity goals and heutagogy's learner-centred principles, the research seeks to provide actionable insights for MOOC designers, national coordinators, and policymakers.

Review of Literature

SWAYAM, India's national MOOC platform, implements a four-quadrant instructional model comprising (1) video lectures, (2) downloadable reading materials, (3) self-assessment activities, and (4) discussion forums. This design aims to balance scalable delivery with learner interaction, making higher education accessible to diverse populations across the country (*Swayam Central*, n.d.).Operated through national coordinators such as NPTEL, UGC/CEC, IIM Bangalore, and IGNOU, SWAYAM offers courses that can be integrated into formal degrees via the Academic Bank of Credits (ABC) under the NEP 2020 framework (Ministry of Education, 2020).

Despite these structural affordances, persistent challenges remain. Studies report low completion rates and high dropout across Indian MOOCs, often attributed to rigid course pacing, minimal personalization, and limited multilingual accessibility (Kumar et al., 2022) These patterns mirror global MOOC trends, where barriers to sustained engagement include lack of learner support, limited flexibility in assessments, and absence of contextualised content (Jordan, 2015);

The NEP 2020 explicitly advocates for flexible, inclusive, and technology-enabled learning pathways, encouraging institutions to embed MOOCs into formal curricula and to adopt learner-centered approaches. However, as Agarwal and Kumar (2021) note, inclusion in MOOCs must go beyond open enrolment; it requires intentional course design that recognizes linguistic diversity, varied learner capabilities, and the need for adaptive pacing.

From a theoretical perspective, this study is grounded in heutagogy, or self-determined learning, introduced by Hase and Kenyon (2000) and later expanded by Blaschke (2012). Heutagogy emphasizes learner agency, capability development, and non-linear learning pathways, aligning closely with the NEP 2020 emphasis on flexibility and autonomy. The six key dimensions of heutagogy—(1) learner agency and choice, (2) self-reflection and metacognition, (3) flexibility of pathways and pacing, (4) authentic and contextualised learning, (5) capability development, and (6) learner-generated content—offer a structured lens for evaluating MOOC design in relation to diversity and inclusivity goals.

While there is a growing body of work on SWAYAM's reach and policy integration, few studies have systematically examined credit-eligible courses for their alignment with heutagogical principles. This gap forms the basis for the present research, which seeks to understand how far India's national MOOCs embody the design features necessary to realize NEP 2020's vision of equitable, learner-driven higher education.

Methodology

This study adopted a qualitative content analysis design to investigate the extent to which credit-eligible SWAYAM courses integrate heutagogical features that align with the inclusivity and flexibility principles outlined in the National Education Policy (NEP) 2020. The analysis followed Mayring's (2000) structured approach, which systematically combines deductive category application based on established theoretical frameworks with inductive category development to capture emergent insights. A qualitative design was

deemed appropriate because the primary aim was to interpret and describe instructional design features, rather than quantify learner behaviours or outcomes, making content analysis a suitable strategy for exploring how heutagogical principles manifest within course structures.

A purposive sampling strategy was employed to ensure representation across a broad range of disciplines and institutional pedagogies. Courses were selected according to four criteria: they were officially designated as credit-eligible under the University Grants Commission (UGC) and Academic Bank of Credits guidelines; they represented diverse fields, including Arts and Humanities, Social Sciences, STEM disciplines, Professional Studies, and Teacher Education; they were offered through different national coordinators; and they contained complete instructional materials accessible for analysis. To capture this breadth, courses were drawn from all SWAYAM national coordinators, namely: NPTEL (National Programme on Technology Enhanced Learning), UGC (University Grants Commission), CEC (Consortium for Educational Communication), IGNOU (Indira Gandhi National Open University), IIMB (Indian Institute of Management Bangalore), NIOS (National Institute of Open Schooling), AICTE (All India Council for Technical Education), NCERT (National Council of Educational Research and Training), and NITTTR (National Institute of Technical Teachers Training and Research). Based on these parameters, fifteen courses were selected, a number judged sufficient to achieve thematic saturation while allowing for in-depth qualitative coding.

The primary dataset was obtained directly from the official SWAYAM platform (https://swayam.gov.in) between January and March 2024. For each course, all available instructional components were downloaded and archived. These included video lectures in various formats (full-length recordings, modular videos, and animated segments), downloadable reading materials such as PDFs, slide decks, and supplementary readings, self-assessment activities in the form of quizzes, assignments, and project tasks, discussion forum transcripts documenting learner–instructor interaction, and metadata detailing the course's intended learning outcomes, credit allocation, prerequisites, and duration.

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The coding framework was developed deductively from the six key dimensions of heutagogy as articulated by Hase and Kenyon (2000) and elaborated by Blaschke (2012): learner agency and choice, self-reflection and metacognition, flexibility in learning pathways and pacing, authentic and contextualised learning, capability development, and learner-generated content. Different theoretical perspectives were considered in refining these categories, including Argyris and Schön's (1978) concept of double-loop learning, Bandura's (*Bandura's (1997) Self-Efficacy Theory, - Google Search*, n.d.) (1997) self-efficacy theory, and Stephenson and Weil's (1992) distinction between competence and capability. In addition, NEP 2020's inclusivity objectives—such as multilingual provision, accessibility features, and institutional learner support—were embedded as cross-cutting indicators within the framework.

Analysis

The data were examined using Mayring's (2000) Structured Qualitative Content Analysis, a systematic approach for linking theoretical categories to empirical material while allowing for the emergence of new insights. The method unfolds in seven interconnected stages: (1) formulating a concrete research question, (2) linking it to relevant theory, (3) defining the research design, (4) determining the sample and materials, (5) collecting and coding the data, (6) processing and presenting results, and (7) evaluating findings against quality criteria. This framework provides both methodological rigour and transparency in interpreting qualitative data.

Following Mayring's framework, the content from the 15 selected credit-eligible SWAYAM courses was imported into NVivo 14 for systematic coding. A deductive coding scheme was first developed, based on the six dimensions of heutagogy and the inclusivity principles outlined in NEP 2020, to ensure alignment with the study's conceptual focus. At the same time, inductive coding was used to capture additional design features that were not anticipated in the initial framework. NVivo was then used to organise these codes into hierarchical categories and to produce outputs such as category frequency counts, thematic matrices, and code co-occurrence maps. These outputs formed the basis for identifying patterns, gaps, and variations in heutagogical design across courses, which are discussed in the findings section.
Figure 1, presents the step-by-step model adapted from Mayring (2000), which served as the procedural guide for this study.
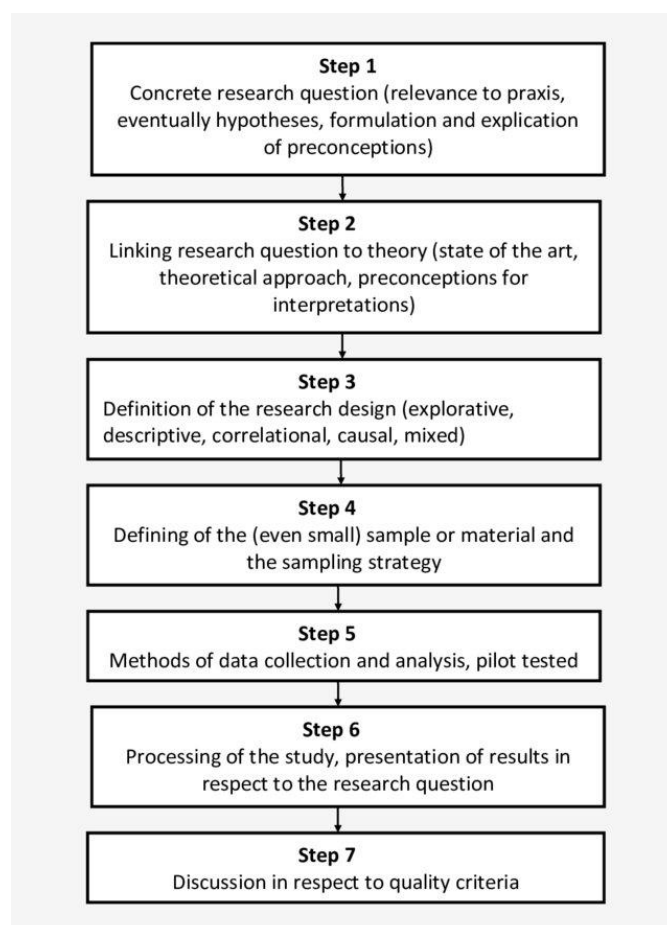
Figure 1: Mayring's (2000) Seven-Step Structured Qualitative Content Analysis Process (Source: Adapted from Mayring, P. (2000). Qualitative content analysis. Forum: Qualitative Social Research, 1(2).)

Findings

The analysis of fifteen credit-eligible SWAYAM courses revealed considerable variation in the incorporation of heutagogical features and inclusivity elements envisioned under NEP 2020. Across the dataset, professional and management-oriented courses demonstrated relatively higher integration of learner agency, offering optional modules, supplementary case studies, and opportunities for learners to select from multiple project topics. In contrast, many STEM-based offerings followed a rigid, linear sequence of modules with limited opportunities for self-directed navigation, thus constraining learner autonomy. While all courses adhered to SWAYAM's four-quadrant model, the ways in which these components supported flexibility and personalised learning were inconsistent.

Self-reflection opportunities were present in a little under half of the analysed courses, often in the form of discussion prompts, post-module quizzes encouraging review of misconceptions, or optional reflective journals. These were more prevalent in teacher education and humanities courses, where instructors explicitly integrated reflection into activities and assignments. However, in most STEM courses, reflection was an incidental rather than intentional part of the learning process. Capability development, particularly in linking theoretical knowledge to practical applications, was evident in management and applied science courses through the use of problem-based tasks, real-world case studies, and project work. Nevertheless, a number of courses relied heavily on multiple-choice assessments, which restricted the scope for demonstrating applied competence.

Flexibility in learning paths, while theoretically afforded by the asynchronous nature of MOOCs, was seldom embedded into the actual course design. Only a minority of courses allowed learners to skip or reorder modules or to choose between alternative assessment formats. The encouragement of learner-defined goals was also rare; most courses presented predetermined learning objectives set by the instructor, with little scope for individual goal-setting. Double-loop learning, which would enable learners to question underlying assumptions and reconstruct their understanding, was observed sporadically. In the few instances where it did occur, it was facilitated through moderated discussion forums or assignments that required comparative analysis and critique, but active facilitation from instructors was inconsistent.

From the perspective of NEP 2020's inclusivity principles, all courses met the basic multimodal delivery standard mandated by the SWAYAM framework, combining video lectures, downloadable resources, and

assessment tools. However, language accessibility emerged as a clear limitation: only three courses offered full multilingual support beyond English subtitles, which potentially limits reach among non-English-dominant learners. Cultural contextualization was also uneven; while humanities and teacher education courses embedded local case studies and region-specific examples, many technical courses relied on generic or globalized content without adapting scenarios to the diverse realities of Indian learners. Assessment formats were predominantly conventional MCQs, with only six courses incorporating alternative strategies such as project submissions, peer evaluations, or open-ended assignments. Finally, although SWAYAM provides centralized technical assistance, course-level learner support—such as guidance on credit transfer procedures, orientation videos, or step-by-step assessment walkthroughs—was inconsistently implemented across coordinators.

NVivo's co-occurrence analysis indicated that the presence of learner agency often overlapped with capability development and flexible learning paths, particularly in management and teacher education courses. In contrast, dimensions such as double-loop learning showed minimal overlap with other heutagogical features, suggesting that while some aspects of self-determined learning are emerging in SWAYAM, deeper critical engagement remains underdeveloped. These findings point to both the promise and the design limitations of India's MOOCs, highlighting the need for course-level strategies that embed heutagogical principles and inclusivity measures more systematically across disciplines and coordinators.

NVivo Hierarchy Diagram - Heutagogy & Inclusivity in SWAYAM Courses (Aligned to Findings)
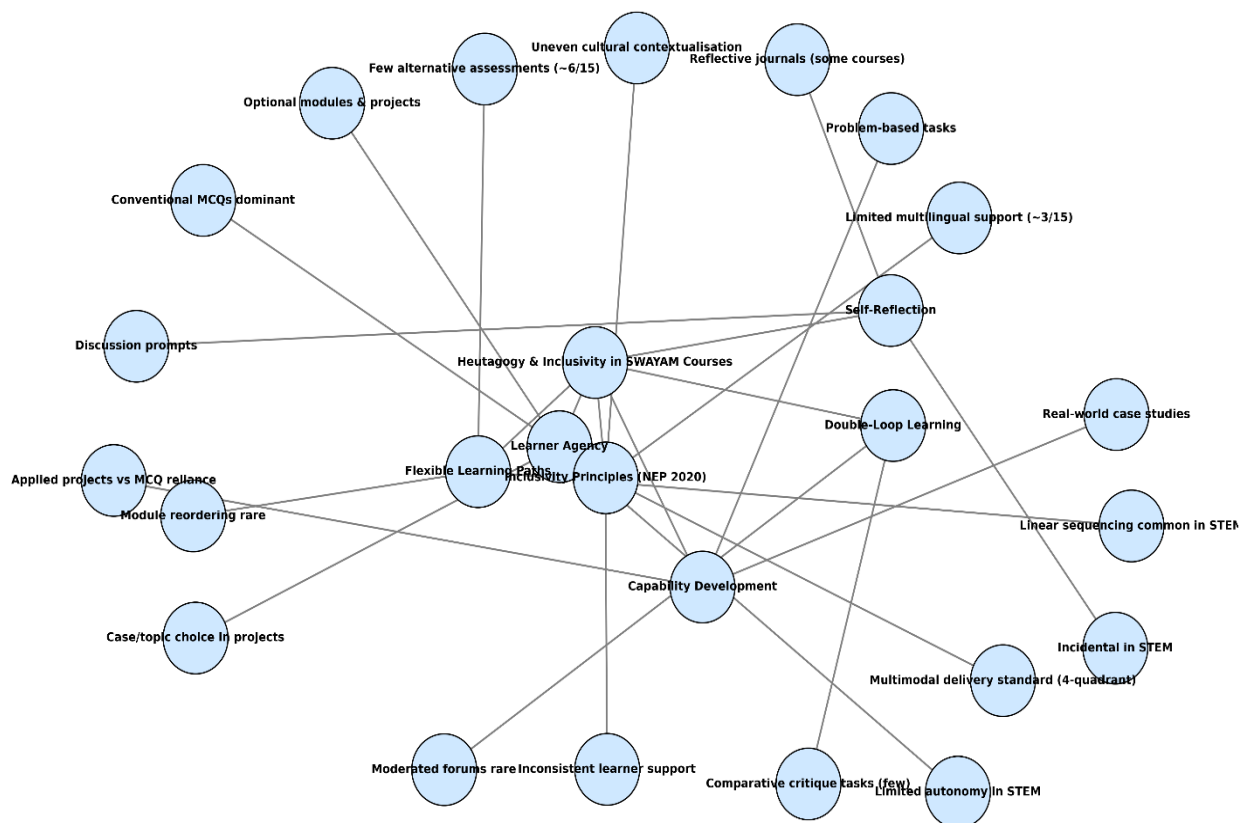
Figure 2. NVivo hierarchy diagram mapping the interconnections between heutagogical dimensions and NEP 2020 inclusivity principles in 15 credit-eligible SWAYAM courses.

The thematic relationships between heutagogical dimensions and NEP 2020 inclusivity principles, as identified through NVivo coding, are shown in Figure 2. The diagram illustrates the interconnections between self-reflection, learner agency, capability development, and inclusivity-related features such as multilingual support and cultural contextualisation, alongside areas where heutagogical integration remains limited.

Discussion

The analysis of fifteen credit-eligible SWAYAM courses revealed an uneven integration of heutagogical features across disciplines, confirming earlier observations that Indian MOOCs often face challenges in embedding learner-centred flexibility into course design (Agarwal & Kumar, 2021; Jordan, 2015). While the four-quadrant model ensures a baseline level of multimodal delivery, the findings of the study suggest that the deeper dimensions of heutagogy—such as learner agency, Self-reflection, capability development, and double-loop

learning—are inconsistently applied. This inconsistency is particularly evident in STEM courses, where content delivery is often rigid and assessment strategies are dominated by multiple-choice formats, limiting opportunities for self-directed exploration and reflective practice.

In line with Blaschke's (2012) definition of heutagogy as a framework that empowers learners to determine what and how they learn, the more heutagogically rich courses in the sample—primarily in management, teacher education, and humanities—provided optional projects, real-world case applications, and alternative assessment pathways. These design features enabled learners to personalise their learning journeys, aligning with NEP 2020's vision of flexible, learner-driven higher education. However, the rarity of module reordering options, goal-setting exercises, and moderated discussion forums in many courses suggests that the potential for autonomy remains underutilized.

From an inclusivity perspective, NEP 2020 emphasises multilingual access and cultural contextualization as key enablers of equity in online learning. Yet, the findings of this study indicate that only a small proportion of courses provided full multilingual support or embedded culturally relevant examples beyond generic global case studies. This aligns with Raffaghelli et al. (2020), who argue that without intentional localization, MOOCs risk perpetuating accessibility barriers for first-generation and non-metropolitan learners. Moreover, the limited use of reflective journals, comparative critique tasks, and open-ended problem-based assessments points to a missed opportunity for fostering deeper critical engagement—an essential aspect of double-loop learning (Hase & Kenyon, 2000).

The NVivo hierarchy diagram (Figure 2) underscores the clustering of learner agency, capability development, and flexible learning paths in certain disciplines, while highlighting the isolation of double-loop learning and cultural contextualization. This pattern suggests that while some elements of heutagogy are finding their way into SWAYAM course design, they tend to be implemented in isolation from one another rather than as part of a cohesive pedagogical strategy. Achieving NEP 2020's ambition of equitable, self-determined learning will require deliberate integration of heutagogical principles across all course types, supported by national coordinators and institutional policy frameworks.

Conclusion

This study set out to examine the extent to which credit-eligible SWAYAM courses embody heutagogical principles and inclusivity features in alignment with the National Education Policy (NEP) 2020. Through qualitative content analysis of fifteen purposively selected courses across disciplines, the findings reveal that while SWAYAM's structural framework offers baseline multimodal access and credit-bearing potential, the depth and consistency of heutagogical integration vary considerably. Professional and management-oriented courses exhibit stronger incorporation of learner agency, flexible assessment formats, and contextualised learning, whereas STEM-oriented courses often retain rigid, instructor-driven structures with limited scope for self-determined learning.

The analysis underscores several systemic gaps—most notably, limited multilingual provision, uneven incorporation of cultural contexts, and the sporadic presence of reflective and double-loop learning opportunities. These shortcomings risk constraining the inclusivity and learner autonomy envisioned under NEP 2020. Importantly, the co-occurrence patterns generated through NVivo highlight that heutagogical features, when embedded holistically, can reinforce each other and enhance overall learner engagement.

For SWAYAM to fulfil its potential as a vehicle for flexible, equitable, and learner-centred higher education, course design must move beyond compliance with the four-quadrant model toward deliberate integration of heutagogical dimensions. This requires cross-coordinator collaboration, enhanced instructor training, and targeted policy support to ensure that principles of self-determined learning are embedded consistently across disciplines. By aligning instructional design more closely with NEP 2020's inclusivity agenda and heutagogy's learner-centred ethos, SWAYAM can better serve the diverse learning needs of India's higher education ecosystem.

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