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# Motivation Attention and Engagement among Young Indian Learners in Massive Open Online Courses

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**Abstract:** This study investigates how young Indian learners between the ages of 18 and 25 engage with Massive Open Online Courses (MOOCs) and how cognitive, motivational, and communication related factors influence their learning trajectories. Using a mixed-methods digital ethnographic approach that includes surveys, interviews, and observation of everyday study routines, the research examines how learners interpret online learning environments and what shapes their ability to maintain consistency. The findings show that students typically enroll in online courses to gain skills, improve employability, and earn certifications, yet many experience declining motivation due to attention fatigue, irregular study habits, limited doubt resolution, and a lack of instructor presence. The study also identifies emotional behaviours such as distraction, isolation, and fluctuating confidence that affect persistence. Participants respond positively to micro-learning formats, short quizzes placed immediately after lessons, and communication that feels friendly, clear, and encouraging rather than overly academic. They also express a desire for hybrid support systems that offer light mentorship or peer accountability. The paper argues that MOOC platforms in India must align instructional clarity, communication tone, and assessment structures with the behavioural needs of young learners to create more supportive and motivating online learning environments.
**Keywords:** Online Learning, Motivation, Engagement, EdTech, User Behavior, Communication Design.

## 1. Introduction

Over the last decade, India has witnessed a dramatic transformation in the way young people learn. Affordable smartphones, cheaper data packages, mass-scale platforms such as SWAYAM, Coursera, and Udemy, and a rising cultural emphasis on employability have turned digital learning from an optional supplement into an expected norm. For learners between 18 and 25, MOOCs are no longer simply educational tools; they **function as gateways to professional mobility, self-development, and social signalling** within an increasingly credential-driven environment ***(Agarwal, 2020)***. Digital certificates today act as symbolic capital, reflecting ambition, productivity, and future readiness.

However, despite widespread enrolment, studies repeatedly highlight low MOOC completion rates around the world ***(Jordan, 2015)***, and this challenge is deeper in India due to specific

cultural, environmental, and behavioural conditions. Young learners navigate online courses while simultaneously managing **academic pressure, family expectations, multitasking habits, fluctuating motivation cycles, and highly distracting digital ecosystems**. These conditions create what scholars refer to as "cognitive interference" the intrusion of competing tasks and stimuli on learning effectiveness ***(Rosen et al., 2013).***

This research emerges from a core question:

**Why do young Indian learners begin online courses with enthusiasm but struggle to stay consistent?**

Early observations indicate that the problem is not rooted in lack of motivation, but rather a **misalignment between course design and the emotional cognitive context of learners**. Unlike traditional classrooms where structure, peer presence, and faculty interaction cultivate a sense of accountability, MOOCs rely heavily on self-regulation
skills such as time management, planning, and autonomous navigation. Yet, these skills are rarely taught or reinforced in Indian educational systems, creating a gap between learner capability and platform expectations.

As ***Norman (2013***) argues, **systems fail when they assume user expertise that does not exist**. MOOC platforms often assume that learners can independently sequence content, control distractions, and sustain long-term engagement. Similarly, ***Sweller's (1988)*** Cognitive Load Theory explains that learners disengage when design elements introduce unnecessary mental demands such as long videos, complex navigation systems, or unsegmented modules. In the Indian context, where many learners use mobile devices, limited bandwidth, and shared spaces, the cognitive load increases even further.

To truly understand drop-offs and disengagement, it is essential to move beyond quantitative indicators like clicks or completion percentages. While platform analytics show what learners do, they cannot reveal why learners behave in certain ways. An ethnographic and digital ethnography approach allows us to examine the subtle, often invisible forces shaping learning behaviours, domestic rhythms, emotional responses, multitasking patterns, peer influence, and environmental constraints ***(Pink et al., 2016).***

Motivational psychology also plays a key role. According to Deci and Ryan's Self-Determination Theory, learners sustain engagement when they experience autonomy, competence, and relatedness ***(Deci & Ryan, 2000)***. However, MOOC structures rarely provide real-time feedback, personal interaction, or community leading to emotional disengagement.

Research on student persistence also shows that belongingness and perceived support significantly influence continuation in learning environments ***(Tinto, 1997)***.

Therefore, this study employs digital ethnography to investigate the lived experiences of young Indian MOOC users, focusing on communication patterns, motivational rhythms, and design-mediated barriers. By observing how learners talk about learning, how they negotiate distractions, how platform interfaces shape their confidence, and how cultural ideas of productivity influence their behaviour, the study aims to produce **actionable, culturally grounded insights**. Ultimately, the findings seek to support the creation of more adaptive, intuitive, and emotionally-attuned MOOC ecosystems that recognise learning not as a purely cognitive process, but as a deeply **social, psychological, and context-dependent** one.

# 2. CONTEXT & LITERATURE REVIEW

## 2.1 The Rise of Online Learning in Post-Pandemic India

The post-pandemic landscape has fundamentally reshaped how young Indians interact with education. The National Education Policy ***(Ministry of Education, 2020)*** positioned digital learning as a strategic priority, encouraging flexible, technology-supported pathways that supplement conventional classrooms. During COVID-19, online platforms shifted from optional tools to essential infrastructures, resulting in an unprecedented expansion of MOOCs and mobile-first learning ecosystems. This growth democratized access to global content, but it also revealed long-standing inequalities in digital access, linguistic diversity, and device availability. Reports by ***NITI Aayog (2021)*** argue that India's EdTech future depends on resolving these disparities through inclusive hybrid models that blend online content with community-based support structures. As a result, the contemporary Indian
learner encounters a complex mix of opportunity and constraint. Online learning is accessible and aspirational, yet deeply shaped by the tensions between digital growth, infrastructural limitations, and diverse learner readiness.

## 2.2 Behavioural and Cognitive Barriers in MOOC Learning

Although MOOCs provide affordability and convenience, they place significant cognitive and behavioural demands on learners who must manage motivation, time, navigation, and self-assessment independently. ***Agarwal and Kaushik (2022)*** note that many Indian learners experience difficulty sustaining long-term engagement because platforms rarely provide timely

doubt resolution or sustained interaction. ***Kumar (2021)*** similarly highlights that confusing navigation structures, scattered resources, and delayed feedback contribute to frustration and early dropout.

These issues are consistent with Sweller's Cognitive Load Theory, which explains that when learners expend mental energy deciphering interface elements or course pathways, fewer cognitive resources remain for processing course content. As a result, MOOC learners are often required to:

- self-regulate without external accountability
- manage study schedules in environments full of digital distractions
- navigate multi-layered menus and dashboards
- evaluate their own progress without reassurance
- learn in isolation without emotional reinforcement

This creates a mismatch between the self-directed expectations of MOOCs and the lived digital behaviours of Indian youth, whose online environments merge entertainment, communication, and micro-tasking. The constant switching between apps and notifications further fragments attention, making deep learning more difficult to sustain.

## 2.3 Communication Design, Semiotics, and Trust

Communication design plays a central role in how learners interpret credibility, approachability, and emotional safety within digital platforms. According to Kress and van Leeuwen's visual semiotic ***framework (2001)***, meaning is constructed not only through written content but also through layout, colour, typography, iconography, and the tone of messaging. The preference of learners for friendly, informal, and success-oriented communication reflects a desire for platforms that feel welcoming rather than authoritative or distant.

This preference is significant in the Indian context because many young learners associate formal academic language with pressure, judgment, or past negative experiences in schooling. When platforms adopt warm and motivating tones, the emotional barrier to participation is lowered. Visual cues that signal progress, encouragement, or simplification help build trust, particularly for first-generation online learners or those who lack confidence in navigating complex digital systems. Communication design therefore becomes a psychological scaffold that influences how receptive and resilient learners feel throughout their learning process.

## 2.4 Importance of Interactivity, Micro-Learning, and Assessments

Research shows that interactivity and modular content are essential for sustaining attention in high-distraction digital environments. ***Gupta and Goyal (2023)*** argue that micro-learning, where lessons are broken into short, structured modules, helps reduce cognitive overload and increases the likelihood that students will complete courses. Interactive elements such as quizzes, polls, and immediate feedback can interrupt monotony and reinforce comprehension by prompting learners to apply concepts in small, repeated cycles.

***Sharma and Srinivasan (2022)*** also highlight that accountability improves dramatically when learners feel connected to peers or mentors. Hybrid models that integrate discussion forums, lightweight mentorship, or small cohort-based learning help establish routines and emotional support, leading to higher completion rates. These findings relate to ***Lave and Wenger's theory of communities of practice (1991)***, which proposes that learning is fundamentally a social activity shaped by participation and shared meaning. Without opportunities for peer validation or community-driven motivation, learners often struggle to persist, even when the content itself is clear and well structured.

## 2.5 The Role of Digital Ethnography

Digital ethnography provides a valuable lens for understanding how learners experience MOOCs within the flow of their everyday digital lives. ***Pink et al. (2016)*** emphasize that digital habits cannot be isolated from the emotional, social, and technological contexts in which they occur. For young Indians, MOOC engagement is intertwined with multitasking routines, social media usage, and the desire for productivity within limited time windows.

This approach encourages the researcher to observe how learners:

- juggle notifications and distractions during study sessions
- adapt learning to commutes, late-night routines, or short breaks
- interpret dashboards, badges, and progress bars
- feel motivated, anxious, or validated at different stages of the course

By examining these behaviours, the study highlights the disconnect between the ideal learner imagined by MOOC designers and the actual learner navigating complex digital environments. Indian MOOC research has largely focused on quantitative metrics such as dropout rates, but has not adequately documented lived experiences, emotional fluctuations, or the semiotic interpretation of platform communication. This ethnographic focus therefore fills a significant

gap by situating learning within real digital contexts rather than controlled or purely analytical models

## 2.6 Research Gap

While existing literature provides strong insights into the expansion of MOOCs, cognitive barriers, communication design, and the importance of interactivity, several critical gaps remain unexplored in the Indian context. Most current studies focus on **quantitative indicators** such as enrolment numbers, completion rates, or satisfaction scores, but they do not sufficiently investigate **how learners emotionally and behaviourally experience MOOCs within their everyday digital ecosystems**.

Research has not fully captured:
● how Indian youth interpret platform communication styles, visual cues, and interface metaphors ● how culturally rooted expectations of learning (e.g., fear of judgment, need for reassurance) shape their engagement patterns
● how multitasking behaviours, micro-attention spans, and notification-driven digital habits disrupt or support sustained learning
● how learners construct meaning and trust through semiotic elements such as tone, typography, colours, progress markers, and interactive features
● how emotional fluctuations motivation, anxiety, doubt, validation evolve across the duration of a course

Although digital ethnography has been proposed as a valuable method, it has rarely been applied to **MOOC learning behaviours among Indian youth aged 18–25**, especially in relation to communication design. Consequently, there is limited understanding of how the **design language of MOOC platforms** interacts with learners' cognitive load, cultural expectations, and daily digital rhythms.

This study addresses this gap by combining **communication design, semiotic analysis, and digital ethnography** to examine how young Indians actually navigate, interpret, and emotionally experience MOOCs beyond what platform analytics alone can reveal.

# 3 Research Problems

1. **Lack of Understanding of Learners' Real Digital Behaviour:**
Existing MOOC studies in India do not adequately document how young learners actually

navigate platforms within their everyday multitasking, notification-driven digital environments. This creates a gap between platform assumptions and real user behaviour.

2. **Disconnect Between Communication Design and Learner Expectations:**

Current platforms rely heavily on formal, text-heavy, or generic communication styles. There is insufficient research on how Indian youth interpret tone, typography, colours, icons, and interface cues and how these elements influence trust, motivation, and emotional safety.

3. **Inadequate Insight Into Cognitive Overload in Indian MOOC Users:**

Although Cognitive Load Theory is referenced widely, little empirical work analyses how confusing navigation, scattered resources, or complex dashboards specifically affect Indian learners who juggle distractions and inconsistent study schedules.

4. **Limited Documentation of Emotional and Motivational Fluctuations:**

Most MOOC research measures dropouts numerically but does not investigate how motivation, anxiety, confidence, or reassurance shift throughout a course, especially for first-generation online learners. 5. **Insufficient Exploration of Social and Community Needs in Digital Learning:**

The role of peer validation, community interaction, and micro-mentorship remains underexplored, even though studies highlight their importance in sustaining engagement.

6. **Lack of Semiotic Analysis in MOOC Interfaces:**

Visual semiotics on how learners read meaning from layout, hierarchy, icons, and progress cues is rarely studied in the Indian context, leading to design choices that may unintentionally increase cognitive strain or reduce engagement.

7. **Absence of Ethnographic Perspectives in MOOC Research:**

There is a shortage of qualitative, ethnographic, or observational studies capturing lived experiences, cultural influences, and daily digital habits of learners aged 18–25 in India.

## 4. Research Questions

1. How can MOOCs be designed to address the unique learning needs and preferences of traditional students, working professionals, and homeschooling learners in India?

2. What are the current barriers to adoption and completion of MOOCs among Indian learners, and how can these challenges be mitigated through platform design, Skill Development , and accessibility? 3. What branding and marketing strategies resonate most with Indian audiences, and how can MOOCs leverage cultural, linguistic, and regional insights to enhance their reach and impact?

4. Who currently uses MOOCs in India, and what are their demographics, motivations, and

learning goals? 5. How do completion rates and engagement vary across different types of learners (age, region, education level, language)?
6. How can MOOCs be integrated with formal education or used in hybrid classroom models?

# 5. Methodology

## 5.1 Research Design

This study used a mixed-methods research design grounded in digital ethnography to understand how young Indian learners engage with MOOCs. Three forms of data were combined: primary survey responses, semi-structured interviews, and secondary literature. This multimodal design allowed for both breadth through quantitative survey patterns and depth through qualitative narratives. By integrating these sources, the research captured not only what learners report about their motivations and challenges but also how they experience and negotiate online learning environments.

## 5.2 Participants

A total of 52 participants aged 18 to 25 were recruited through convenience sampling using peer networks and student communities on social media. All participants had enrolled in at least one MOOC in the previous year. The group represented diverse academic backgrounds including engineering, design, commerce, humanities, and business.
From this sample, a smaller subset also responded through quick digital submissions via Google Forms, offering rapid insight into behavioural patterns, attention issues, motivations, and tone preferences. Five participants were further selected for in-depth semi-structured interviews based on variation in discipline, consistency in MOOC usage, and diversity in engagement levels.

## 5.3 Data Collection Procedures

**A - Survey Data** Participants completed an online survey capturing their general motivations, challenges, attention behaviours, and communication tone preferences related to MOOCs. The Google Form format enabled quick and accessible responses, which produced both statistical distributions and short qualitative descriptions of learner
experience. These responses offered insight into patterns such as high initial motivation but declining consistency, frequent attention loss, reliance on convenience, and strong preferences

for certain platform communication tones.

**B- Semi-Structured Interviews** To deepen understanding of the contexts behind these behaviours, five interviews were conducted online. Each lasted between 25 and 45 minutes. Interviews explored how learners navigate digital environments, what drives or interrupts their attention, how they emotionally respond to online learning structures, and how they evaluate the credibility or trustworthiness of MOOC platforms. Interviews also helped interpret gaps between reported intentions and actual behaviour.

**C- Secondary Research** Reports from national policy bodies, ed-tech research organisations, and academic literature on digital learning in India were used to contextualise primary findings. These materials helped situate participant behaviour within broader structural factors such as digital access, attention fragmentation, instructional design limitations, and platform communication practices in India.

## 5.4 Ethical Considerations

Participants were informed about the purpose of the study and the voluntary nature of participation. Consent was obtained digitally. All identities were anonymised, and no sensitive personal information was collected. Data was stored securely and used strictly for academic analysis.

## 5.5 Data Analysis Procedures

Data analysis followed a convergent mixed-methods approach.

**a. Quantitative Analysis** Survey responses were analysed using descriptive statistics, focusing on proportions and frequency patterns across the 52 participants. These patterns highlighted specific behavioural trends such as high motivation for certification, convenience-oriented learning, difficulty sustaining focus, and preferences for specific brand tones.

**b. Qualitative Analysis** Open-ended survey responses and interview transcripts were analysed through thematic coding. The coding process involved four steps: familiarisation with all textual data, generating initial open codes related to motivation, attention, emotional states, platform trust cues, and barriers, grouping codes into higher-order themes such as motivation cycles, attentional fragmentation, communication tone influence, curriculum structural issues,

and emotional disengagement, and finally comparing themes across participants to identify consistent behavioural patterns and points of divergence.

The qualitative analysis provided depth to quantitative findings, revealing why attention lapses occur, why learners often experience motivational drop-off, and how platform tone affects credibility perception.

## 5.6 Triangulation and Validity

Triangulation occurred across survey data revealing trends, interview narratives explaining underlying causes, and secondary research validating observed behaviours. When gaps emerged, such as differences between self-reported motivation and actual engagement, interview narratives were used to refine interpretations. This approach ensured analytical rigour by grounding each finding in multiple forms of evidence rather than a single data source. Limitations were acknowledged, including the non-representative sampling and self-reported nature of the data. However, the triangulation strategy strengthened internal validity by showing convergence across quantitative patterns, narrative accounts, and established research on digital learning behaviours in India.

| Section | What was done? (Procedure) | Who/What was Studied? | How was it Analysed? (Method) |
|---|---|---|---|
| **I. Participants & Sampling** | **Convenience Sampling** via peer/social networks. Eligibility: Age **18–25**, MOOC enrollment in the last year. | **Total N=52** MOOC learners (Engineering, Design, Commerce, Humanities, Business). | N/A (Defined Sample) |
| **II. Data Collection (Primary)** | **A. Online Survey** (Google Forms) covering motivations, attention, tone. **B. Semi-Structured Interviews** (Online, 25 – 45 mins). | **N=52** (Survey) + **N=5** subset (Interviews, selected for diversity/consistency). | **Quantitative:** Descriptive Statistics (frequency, proportion) on N=52. **Qualitative:** Thematic Coding (4 steps) on open-ends and N=5 transcripts. |
| **III. Context & Rigour** | **C. Secondary Research** (National policy, ed-tech reports). **Triangulation** across all data sources. | Ed-tech reports and literature on digital learning in India. | **Triangulation** confirmed findings across statistical trends, narrative accounts, and established research to validate internal conclusions. |

Table on data-analysis and methodology.

## 6. Result and Findings

Descriptive and thematic analysis of the survey data (n = 30) and in-depth interview responses revealed a coherent set of behavioural, motivational, and communicative patterns that shape learner engagement with MOOCs in India. The findings highlight the strong intentions with which learners begin online courses, the cognitive and structural barriers that interrupt continuity, and the communication design features that significantly influence trust and motivation.

## 6.1 Learner Motivation

Motivation among participants was largely driven by pragmatic and aspirational goals. Survey responses showed that learners enrolled in MOOCs to develop new skills, earn certifications,

strengthen their academic or professional profile, and reduce the need for travel. Many participants appreciated the autonomy of self-paced learning,
particularly the ability to pause, replay, and review content based on individual comprehension levels. Interviews added nuance by revealing that online courses were often perceived as a way to gain an advantage in competitive environments, especially in relation to employability and admissions. Several learners described MOOCs as a means of "self-improvement" and "up-skilling," indicating that the motivations were not only instrumental but also tied to personal identity formation and self-worth.

## 6.2 Barriers to Course Completion

Despite strong initial motivation, the most prominent barrier was the inability to sustain engagement over time. Participants repeatedly mentioned declining motivation, inconsistency, and external distractions as key challenges. Many attributed disengagement to cognitive fatigue, lack of structured timelines, and the absence of immediate consequences for falling behind. Interview narratives revealed that learners often began courses with enthusiasm but gradually experienced attention drop-off, which they associated with multitasking environments, social media interruptions, and difficulty in managing self-paced schedules. Some participants highlighted structural issues such as poorly organised curricula, limited doubt resolution, and overwhelming modules that made the learning process feel fragmented. These barriers collectively contributed to high attrition and unstable engagement patterns.

## 6.3 Preferences for Platform Communication

Communication style emerged as a central factor influencing trust and emotional comfort. The majority of participants preferred fun and creative brand tones, describing them as energetic, relatable, and motivating. Success-driven communication was also highly valued, especially when it emphasised growth, achievement, and real-life outcomes. Relatable and supportive tones ranked moderately, with learners appreciating encouragement but disliking messaging that felt overly sentimental. Expert-driven communication received the least support. Many respondents indicated that formal or authoritative tones felt "too heavy," "intimidating," or similar to traditional classroom environments they wished to avoid. These preferences suggest that communication design plays an essential role in reducing learner anxiety, building initial trust, and signalling that the learning environment is approachable and student-oriented.

## 6.4 Impact of Short Quizzes on Learning

Short quizzes were identified as one of the most effective mechanisms for reinforcing learning and sustaining attention. Participants reported that quizzes placed immediately after lessons helped them understand concepts more clearly, track their progress, and maintain a sense of

accomplishment. Interviews revealed that quizzes created “micro-milestones” that made long courses feel more manageable. Learners described quizzes as a way to stay mentally present, particularly when they struggled with long videos or dense theoretical content. This finding aligns with cognitive theories that highlight the value of low-stakes assessment in supporting retention and reducing cognitive overload.

## 6.5 Need for Hybrid and Community Support

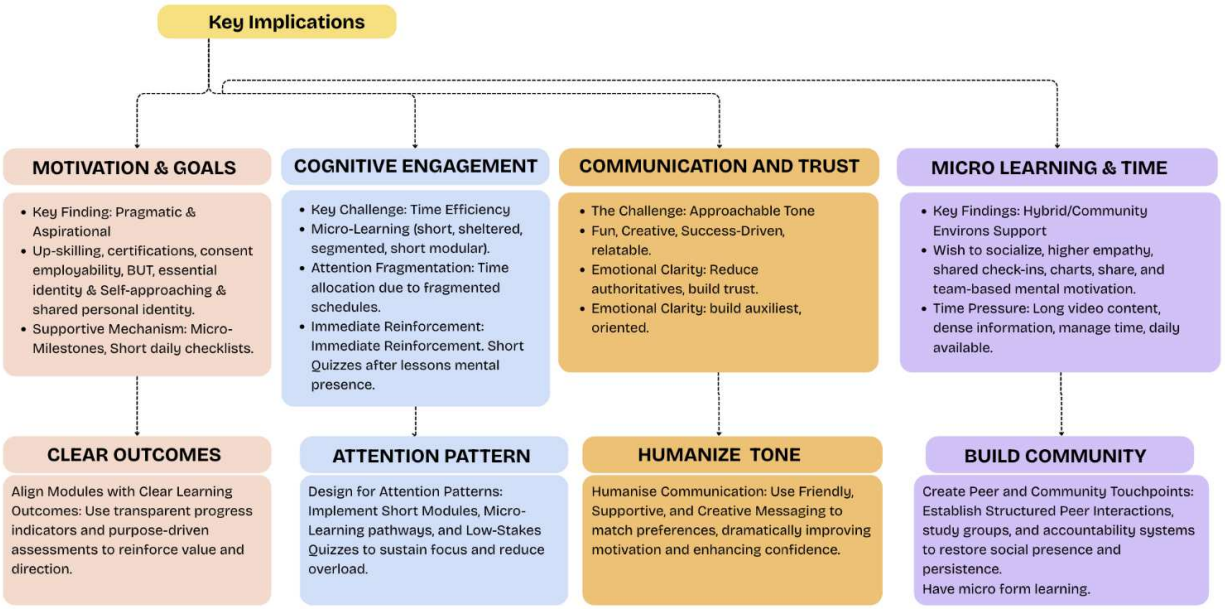
A significant finding was the emotional and behavioural impact of isolation in self-paced learning environments. Participants explained that studying alone often reduced motivation and made it difficult to remain accountable. Many expressed the need for hybrid support systems that could include periodic mentor check-ins, peer learning
groups, discussion forums, or occasional offline sessions. Interviews revealed that learners valued even minimal social interaction because it provided reassurance, clarified doubts, and created shared momentum. The absence of such support led to feelings of disconnection, which contributed to early disengagement. This underscores the social dimension of learning and the importance of perceived presence in digital environments.

## 6.6 Micro-Learning and Time Efficiency

Micro-learning emerged as a practical solution for learners who faced time pressure or attention fragmentation. Participants appreciated short, modular lessons that could be completed during commutes, breaks, or between other responsibilities. Many described these formats as “less overwhelming” and “easier to commit to,” especially compared to traditional long-form video lectures. Micro learning was viewed as a way to make consistent progress without requiring large blocks of uninterrupted time. This format also supported motivation by creating a sense of daily achievement and reducing cognitive fatigue.

## 6.7 Overall Insight

The findings demonstrate that learners enter MOOCs with strong intentions shaped by self-improvement goals, convenience, and career aspirations. However, maintaining engagement is difficult without built-in support structures, interactive mechanisms, and communication styles that match the expectations and behavioural tendencies of young Indian learners. The preference for approachable and creative communication, combined with the need for micro-learning, quizzes, and hybrid support, indicates that effective online learning must blend cognitive clarity with emotional motivation. Ultimately, sustained engagement requires platforms to address both the structural and psychological aspects




Infographic on the key findings**.**

## 7. Solution

**1. Design for Attention Patterns :**Short modules, micro-learning pathways, and low-stakes quizzes help sustain cognitive engagement and reduce overload.

**2. Strengthen Teaching Presence :**Instructor visibility, personalised feedback, and weekly summaries create a sense of guidance and reduce emotional isolation.

**3. Humanise Communication:** Using friendly, supportive, and creative messaging can dramatically improve learner motivation and enhance confidence.

**4. Create Peer and Community Touchpoints:** Structured peer interactions, study groups, and accountability systems can restore social presence and increase persistence.

**5. Align Modules with Clear Learning Outcomes:** Transparent progress indicators and purpose-driven assessments help learners maintain direction and perceive value.

**6.Use Community Driven Explainer Challenges**

A one minute explainer campaign where students take on topic challenges, receive community votes, and earn placement in weekly and monthly leaderboards. The format encourages active participation by allowing learners to teach and request topics. This turns difficult concepts into quick and accessible explanations. By combining peer to peer learning, light gamification, and micro learning suited to MOOC environments, the campaign creates a flexible and motivating space for continuous academic engagement.




Solution- social media campaigns- ideation as a part of a toolkit.

## 8. Analysis and Discussion

This section provides an in-depth interpretation of the findings through established theoretical frameworks and existing scholarship. By triangulating primary data from surveys and interviews with secondary research on online learning behaviours in India, the discussion identifies how motivation, cognition, emotional support, communication design, and platform structure interact to shape learner experiences within MOOCs. The analysis interrogates the systemic factors that either facilitate or hinder engagement and explains why Indian learners often face difficulties in sustaining long-term participation.

### 8.1 The Motivation and Attention Gap

Although participants enrolled with strong initial motivation driven by skill enhancement, certifications, and career aspirations, the study shows a consistent decline in engagement after the early weeks of a course. This pattern reflects what can be described as a motivation and attention gap. According to Self-Determination Theory, motivation is maintained only when the learning environment supports autonomy, competence, and relatedness. Indian MOOCs typically support autonomy because they allow learners to progress at their own pace. However, competence and relatedness remain underdeveloped. Learners do not receive timely feedback, structured guidance, or visible instructor involvement. The absence of these

components weakens internal motivation over time.

Attention deteriorates further due to competing responsibilities such as academics, work, and family tasks. Participants reported that maintaining consistent focus without external reinforcement was difficult. As a result, motivation remains conceptually strong but does not translate into sustained cognitive engagement. This reveals a deeper structural issue: motivation cannot compensate for poor attention design unless platforms intentionally support attention management through short, structured, and interactive formats.

## 8.2 Cognitive Load and the Structure of Course Content

A recurring theme in participant narratives was cognitive overload. Long videos, dense texts, and unclear sequencing made it difficult for learners to retain focus. Cognitive Load Theory helps explain this phenomenon. When intrinsic load, which arises from the complexity of subject matter, combined with extraneous load, generated by poor instructional design, learners experience fatigue, confusion, and disengagement.

Several participants described a specific pattern. They began lessons with enthusiasm, but long-form content triggered cognitive saturation. Working memory is limited, and extended learning sessions without breaks or interactive elements exceed this cognitive capacity. Micro learning emerged as a preferred alternative because shorter modules reduce extraneous load and help distribute intrinsic load across manageable segments.

This supports existing research showing that chunking, progressive scaffolding, and interactive checkpoints enhance comprehension. It also aligns with the finding that short quizzes after lessons improved retention. These quizzes function as retrieval practice checkpoints, enabling learners to consolidate information before moving on.

## 8.3 Emotional Isolation and the Lack of Social Presence

Beyond cognitive challenges, one of the strongest findings relates to learners' emotional experiences. Many participants described online learning as isolating. They felt disconnected from instructors and peers, which supports literature on the importance of social presence in digital learning environments. The Community of Inquiry Framework identifies social presence as essential for creating meaningful educational experiences.

Learners repeatedly noted the absence of human interaction. They missed opportunities for dialogue, collaborative problem solving, and real-time clarification of doubts. Without a sense of being supported or accompanied through the course, learners often disengaged emotionally even before disengaging cognitively.

This lack of social presence directly affects persistence. Emotional isolation reduces intrinsic

motivation, weakens accountability, and produces a sense of detachment from the course. Hybrid features such as weekly mentor check-ins, group discussions, and peer learning circles were described as highly desirable. These structures can reintroduce human connection into the learning process and significantly improve completion rates.

## 8.4 Communication Style as a Mechanism for Engagement

The study also highlights the profound influence of platform communication style on learner engagement. Participants overwhelmingly preferred fun, creative, and relatable communication styles rather than formal academic tones. This challenges the dominant assumption that seriousness equates to credibility in online learning.

The ARCS Motivation Model emphasises attention, relevance, confidence, and satisfaction as core elements of motivational design. Informal and friendly messaging aligns with these principles by reducing intimidation, enhancing clarity, and establishing emotional resonance. When communication feels human rather than institutional, learners perceive the platform as more approachable.

This has implications for design. Platforms can use conversational onboarding, progress reminders, creative push notifications, and small motivational messages to support learners emotionally. These techniques not only sustain engagement but also help reinforce consistency, which participants identified as a major barrier. Communication thus becomes a behavioural scaffold that supports persistence.

## 8.5 Teacher and Student Responsibilities in Digital Learning

The analysis also reveals an underlying dual framework of responsibilities that define successful learning ecosystems. Learners expect educators to provide clear pathways, structured modules, and visible presence. They expect content to be broken into understandable parts and supported through timely checks for understanding. These expectations align with teaching presence as articulated within the Community of Inquiry model.

On the other hand, students recognise their own responsibilities. They understand the need to manage distractions, maintain discipline, and engage actively with learning materials. However, the findings show that learners struggle to uphold these responsibilities without systemic support from the platform. Self-regulated learning is difficult in environments that lack structure, feedback, and emotional reinforcement.

This suggests that effective MOOCs must not assume learner discipline but must actively facilitate it. They should provide behavioural cues, achievable targets, regular nudges, and structured pacing to help learners maintain momentum.

## 8.6 Misalignment Between Learning Outcomes and the Actual Experience

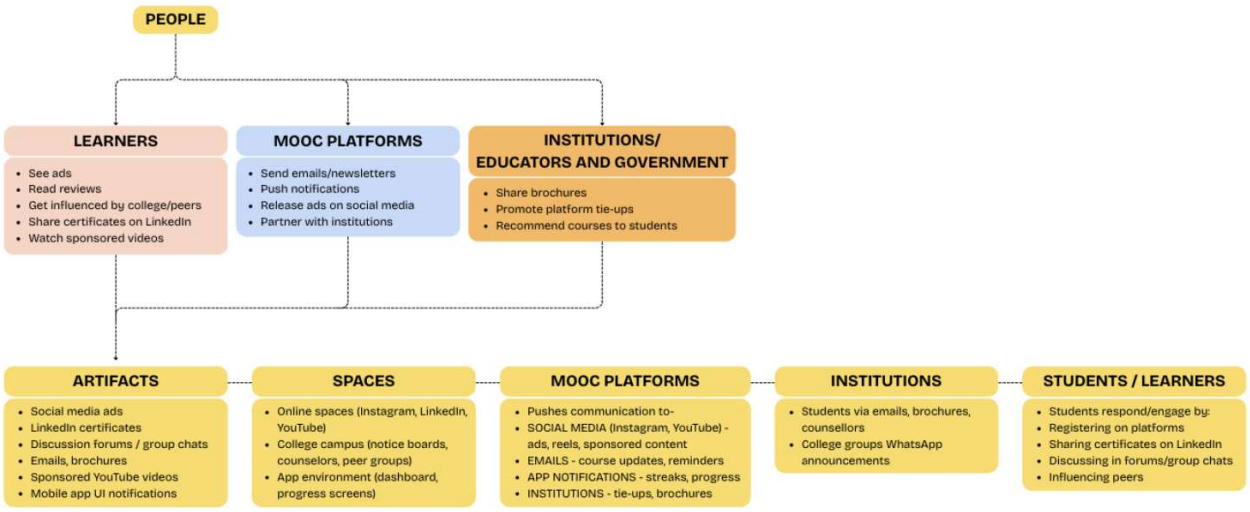
Another important insight relates to the misalignment between learning outcomes and how materials are presented. Learners reported that they often lost track of the overall purpose of the course. When assessments, lesson flow, or communication do not reinforce learning outcomes, the experience becomes fragmented.

Participants noted that they felt unsure of their progress when courses lacked clear markers of achievement. This confusion reduces motivation and weakens the perceived value of the course. Learning outcomes should shape the organisation of modules, the design of assessments, and the user interface of the platform. When outcomes are visible and reinforced, learners feel guided and purpose-driven.

## 8.7 Triangulation Across Data Sources

Triangulating survey data, interviews, and scholarly research reveals powerful coherence in the challenges faced by learners. Existing global studies show exceptionally low MOOC completion rates. The primary data confirms that Indian learners experience similar issues. Cognitive overload documented in academic literature is directly reflected in participants' experiences of mental fatigue and loss of focus. Research emphasising teaching presence and peer interaction aligns with the finding that learners feel isolated and unsupported.

This triangulation increases confidence in the validity of the findings despite a modest sample size. The consistency across sources indicates that the issues identified are not isolated incidents but reflect broader systemic challenges in Indian online education.




## 9. Personal Reflection

Immersing ourselves in this research fundamentally reshaped how we understand online learning and the everyday realities of Indian learners navigating MOOCs. What initially appeared to be a

simple issue of motivation loss unfolded into a complex interplay of cognitive overload, emotional exhaustion, inconsistent attention patterns, and communication styles that often do not meet learners where they are. Speaking directly with participants revealed how much pressure young people carry to constantly upskill, stay relevant, and build their profiles while also managing distraction-heavy digital environments and the loneliness of self-paced learning. Their narratives made it clear that disengagement is not a personal failure but a systemic one that occurs when platforms overlook the human need for clarity, connection, and encouragement. This immersion also challenged our own assumptions as designers and researchers. We realised how easily educational systems rely on rigid academic communication without considering how deeply tone shapes confidence and willingness to continue. Translating these lived experiences into design insights highlighted the responsibility we hold, because MOOCs cannot simply deliver content. They must create psychologically supportive, relatable, and emotionally intelligent learning spaces. This project strengthened our belief that meaningful educational design begins with empathy, listens before it instructs, and centres the real cognitive and emotional worlds of learners rather than idealised expectations of discipline and self-regulation.

## 10. Conclusion

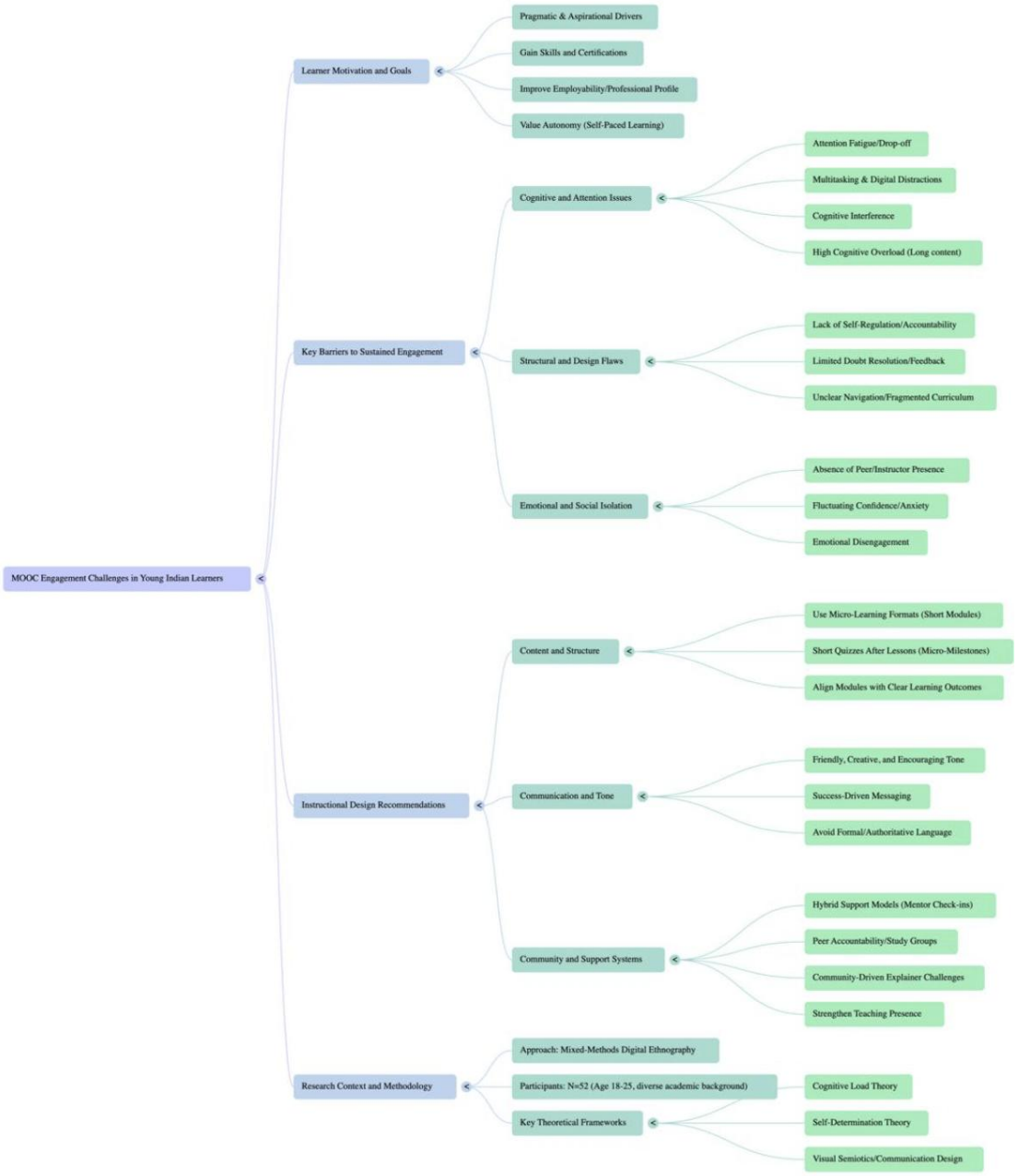
This study demonstrates that the challenges Indian learners face in MOOCs do not stem from a lack of ability or willingness to learn. Instead, they arise from platforms that place heavy cognitive, emotional, and behavioural demands on users without offering the corresponding support systems. Learners struggle with unclear structures, overwhelming content, inconsistent navigation, and the absence of human guidance, which collectively erode motivation and make course completion difficult. The emotional dimension emerged as particularly significant, with many participants describing feelings of isolation, confusion, and discouragement when learning alone. These experiences reveal that disengagement is not an individual weakness but a structural outcome of design that does not fully consider real user contexts.

The ethnographic and mixed method approach helped us see MOOCs not simply as instructional tools, but as environments shaped by attention patterns, cultural expectations, communication cues, and social relationships. Learners consistently expressed a desire for interactions that feel guided, encouraging, and relatable. This makes it clear that effective online learning must integrate communication design with pedagogy. It must support users cognitively by reducing load, emotionally by providing presence and reassurance, and behaviourally by enabling consistent habits through structure and feedback.

The findings argue for a shift in how MOOCs are conceptualised in India. Content quality alone is not enough. Platforms must intentionally design for clarity, community, and continuity. Hybrid models, peer groups, personalised nudges, micro learning modules, and transparent progress pathways can significantly enhance learner confidence and persistence. These strategies are not

add ons, but essential components of equitable and human centred online education.

As India expands its digital learning ecosystem, there is a risk of exclusion if MOOCs continue to operate on assumptions of high self discipline, uninterrupted attention, and academic familiarity. Ensuring that every learner can participate confidently in online education is not only a design priority but a social responsibility. The study
concludes that truly inclusive MOOCs are those that recognise the realities of Indian learners, respond to their emotional and cognitive needs, and create learning spaces that feel supportive, motivating, and achievable.




Affinity mapping on MOOC platforms and their engagement challenges in young Indians.

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**Clinical trial number:** not applicable.

### Ethical Approval and Consent to Participate and Publish

The study protocol was reviewed by the Institutional Ethics Committee of ATLAS SkillTech University, Mumbai. The Committee determined that the study involved minimal risk to participants and granted a formal waiver of full ethical approval (Exemption Letter Reference No. ASU/IEC/25-26/003), as the research involved voluntary participation of adult learners and did not include any sensitive or clinical procedures. All participants provided informed consent prior to participation. The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and the applicable institutional guidelines.

Written informed consent for participation and publication was obtained in hard copy from all participants prior to data collection (n = 52). Participants were informed about the purpose of the study, the voluntary nature of their participation, and the use of anonymized data for academic research and publication. All personal identifiers have been removed to ensure confidentiality.

Scanned PDF copies of the signed consent forms can be provided as supplementary material or shared via a separate secure link upon request, in accordance with the journal's editorial guidelines.

### Data Availability Statement

The datasets generated during and/or analysed during the current study are not publicly available due to ethical considerations related to participant confidentiality but are available from the corresponding author on reasonable request.

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