Navigating YouTube: Insights into Usage Patterns of Emergent Users in Rural and Semi-Urban India

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With the rise of YouTube as a platform for upskilling and entertainment, it is essential to understand how emergent users interact with it. Previous research has focused on experienced users or specific content types, neglecting the unique challenges newer, less technologically literate users face. This study addresses this gap by examining how emergent YouTube users in rural and semi-urban India discover and engage with content. In this work, we employed (n=36) Think-aloud and semi-structured interviews to analyze the impact of internet connectivity, age, and gender on YouTube usage patterns. Our analysis reveals that users mainly use fundamental features such as search and playback, with advanced functions like channel creation and notifications being underutilized. These insights underscore significant opportunities for enhancing design and user experience, which could improve proficiency and engagement for emergent users. These improvements will allow YouTube to serve a diverse audience better and guide future platform developments.

CCS Concepts: • **Human-centered computing** → **Usability testing**.

Additional Key Words and Phrases: Emergent Users, YouTube;, User Proficiency Level, Technological Awareness, Low Internet Connectivity, India

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1 Introduction

The rapid proliferation of digital technologies has significantly transformed various aspects of daily life, particularly in emerging markets like India. Despite the widespread adoption of Internet and mobile applications, there remains a gap in understanding how emergent users—individuals who are new to digital technologies—navigate and utilize these tools. Digital inclusivity is on the rise, yet the full potential of digital tools is often unrealized among new users, especially in geographically dispersed areas with people less exposed to technology [14]. While YouTube has a vast potential for educational and entertainment purposes, Some challenges hinder the effective use of the platform. Many new users struggle with basic functionalities such as subscribing to channels, managing notifications, and downloading content for offline use, which results in underutilization and misunderstanding of YouTube features among emergent users in India. his research aims to identify emergent users' specific barriers on YouTube and propose actionable recommendations to enhance their digital literacy and overall user experience. This study focuses on emergent YouTube users in rural and semi-urban India, examining their understanding and use of features like subscriptions, notifications, offline content, and content creation. The research is limited to a representative sample of this demographic, with an emphasis on

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identifying barriers to effective platform use and proposing solutions to improve digital literacy and user experience. The study specifically excludes users with advanced digital literacy to maintain a focus on new users.

2 Literature Review

The proliferation of smartphones in India has accelerated significantly since 2016, largely due to the introduction of affordable internet plans by Reliance Jio. By offering low-cost, high-speed 4G internet, Jio disrupted the telecom market, compelling competitors to lower prices and enhance services. This shift notably increased internet penetration, especially in rural areas, and promoted digital inclusion [21] [8]. As a result, India's smartphone user base exceeded in 2023, with projections reaching 1.55 billion by 2040 [3]. The market is predominantly driven by budget and mid-range segments, which cater to the rural population [4]. In Q4 2023 alone, India shipped 36.1 million smartphones, reflecting substantial year-on-year growth due to the widespread adoption of digital services [4] .

YouTube, established in 2005, has become the second most visited website globally after Google. As of January 2024, India is the largest YouTube audience worldwide[7]. This growth is supported by high smartphone penetration and affordable data plans, which have enabled extensive use of social media platforms. Indian users spend approximately 29 hours per month on YouTube, engaging with a broad spectrum of content which includes entertainment, education, news, and lifestyle [5][15]. Mobile devices, are the most used for accessing YouTube, followed by devices like desktop computers and laptops [12].

India's digital population is increasingly diverse, with significant growth in mobile internet usage among users across different age groups and regions [1]. In 2023, approximately 70% of users were aged between 18 and 35, reflecting a young and dynamic user base that is highly engaged with digital content [2]. The rise in internet usage is also evident in the significant increase in digital consumption patterns, with users accessing various online services, like social media, news, and content streaming platforms [11]. This widespread engagement is underpinned by the expansion of affordable internet access and smartphone usage [6].

Emergent users, defined as individuals with limited prior exposure to digital technologies and lower levels of digital literacy, represent a rapidly growing segment in India's ICT landscape [14]. This group, often characterized by economic constraints and varying levels of educational attainment, increasingly engages with digital platforms like YouTube. The platform plays a crucial role in providing these users with access to information and entertainment, thus helping bridge the digital divide and offering valuable resources to underserved populations [14][17]. This trend underscores the importance of tailoring digital experiences to meet the needs of emergent users and enhance their ability to navigate and utilize these platforms effectively.

The "User Proficiency Level" model categorizes users based on their observed behaviors and usage patterns, dividing emergent user proficiency into various levels as outlined in Table 1. This model assesses an individual's competency in using specific features of a platform, providing a structured way to understand user proficiency [10].

The Think Aloud (TA) method, particularly the Concurrent Think Aloud (CTA) approach, is widely used in usability studies to gather insights into user interactions by having participants verbalize their thoughts in real-time while navigating a product or interface [13] [15]. Complementing this, Heuristic Evaluation, developed by Nielsen and Molich,

Table 1. **Model of User Proficiency Level**

Proficiency Level	Description of Proficiency Level
Beginner	User who performs basic actions.
Intermediate	User who performs a wider range of actions with some regularity.
Advance	User who is familiar with most features and use them regularly.
Expert	User who explores advanced features and customizes their experience.

assesses interfaces against established guidelines to quickly identify usability issues, though it relies on the evaluators' expertise and can be subjective [18][16]. To enhance assessment robustness, incorporating the Five Layers of User Experience Design, based on Jesse James Garrett's framework, offers a comprehensive view across surface, skeleton, structure, scope, and strategy, ensuring a holistic evaluation of digital products [19].

2.1 Emergent User Proficiency Level

To define the proficiency level division for our study, firstly, we created an "Interaction Mapping" after doing a pilot testing with emergent users to understand the user flow and how they currently interact with YouTube, as shown in Figure 1. In our study, we applied the "Emergent User Proficiency Level" model to understand how different users interact with YouTube. This model categorizes users into four proficiency levels, as shown in Table 2:

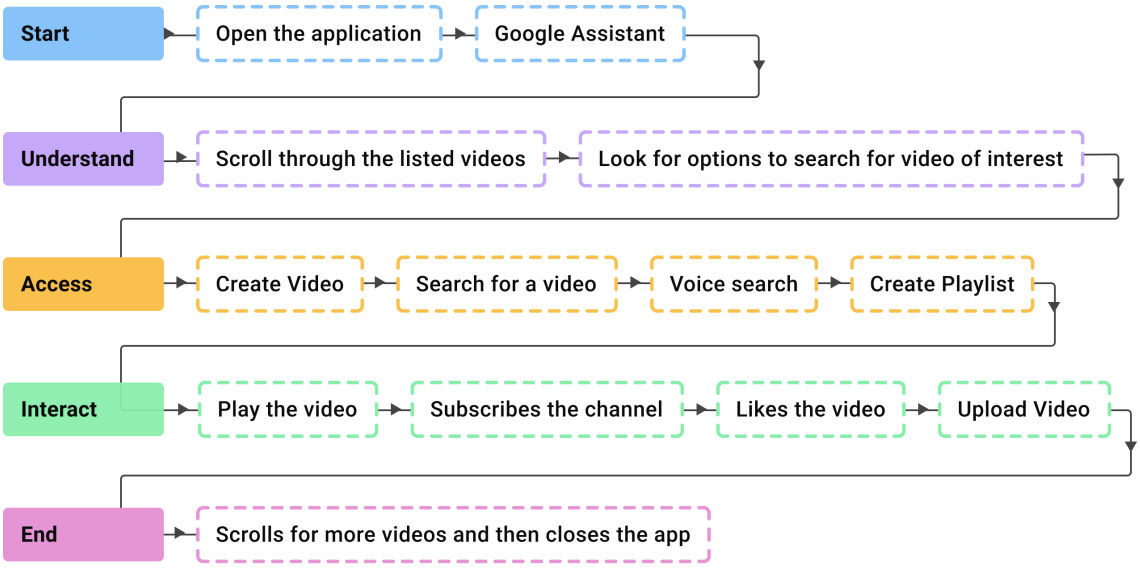

Fig. 1. **Interaction Mapping**.

(1) Basic Navigation: This level represents users who are only familiar with the most fundamental functions of YouTube, such as searching, playing, and pausing videos. These users are in the early stages of digital literacy, just beginning to familiarize themselves with the interface and basic controls [6].
(2) Standard Interactions: Users at this level better understand YouTube's interactive features, moving beyond passive consumption to active participation, such as engaging with comments and playlists [7].

Table 2. **Model of Emergent User Proficiency Level**

Proficiency Level	Description of Proficiency Level
Basic Controls	Play and pause videos | Scroll through videos
Standard Interaction	Search for content | Subscribe to channels | Like, share and download videos
App Navigation	Navigate YouTube app | Check viewing history | Shorts | Subscription
Advance Feature use	Create playlists | Creating Shorts or videos | Manage User Account | Manage Notifications & Alerts

(3) App Navigation: This proficiency level indicates users who navigate the YouTube app efficiently, demonstrating familiarity with its layout and a range of features. They can perform tasks with minimal guidance and are comfortable using the app's more advanced functions [20].
(4) Advanced Feature Use: These users comprehensively understand YouTube's functionalities and proactively manage their user experience. They are adept at using basic and advanced features and customizing their experience according to their preferences [10].

The interaction mapping, created from pilot testing with emergent users, illustrated these proficiency levels and how users engage with YouTube. Table 2 shows the user flow and interaction patterns, highlighting the differences between novice and advanced users. This mapping helps identify gaps in user understanding and guides the design of targeted interventions to improve user experience.

By applying the user proficiency levels model, our study aims to enhance understanding of emergent users' interactions with YouTube and identify areas where users might benefit from additional support or training. This approach aligns with the objective of improving engagement among diverse user groups [9][1].

3 Methodology

This study aims to explore the YouTube usage patterns of emergent users in India, focusing on their interactions, challenges, and proficiency levels. We employed a mixed-method approach combining think-aloud sessions and semi-structured interviews to achieve this. This methodology enabled us to gather qualitative and quantitative insights into users' behaviors, decision-making processes, and feature utilization at different proficiency levels. The study began with pre-experiment semi-structured interviews to understand the initial proficiency levels and general behaviors of emergent users on YouTube. These interviews provided foundational insights into how participants interact with the platform, including their familiarity with basic and advanced features. Following the initial interviews, participants were asked to perform their usual activities on YouTube while thinking aloud. This approach allowed us to observe their real-time interactions, thought processes, and navigation patterns. The tasks during these sessions were tailored to match each participant's proficiency level, which was identified during the pre-experiment interviews. After the think-aloud sessions, post-experiment semi-structured interviews were conducted to gather deeper insights into the users' awareness and utilization of specific YouTube features. This step helped us understand the participants' experiences, challenges, and gaps in their knowledge or usage of the platform.

This combination of methods provided a comprehensive understanding of the usage patterns and challenges emergent YouTube users face in India, offering insights into their behaviors and thought processes. By combining think-aloud sessions with semi-structured interviews at different stages, our methodology provided a comprehensive understanding

of the usage patterns and challenges faced by emergent YouTube users in India and our research was guided by the following questions:

RQ1: How do emergent users in India discover new content on YouTube?

RQ2: What is the level of awareness and usage of YouTube features (such as voice search, channel creation, making shorts, and notifications) among these users?

RQ3: How do these users engage with interactive elements on YouTube, and what are the barriers to their full utilization?

RQ4: What gaps exist in the technological literacy of emergent users, and how do these gaps impact their overall user experience on YouTube?

3.1 Think Aloud and Semi-Structured Interviews

This study employed a mixed-method approach, combining think-aloud sessions with semi-structured interviews. The **think-aloud method** allowed us to capture participants' thought processes in real-time as they interacted with YouTube, revealing their navigation strategies, decision-making, and problem-solving approaches. The **semi-structured interviews** provided deeper insights into participants' behaviors, preferences, and awareness of specific features through follow-up questions tailored to their initial responses. Previous studies have demonstrated that combining these methods provides a holistic view of user experience by merging observational data with self-reported feedback. For instance, in a study by Ester et al. [13], this approach effectively identified surface-level usability issues and deeper behavioral patterns among users, validating its effectiveness in complex digital environments. Similarly, our study leverages this method to explore emergent YouTube user behavior, ensuring that the data collected captures both immediate, task-specific reactions and broader user perceptions. We did the final experiment with 30 participants, each being audio recorded, and the conversations went from 5-10 minutes each.

3.2 Participants Demographic

The study involved 36 participants, with 6 users included for pilot testing. Participants were selected from three distinct locations in India to capture a diverse range of experiences:

(1) **Bhamnaour**, Punjab (12 users): A small village with poor network connectivity.
(2) **Sunkali**, Himachal Pradesh (9 users): another small village with similarly poor network conditions.
(3) **Hoshiarpur**, Punjab (9 users): A semi-urban city with decent network connectivity.

The demographic details of participants varied in age, gender, occupation, and digital literacy, as shown in Table 3. This diversity was crucial in understanding how distinct factors influence YouTube usage patterns among emergent users.

3.3 Data Analysis

Data from the think-aloud sessions and semi-structured interviews were analyzed using thematic analysis. The steps involved in the analysis were as follows:

(1) **Transcription**: All sessions were transcribed from the local language to English.
(2) **Interpretations**: Transcripts were systematically interpreted from User statements into breakdowns and insights to identify significant patterns and themes. Both inductive and deductive coding methods were used to ensure a comprehensive capture of the data.

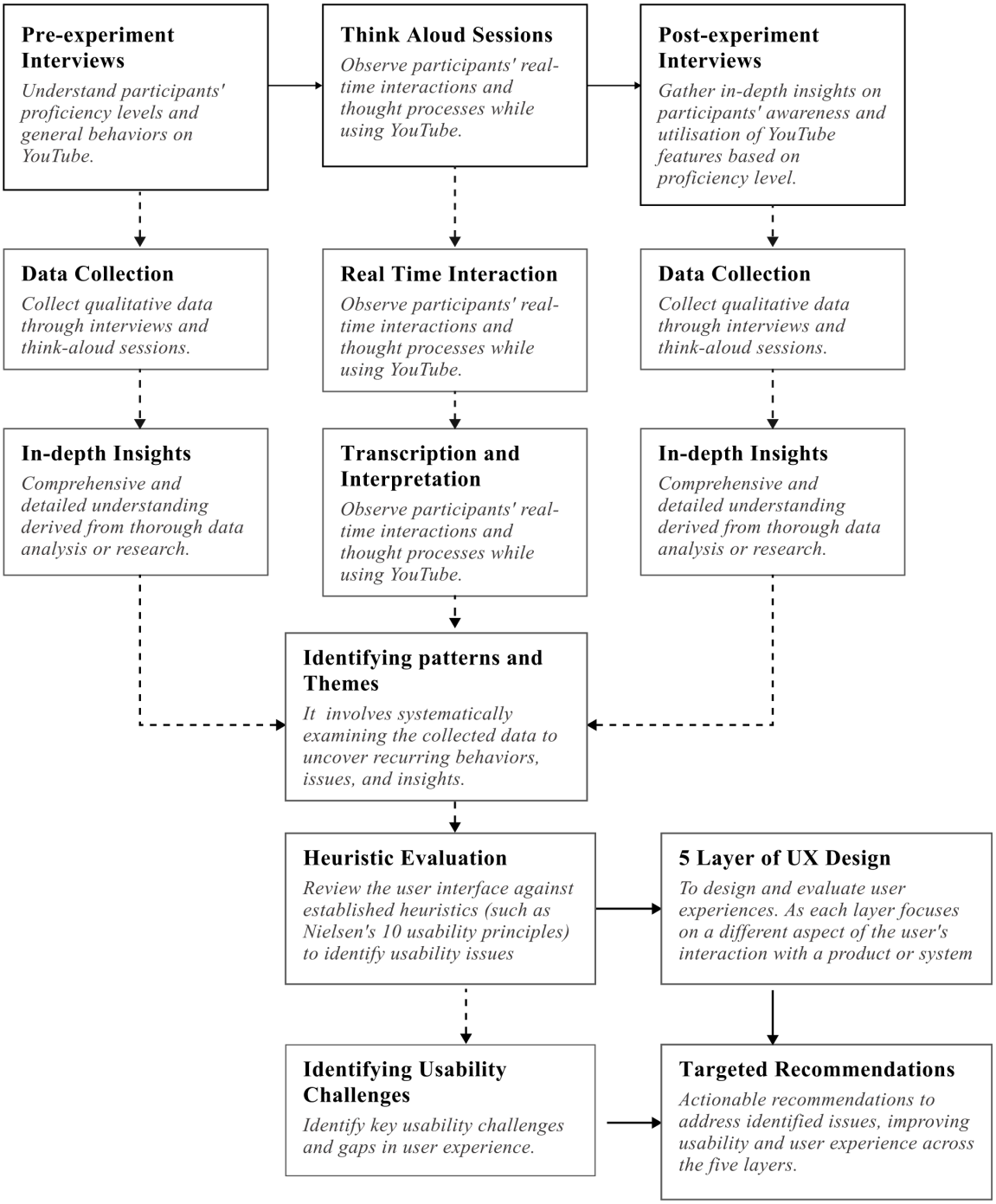

Fig. 2. **Flow chart of Methodology.**

Table 3. **Demographics of Participants**

Demographics	Bhamnaur (Punjab)	Sunkali (Himachal Pradesh)	Hoshiarpur (Punjab)
Area	Rural Village	Rural Village	Semi Urban City
Age	Mean= 36 (18 - 54) years, SD= 10.87	Mean= 34.5 (17-59) years, SD= 12.6	Mean= 32.11 (15-58) Years, SD= 16.37
Gender	9 Females, 3 Males	6 Females, 3 Male	5 Females, 4 male
Education	3 (10th -12th) grade; 9 (>12th) grade	6 (10th -12th) grade; 3 (>12th) grades	7 (10th -12th) grade; 2 (>12th) grade
Profession	Shop Owners, Homemakers, Pradhan, Student	Teacher, farmer, Factory Employee, Student, homemaker	Shopowner, Teacher, student, Homemaker
Internet Network	Very Poor	Poor	Good
Using Smartphone Levels	4 (0-2) years; 8 (3-6) years 4 of Level 1 4 of Level 2 1 of Level 3 3 of Level 4	2 (0-2) years; 7 (3-6) years 2 of Level 1 3 of Level 2 2 of Level 3 2 of Level 4	1 (0-2) years; 8 (3-6) years 3 of Level 1 2 of Level 2 1 of Level 3 3 of Level 4

(3) **Theme Development**: Insights were grouped into broader themes that encapsulated key aspects of YouTube usage patterns. Themes included voice search preferences, subscription misunderstandings, offline content usage, feature overload, platform loyalty, content creation barriers, gender differences, cultural influences, and social sharing norms.

3.4 Identifying Design Problems

To identify design problems and present recommendations, we incorporated heuristic evaluation and the five layers of user experience design into our methodology. We assessed YouTube's usability through heuristic evaluation by applying Nielsen's heuristics, identifying visibility, control, consistency, error prevention, and user support issues. Additionally, we employed the five layers of user experience design to systematically make recommendations for design across sensory, interface, information architecture, functional, and strategic dimensions. This dual approach helped us to pinpoint emergent users' specific usability challenges and offer targeted recommendations to improve their overall experience on the platform. Our insights focused on enhancing voice search accuracy, simplifying subscription processes, improving offline content management, reducing feature overload, easing content creation, addressing gender-specific barriers, localizing content, and providing better privacy controls. These recommendations aim to create a more intuitive and accessible YouTube experience for emergent users.

3.5 Positionality

As authors with deep roots in Indian culture, we leveraged our understanding to design respectful and relevant research to our participants. We were careful to avoid letting our assumptions influence the data. While familiar with digital technologies, we acknowledged and respected the participants' skill in navigating digital environments with limited resources. Conducting interviews in Punjabi and Pahadi enabled us to communicate more effectively with participants, ensuring their comfort and clarity in expression. Ethical considerations were paramount; we ensured informed consent, maintained confidentiality, and allowed participants to withdraw at any time. Coming from a semi-rural city and having firsthand experience with the rural villages involved in this study, our reflective approach aimed to conduct the research with integrity, ensuring our findings accurately represent the experiences and perspectives of emergent users in India.

4 Results

To structure the findings, we analyzed each interview, deriving insights from the given statements and actions performed and verbalized during think-aloud sessions. We then consolidated these insights based on location, age, gender, content preference, and feature awareness. Once we analyzed the interviews and experiments across different categories, we formed themes from the insights that addressed our research questions.

Patterns of YouTube Engagement

We found that most participants use YouTube for entertainment, learning, and spiritual content. Common actions include searching for videos, subscribing to channels, and sharing content via WhatsApp. The quality of internet connections significantly affects usage patterns, with many participants experiencing poor or medium connectivity. Difficulty typing speed influences their preference for voice search or scrolling through recommendations. Many users primarily consume content rather than creators due to limited awareness or interest in uploading videos.

Location-Based Usage

Rural Areas: Low internet connectivity leads to a higher reliance on downloaded videos or pre-created playlists for later viewing. Participants faced connectivity issues during interviews and experiments. Participant 09: “Because I had been using it for studying, so with time, I started to explore, and now I can create playlists and download them at once and watch them later.” Participant 11: "Because the Internet connectivity is poor here, I go on the terrace to get network and download." Semi-Urban Areas: Internet connectivity influences the extent of feature exploration, with most users predominantly using YouTube for entertainment and spiritual content. Better network availability results in no need to explore the downloading section. There is limited awareness and use of advanced features like history, playlists, and content creation tools. Participant 23: “I have not done too many downloads majorly if I have a good network here, so I don’t sometimes save the videos to view them later.”

Age and Technical Literacy

Older Users (40+ years): Tend to learn from friends and family and prefer voice search due to slow typing skills. Limited interaction and learning of YouTube beyond basic content consumption leads to unawareness of advanced features.

Participant 23: “I don’t know much of it to use whatever little children have taught us is that what we know, also children don’t take much interest in teaching rather just show us things on their own mobile phones, so we don’t bother to learn”

Middle-aged (30-40 years): Characterized by moderate to slow typing skills and medium technical literacy. They use YouTube for entertainment and spiritual content and are aware of basic features but have limited use of advanced functionalities.

Younger Participants: Typically, fast typists with higher technical literacy show greater awareness of advanced YouTube features. They use YouTube for education, entertainment, and social connectivity and are likelier to create and manage their own content.

Participant 29: “I have my own channel by the name “the Crafty Century which has 100+ subscribers, where I post videos of my craft work, which I share with my family and friends from school”

Gender Differences

Females: The females interviewed were primarily homemakers, students, or teachers, with the majority being homemakers. Those from rural areas generally had an education level up to the 10th standard. They predominantly use YouTube for spiritual content, cooking, knitting, tailoring, and entertainment. Their familiarity with advanced features on the platform is limited. Many are hesitant to upload content themselves due to a lack of knowledge about the process or reluctance to engage with social media in this way. Basic functionalities like scrolling are widely used and understood, reflecting their heavy reliance on fundamental navigation and voice search.

Males: The males interviewed were a mix of students and professionals engaged in diverse occupations. They generally use YouTube for various purposes, including entertainment, education, informative content, news, and sports. Compared to females, they have a higher familiarity with the platform's advanced features. However, many still consider uploading content to be unimportant or find they have a lack of content to upload. Males tended to explore more features on YouTube and were generally proficient beyond the basic level. Among students, males demonstrated greater curiosity about informative content relevant to their careers or to their female family members.

Participant 17: "I don't use it much. If I want something, I ask Lakshay to do it for me, but I myself avoid it majorly because I am not that fluent."

Content and Feature Awareness

Spiritual and Educational Content: Highly popular, especially among those with lower internet speeds. Entertainment: Widely watched across all demographics, serving as a primary source of relaxation and enjoyment. Informational Content: Frequently accessed for problem-solving and staying updated with current events. Basic Functionalities: Search, play, like/dislike, and subscribe are well-known and utilized by all user groups. Advanced Features: Better understood and more frequently used by younger users and those with higher technical literacy. Underutilized by older users and individuals in less technical occupations.

4.1 Specific Feature Observations

Voice Search

Participants with slow typing skills and poor internet connectivity frequently use voice search, finding it efficient and easier to locate content. These participants show a moderate to advanced understanding of the app's features. In contrast, less proficient users primarily discover content by repeatedly scrolling and are often unaware of the search button or find typing difficult.

Subscription Misunderstanding

Many users misunderstand subscribing, thinking it means they will automatically receive similar videos. The concept of "unsubscribe" is also largely unknown. While familiar with the term "subscribe," users often do not know where to find subscribed content or why they should subscribe. Some participants who claimed never to have used the subscribe feature had subscribed to a few channels and were receiving notifications without knowing how or when they subscribed.

Offline Content Usage

Downloading videos for offline viewing is highly valued by users in areas with poor internet connectivity. These users are familiar with the process of downloading videos and understand its use. However, they face challenges in managing downloaded content, especially when their device memory gets full, and they must delete downloaded videos.

Notifications and Alerts

Many users do not understand the difference between notifications and alerts, when alerts appear, or why they are shown. While users recognize the notification icon as "Ghanta" (a term popularized by content creators), they often do not understand how to customize or manage them effectively.

Feature Overload

YouTube offers a wide range of features, including likes, dislikes, comments, sharing, playlists, and more. Many users perceive the vast array of YouTube features as overwhelming, leading them to stick to basic functions and avoid exploring beyond their comfort zone. Older users tend to use only the basic functionality that allows them to watch content without hassle.

Platform Loyalty

Users exhibit strong loyalty to YouTube due to its extensive content library, despite also using platforms like Instagram and Facebook for entertainment. They prefer YouTube for watching short and longer videos because it offers a more straightforward and comfortable viewing experience.

Creating Content Barrier

Many users feel that creating content requires significant knowledge and resources, leading to hesitation due to a lack of confidence and fear of judgment. Less proficient users are often unaware that they can post their own videos and how to do so, partly due to hesitation and lack of guidance. Users aware of the content creation features are unsure about what content to post, how to create it, and how to upload it.

Cultural Influence

Cultural influences play a significant role in shaping content preferences on YouTube, with distinct variations observed between rural and semi-urban areas, as well as between males and females. In rural areas, there is a strong preference for spirituality, reflecting the importance of communal and religious practices, particularly among women of all ages. On the other hand, users from semi-urban areas tend to gravitate more towards entertainment, news, informational content, and skill-related videos, reflecting a broader range of interests and access to diverse media influences.

Social Sharing Norms

WhatsApp is the primary platform for sharing YouTube videos, reflecting a reliance on trusted social networks for content dissemination. Users share content they find valuable or informative on their WhatsApp status or with friends. Commonly shared videos include those related to Ayurvedic medical solutions, spiritual teachings, and educational content. Students frequently share educational videos with peers to help each other learn.

4.2 Answering the Research Questions

4.2.1 How do emergent users in India discover new content on YouTube?

Emergent users in India primarily discover new content on YouTube through a combination of voice search, recommendations, and social sharing. Voice search is particularly popular among users with slow typing skills or poor internet connectivity. The recommendation algorithm plays a significant role, as users often rely on thumbnails and suggestions on their homepage or sidebars to find relevant content. Additionally, sharing via social networks like

WhatsApp is a crucial method for content discovery, with users frequently exchanging videos within their trusted circles.

4.2.2 What is the level of awareness and usage of YouTube features (such as voice search, channel creation, making shorts, and notifications) among these users?

Voice Search: Voice search is utilized and preferred by users with slower typing speeds or poor internet connectivity. Out of 30 participants, 14 were aware of the voice search feature, but only 4 used it regularly. Interestingly, despite being designed for users at a basic proficiency level, voice search remained underutilized; 8 out of 9 participants who could benefit most from this feature were unaware of its existence, relying instead on scrolling through recommended content. This highlights a gap between available features and user awareness or comfort in adopting them.

Channel Creation: Low awareness and usage. Many users feel content creation requires significant knowledge and resources, leading to hesitation. Only 11 out of 30 participants have explored or engaged with channel creation and 2 out of 30 upload their content.

Making Shorts: Although there is a general awareness of YouTube Shorts among users, actual usage remains limited. Many users find it much easier to consume Shorts rather than create them, as the process of content creation is perceived as complex and time-consuming. Additionally, the advantages of creating Shorts are not widely understood or appreciated. Only a few younger participants, who are typically more comfortable with digital tools and social media trends, show genuine interest in producing Shorts, while most others remain hesitant or uninterested.

4.2.3 How do these users engage with interactive elements on YouTube, and what are the barriers to their full utilization?

Engagement: Users engage with basic interactive elements such as play, pause, like, and share. Sharing is done via WhatsApp. Features like commenting, subscribing, and creating playlists are less commonly used.

Barriers**:**

Feature Overload: Many users feel overwhelmed by the numerous features available on YouTube, leading to a preference for sticking to basic functionalities.

Lack of Understanding: There is a general lack of understanding about the benefits of advanced features like playlists, subscriptions, and notifications.

Confidence: Users often lack confidence in exploring new features due to fear of making mistakes or not being tech-savvy enough.

4.2.4 What gaps exist in the technological literacy of emergent users, and how do these gaps impact their overall user experience on YouTube?

Technological Literacy Gaps:

Feature Understanding: Many users are unaware of how to effectively use features like subscribing, creating playlists, managing notifications, and downloading content for offline use.

Content Creation: A significant number of users do not understand how to create and upload content, with many perceiving it as a complex and resource-intensive process.

Notifications: Known but not effectively managed. Users receive notifications but often do not understand why they receive notifications and have no knowledge to customize settings.

Impact on Digital Literacy and User Experience:

Limited Exploration: Users miss out on their app experience by not utilizing all the features. 20 out of 30 participants

recognize notifications but do not utilize them fully.

Reduced Engagement: Low engagement with interactive and community-building features limits users' ability to fully participate in the YouTube ecosystem.

Creating Content: Users feel underconfident about uploading and sharing content on YouTube, viewing it as a complex task demanding high technical knowledge. Users struggle with functions that are not easily visible or intuitively accessible. Consequently, this lack of confidence and perceived complexity discourages them from engaging with the platform's content-sharing features, leading to underutilization.

5 Discussion

Our study explores YouTube usage among emergent users in rural and semi-urban India, shedding light on how this platform influences their digital behaviors and engagement. We delve into users' multifaceted interactions with YouTube, offering insights into their motivations, challenges, and evolving practices. Here, we reflect on the implications of our findings for designing effective solutions and guide researchers and practitioners working with this user group.

5.1 Evolving Engagement Patterns

Our findings show that emergent YouTube users in rural and semi-urban areas are increasingly using the platform for both entertainment and education. This shift from passive to active engagement, accelerated by the pandemic and increased digital access, reflects a broader trend. According to recent statistics from *GrabOn (2024)*, India's substantial YouTube user base indicates a growing interest in diverse content, including tutorials and skill development. This highlights the need for solutions seamlessly integrating entertainment and educational content to serve users' evolving needs better.

5.2 Navigating Challenges in Content Access and Engagement

Despite the increased use of YouTube, emergent users in rural and semi-urban areas face significant challenges, including limited digital literacy, slow internet speeds, and device constraints. This aligns with findings from previous research (Devanuj et al., 2016; Meghna., 2023), which underscores that technical and cognitive barriers can impede effective platform usage. Our study talks about similar concerns, revealing that users often struggle with navigating YouTube's interface and finding relevant content due to these constraints. To enhance engagement, there is a need for more user-friendly interfaces, features optimized for low-bandwidth conditions, and contextual guidance to better support users in accessing and utilizing content.

5.3 The Role of Language and Localization

Our study highlights the significant impact of language and localization on YouTube user engagement, with users showing a clear preference for content in local languages and dialects. This finding aligns with Devanuj et al. (2016), which underscores how language and regional adaptation are crucial for enhancing accessibility and user satisfaction in digital platforms. Similarly, Meghna. (2023) emphasize the importance of localization in improving engagement and making platforms more relevant to diverse user bases. To better serve this demographic, it is essential to support content creation and consumption in regional languages and to collaborate with local content creators. Integrating regional languages into YouTube's interface can further enhance user engagement and inclusivity.

5.4 Content Creation and User Agency

Our findings reveal a growing trend among emergent users towards content creation and sharing, signaling an increase in user agency on the platform. This trend aligns with research by Devanuj et al. (2016) and Meghna. (2023), highlighting user empowerment's importance in digital spaces. Users are not only consuming content but are also actively producing their videos and tutorials. This shift emphasizes the need for tools and features that facilitate content creation, such as user-friendly editing tools and production guidance. By supporting users in creating and sharing their content, YouTube can enhance personal expression and knowledge sharing among its diverse user ser bases.

5.5 Implications for Design

Our study's insights underscore the need for design and experience enhancement to serve emergent YouTube users better. From a design standpoint, our recommendations align with established user experience principles and heuristic evaluations (O'Broin, 2019; Nielsen, 2024) by suggesting improvements to content discoverability and user guidance. Enhancements such as improved visibility for voice search, intuitive personalization features, and simplified content sharing directly address users' needs for a more supportive and engaging experience. Additionally, optimizing the platform for low-bandwidth conditions and creating user-friendly interfaces aligns with findings on effective user support and interface design (IESE, 2024). This approach supports broader goals of digital inclusion and equitable access to technology, ensuring that emergent users can fully leverage YouTube's potential. By integrating these design and policy considerations, YouTube can enhance its platform's accessibility and effectiveness, better serving its diverse user base.

6 Conclusion

Our study provides key insights into how emergent YouTube users in rural and semi-urban India engage with the platform, revealing that while they increasingly use YouTube for both educational and entertainment purposes, they face significant challenges related to digital literacy, internet connectivity, and feature utilization. Users primarily engage with basic functions like search and playback, with advanced features being underutilized. To enhance user experience, YouTube should focus on simplifying interfaces, improving content discoverability, and optimizing for low-bandwidth conditions. Additionally, supporting localized content and providing better guidance on platform features will help bridge the gap in user engagement. These adjustments will support emergent users more effectively and promote broader digital literacy and equitable technology access, guiding future platform developments and fostering inclusive growth.

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