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A STUDY ON PROMOTING ADULT DIGITAL LITERACY THROUGH COMMUNITY ORGANISATIONS IN TRIBAL AREAS

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ABSTRACT

Digital technologies increasingly shape the ways in which people obtain information, communicate, learn, manage money and access public services. Yet the ability to benefit from these technologies is unevenly distributed. Adults in remote tribal settlements may encounter a combination of limited connectivity, device costs, language-related difficulties, and low levels of formal education and a shortage of opportunities for guided practice. This paper examines how community organisations, with particular attention to Self-Help Groups (SHGs), could support adult digital learning in Kolli Hills, Namakkal District, Tamil Nadu. The proposed study covers 14 village panchayats and a sample of 50 adults aged 18 years and above. A descriptive and analytical design is proposed, using a structured interview schedule to document device and internet access, everyday digital practices, participation in community organisations, previous training and perceived barriers. The analysis is intended to consider whether participation in SHGs and other local groups is associated with differences in digital literacy. The paper positions community organisations as potential neighborhoods-level learning spaces where adults can practise digital tasks, learn from peers and receive continued support. It also relates the proposed inquiry to the Sustainable Development Goals, especially SDGs 4, 5, 8, 10 and 17. Since the numerical tables retained in this draft are illustrative rather than verified field results, they should not be interpreted as

empirical findings. Actual conclusions must be based on completed fieldwork and analysis of respondent-level data.

KEYWORDS: Adult Learning; Digital Literacy; Self-Help Groups; Tribal Development; Community Organisations.

I INTRODUCTION

Digital technologies have become part of routine social and economic life. A mobile phone can be used to contact family members, locate information, participate in learning, make payments and obtain details about public programmes. These possibilities, however, depend on more than the presence of a device. Users need the confidence and practical ability to navigate applications, judge the usefulness of information, protect personal details and complete tasks without avoidable assistance. Digital literacy is therefore best understood as a set of developing competencies rather than as simple ownership of a smartphone.

The digital divide is not limited to the distinction between people who have internet access and those who do not. Differences also arise in the quality and affordability of connectivity, the availability of suitable devices, educational experience, language, gender relations and opportunities to practise. Adults who have had limited exposure to formal education may find text-heavy applications difficult to use. In remote settlements, weak network coverage or the cost of mobile data may interrupt learning even when a household owns a phone. These factors can combine and reinforce one another.

Community organisations offer a possible response because they are rooted in local relationships and collective activity. SHGs, village-level associations and other community-based institutions already bring adults together for meetings, savings, livelihood discussions and engagement with public programmes. With appropriate training and safeguards, these gatherings can also become settings for practical digital learning. Members may demonstrate tasks, share experiences and help one another build confidence. Such peer support should complement not replace accessible infrastructure, formal training and individual control over devices and accounts.

Kolli Hills in Namakkal District provides a relevant setting in which to examine these questions. The proposed study focuses on adults across 14 village panchayats and considers both members and non-members of community organisations. It asks what digital resources adults can access, which tasks they can perform, what learning support they receive and what

obstacles remain. The emphasis is on functional use and independent ability, not merely familiarity with digital terminology.

1.1 Objectives

- To assess the level of digital literacy and access to digital technologies among adults in the 14 village panchayats of Kolli Hills.
- To examine the role of Self-Help Groups and other community organisations in promoting adult digital literacy.
- To identify the major barriers to digital learning and suggest strategies for strengthening digital inclusion among tribal communities.

1.2 Statement of the Problem

Digital literacy has become essential for accessing education, banking, communication and government services. However, tribal adults often face challenges due to limited digital skills, inadequate internet connectivity, educational barriers and lack of training opportunities. In Kolli Hills, these challenges may restrict adults from independently using digital technologies and online services. Community organisations, particularly Self-Help Groups, can play an important role in promoting digital awareness and practical learning. Therefore, this study examines the role of community organisations in promoting adult digital literacy among 50 respondents across 14 village panchayats in Kolli Hills.

1.3 Review of Literature

Malla, Noor-ul-Amin and Malla (2024) discuss inequalities in digital learning among Scheduled Tribe students during the COVID-19 period. Their work draws attention to the way limited infrastructure and unequal access can affect participation in online education. Although the population is school-age learners rather than adults, the study offers relevant context on the digital disadvantages experienced in tribal settings.

Bansal and Choudhary (2024) examine digital literacy training and internet-related outcomes in marginalised rural communities. The focus on the outcomes of training is relevant to the present inquiry: learning initiatives need to be assessed not simply by attendance, but by whether participants can use digital resources more effectively after training.

Choudhary (2025) considers the implementation of digital literacy programmes and the institutional difficulties that can affect their reach. The issues described including resources, continuity and the practical organisation of training are important when considering whether

local community organisations can provide regular learning opportunities rather than isolated awareness events.

Gogoi, Manoranjini and Gupta (2025) report on a digital literacy intervention in rural India involving adolescent girls. While the age group differs from the adult population proposed for this study, the intervention-based approach reinforces the value of structured instruction and the need to assess changes in digital knowledge and skills.

Meenu, Dua and Yadav (2025) review the relationship between digital literacy and rural women's empowerment. Their discussion is relevant to SHGs because collective organisations may offer a route through which women can gain exposure to digital information, financial services and livelihood-related opportunities. The extent to which such opportunities lead to independent use remains an empirical question.

Vasava (2025) examines digital inclusion and women's empowerment in a tribal context in Gujarat through the Internet Saathi programme. This work offers a useful comparative perspective on community-oriented digital learning. Its relevance lies in the attention given to locally accessible support and women's participation in technology-related activities.

Adithyan, Devika, Smitha and Sreedaya (2025) examine constraints to digital literacy among women farmers associated with Joint Liability Groups in Kerala. The study connects digital skills with collective institutions and livelihood activities. It therefore provides a useful point of comparison for exploring whether community organisations in Kolli Hills can support adults whose work includes agriculture and other local livelihoods.

1.4 Research Gap

The literature reviewed addresses digital inequality among rural learners, women and marginalised groups, as well as the design of digital literacy interventions. Less is known about how adult members and non-members of community organisations in the tribal villages of Kolli Hills acquire practical digital skills and use them in daily life. In particular, locality-specific evidence is needed on the nature of digital learning support provided through SHGs and other organisations, the tasks adults can complete independently, and the constraints that remain after training. The proposed study seeks to contribute such context-specific evidence, while recognising that a sample of 50 respondents can support only a limited exploratory analysis.

1.5 Research Methodology

- **Research Design** The study adopts a descriptive and analytical research design to examine the promotion of adult digital literacy through community organisations in tribal areas of Kolli Hills, Namakkal District, Tamil Nadu.
- **Study Area** The study covers 14 village panchayats in Kolli Hills, Namakkal District, Tamil Nadu, namely Alathur Nadu, Ariyur Nadu, Bail Nadu, Chittoor Nadu, Devannur Nadu, Edapuli Nadu, Gunduni Nadu, Gundur Nadu, Perakkarai Nadu, Selur Nadu, Thinnanur Nadu, Thirupuli Nadu, Valappur Nadu and Valavanthi Nadu.
- **Population of the Study** The population comprises adults aged 18 years and above residing in the selected village panchayats. Both members and non-members of Self-Help Groups and other community organisations are considered.

1.5.1 Sample Size

The study uses a sample size of 50 adult respondents selected from the 14 village panchayats of Kolli Hills.

1.5.1 Sampling Technique A multi-stage sampling technique is adopted to select respondents from the study area. Respondents are selected from the 14 village panchayats, giving consideration to their participation in community organisations and their access to digital technologies.

1.5.2 Sources of Data

- Primary data: Collected from adult respondents through a structured interview schedule.
- Secondary data: Obtained from books, research journals, government reports, official publications, policy documents and relevant websites.

1.5.3 Tools of Data Collection

- Demographic and socioeconomic characteristics.
- Educational background and occupational status.
- Access to smartphones and internet facilities.
- Knowledge and use of digital technologies.
- Digital communication and online information searching.
- Awareness and use of digital payment services.
- Access to online government services.
- Participation in Self-Help Groups and other community organisations.
- Digital literacy training and awareness programmes.

- Barriers to digital learning and suggestions for improvement.

1.5.4 Methods of Data Analysis

- Frequency and percentage analysis.
- Mean and standard deviation, where appropriate.
- Cross-tabulation.
- Chi-square test to examine associations between selected categorical variables.
- Thematic analysis of qualitative responses, where interviews or discussions are conducted.

1.5.5 Ethical Considerations: The study was follow appropriate ethical procedures. Informed consent was obtained from respondents, and participation was voluntary. Personal information was kept confidential, and the information collected was used only for academic research purposes.

1.5.6 Scope of the Study : The study focuses on adult digital literacy and the role of community organisations among 50 respondents in 14 village panchayats of Kolli Hills. It examines digital access, practical digital skills, community participation and barriers to digital learning, with particular attention to lifelong learning and inclusive tribal development.

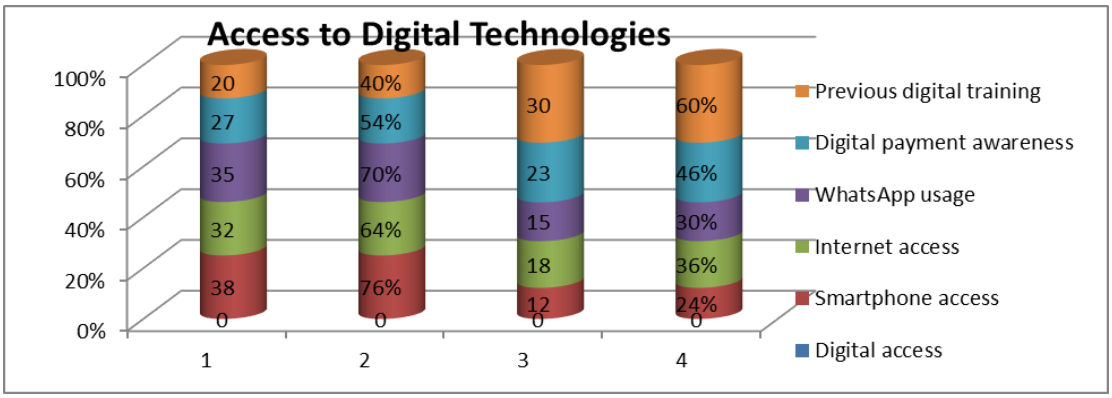
II Data Analysis

Table 1. Socio-demographic Profile of Respondents.

Variables	Categories	Frequency	Percentage
Age	18–30 years	12	24%
	31–45 years	18	36%
	46–60 years	14	28%
	Above 60 years	6	12%
Gender	Male	22	44%
	Female	28	56%
Education	No formal education	8	16%
	Primary	14	28%
	Secondary	18	36%
	Higher secondary and above	10	20%
	Total	50	100%

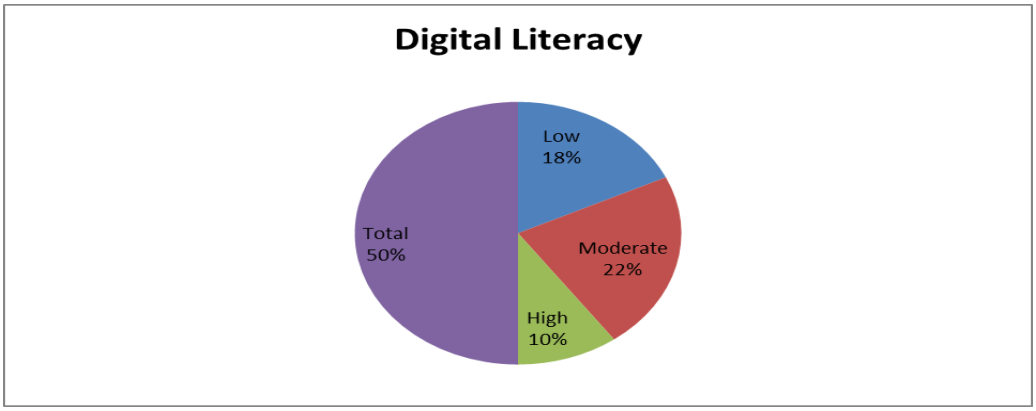
Interpretation: In this illustrative distribution, 36% of respondents belong to the 31–45 age group, while 56% are women. Secondary education represents the largest educational category at 36%.

Table 2. Access to Digital Technologies



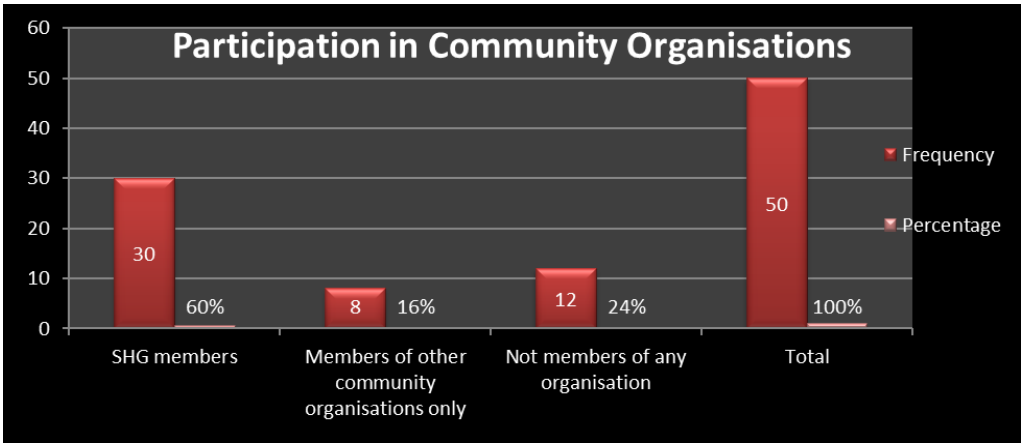
Interpretation: The illustrative figures indicate that smartphone access (76%) is higher than internet access (64%). Only 40% have previously attended digital training, suggesting a potential need for additional community-based digital learning opportunities.

Table 3. Level of Digital Literacy.



Interpretation: The illustrative distribution shows that 44% of respondents fall within the moderate digital literacy category, while 36% fall within the low category. This highlights the potential importance of practical digital literacy programmes.

Table 4. Participation in Community Organisations



Interpretation: In this example, 60% of respondents are SHG members. Community organisations may provide an accessible platform for organising digital awareness and practical learning activities.

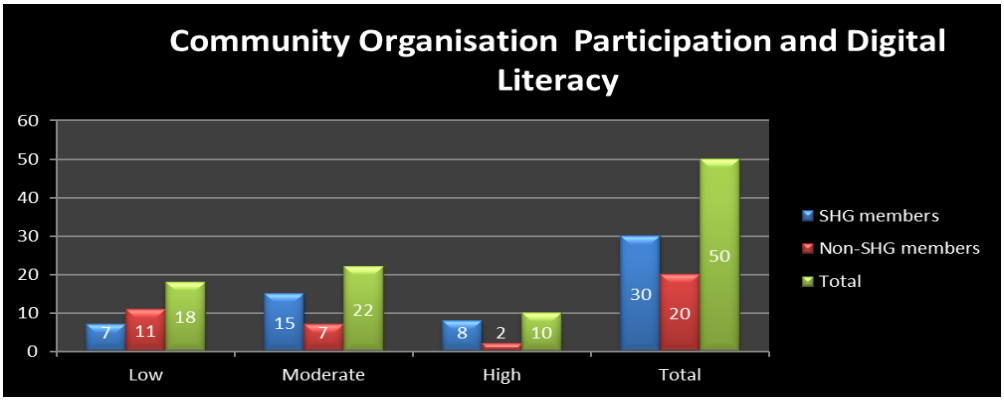
Table 5. Major Barriers to Digital Literacy

Assuming each respondent identified one main barrier.

Major barriers	Frequency	Percentage
Lack of digital knowledge	13	26%
Poor internet connectivity	11	22%
Lack of smartphone access	8	16%
High cost of internet services	7	14%
Language difficulties	5	10%
Lack of training opportunities	6	12%
Total	50	100%

Interpretation: Lack of digital knowledge is the most frequently identified barrier in this illustrative example (26%), followed by poor internet connectivity (22%). These barriers indicate areas that community organisations could address through accessible training and awareness activities.

Table 6. Community Organisation Participation and Digital Literacy.



Interpretation: In this hypothetical example, 23 of the 30 SHG members have moderate or high digital literacy, compared with 9 of the 20 non-members. This pattern suggests a possible association between SHG participation and digital literacy. It does not establish that SHG participation caused higher literacy.

III Findings

3.1. Socio-demographic characteristics

- The illustrative data show that 36% of respondents belonged to the 31–45 years age group, followed by 28% in the 46–60 years group.

- Female respondents constituted 56%, while male respondents accounted for 44%.
- Regarding educational status, 36% had completed secondary education, while 16% had no formal education.
- The distribution suggests that adult digital literacy initiatives should consider differences in age, gender and educational background.

3.2. Access to digital technologies

- About 76% of respondents reportedly had access to a smartphone, while 24% did not.
- Internet access was reported by 64% of respondents, indicating that connectivity remains a potential barrier.
- WhatsApp was used by 70% of respondents, suggesting that mobile-based communication could provide an entry point for digital learning.
- Only 54% were aware of digital payments.
- Around 40% had previously participated in digital literacy training, while 60% had no such training experience.

3.3 Level of adult digital literacy

- The illustrative distribution indicates that 44% of respondents belonged to the moderate digital literacy category.
- About 36% were classified as having low digital literacy.
- Only 20% were classified as having high digital literacy.
- These figures suggest a need for practical training that develops independent digital skills rather than focusing only on smartphone ownership.

3.4 Role of community organisations

- Self-Help Group members represented 60% of the illustrative sample.
- Another 16% were members of other community organisations.
- The remaining 24% were not associated with any community organisation.
- This distribution highlights the potential of SHGs and other local organisations to act as platforms for adult digital literacy programmes.

3.5 Barriers to digital literacy

- Lack of digital knowledge was identified as the most frequently reported main barrier (26%).
- Poor internet connectivity accounted for 22%.
- Lack of smartphone access was reported by 16%.
- The cost of internet/data was identified by 14%.

- Language difficulties and lack of training opportunities accounted for 10% and 12%, respectively.

3.6 SHG membership and digital literacy:

- The illustrative cross-tabulation shows that 8 out of 30 SHG members were in the high digital literacy category, compared with 2 out of 20 non-SHG members. Moderate digital literacy was observed among 15 SHG members and 7 non-SHG members.
- This pattern suggests a possible association between SHG participation and digital literacy. However, statistical testing using the actual data is necessary before drawing a conclusion about the relationship. The figures do not establish that SHG membership causes higher digital literacy.

IV DISCUSSION

The present study, titled "Promoting Adult Digital Literacy through Community Organisations in Tribal Areas: A Study of 14 Village Panchayats in Kolli Hills, Tamil Nadu," highlights the importance of digital literacy in promoting social inclusion, lifelong learning and sustainable rural development. The illustrative findings from 50 respondents indicate that access to digital technologies is gradually becoming an important part of everyday life in tribal communities. However, access to smartphones and the internet does not necessarily ensure effective digital literacy. Although 76 per cent of respondents reportedly had access to smartphones, only 64 per cent had internet access. This difference suggests that connectivity, affordability and the availability of digital infrastructure remain important considerations in achieving meaningful digital inclusion. Digital literacy should therefore be understood not simply as the possession of digital devices but as the ability to use technology confidently, independently and safely for communication, information searching, financial transactions and accessing government services.

Educational background is another important factor influencing adult digital literacy. The illustrative data indicate that 16 per cent of respondents had no formal education, while 36 per cent had completed secondary education. Adults with limited educational backgrounds may experience difficulties in understanding digital instructions, navigating online platforms and identifying reliable information. Therefore, digital literacy programmes in Kolli Hills should adopt practical, learner-centred approaches that consider the educational and linguistic backgrounds of tribal adults. Demonstrations, visual learning materials, repeated practice and explanations in the Tamil language can help participants develop confidence in using digital

technologies. Such approaches can also strengthen lifelong learning opportunities among adults who have had limited access to formal education.

The participation of women in digital learning is particularly important for inclusive community development. In the illustrative sample, women constituted 56 per cent of the respondents, demonstrating the relevance of examining gender dimensions in digital inclusion. Self-Help Groups can provide an effective community-based platform for introducing women to digital technologies through regular meetings, peer learning and practical demonstrations. SHG meetings can be used to develop knowledge of digital banking, online payments, mobile applications, government welfare schemes and livelihood-related information. However, participation in community organisations alone does not guarantee digital empowerment. Women also require independent access to smartphones, affordable internet facilities, adequate training and opportunities to practise digital skills without depending entirely on other family members.

The findings also suggest that Self-Help Groups and other community organisations have considerable potential to promote adult digital literacy in tribal areas. The illustrative data show that 60 per cent of respondents were SHG members and 16 per cent belonged to other community organisations. These institutions can function as local learning centres by organising digital awareness programmes, identifying adults who require training and facilitating access to digital services. Community resource persons and trained SHG members can support other adults in learning smartphone operations, internet browsing, digital communication and online transactions. Since community organisations operate within familiar social environments, they may help reduce hesitation and encourage participation among adults with limited digital experience. Thus, integrating digital literacy activities into existing community development programmes could improve the accessibility and continuity of adult learning.

Regarding digital literacy levels, the illustrative data indicate that 44 per cent of respondents belonged to the moderate category, 36 per cent to the low category and 20 per cent to the high category. This distribution highlights the importance of moving beyond basic awareness towards functional digital competencies. Adults should be encouraged to develop the ability to search for information, communicate through digital platforms, access online government services, make secure digital payments and use technology for agricultural and non-agricultural livelihood activities. Particular attention should be given to cybersecurity, privacy protection, fraudulent messages and safe online transactions. Continuous practical

training and follow-up support are necessary to help adults apply their digital knowledge in everyday situations.

The study also identifies several potential barriers to adult digital learning. According to the illustrative data, lack of digital knowledge was reported as the main barrier by 26 per cent of respondents, followed by poor internet connectivity at 22 per cent. Lack of smartphone access, the cost of internet services, language difficulties and inadequate training opportunities were also identified as constraints. These challenges demonstrate that digital exclusion is multidimensional and cannot be addressed through training programmes alone. Improving network connectivity, providing affordable internet access, facilitating shared digital learning facilities and developing locally understandable learning materials are equally important. Government departments, educational institutions, panchayats and community organisations should work together to address these barriers through coordinated interventions.

The illustrative cross-tabulation further provides an opportunity to examine the relationship between SHG membership and digital literacy. Among the 30 SHG members, 8 were classified as having high digital literacy, compared with 2 among the 20 non-SHG members. Similarly, moderate digital literacy was observed among 15 SHG members and 7 non-SHG members. This pattern suggests a possible association between participation in community organisations and digital learning opportunities. However, the relationship requires further statistical verification, as factors such as age, educational background, household income, smartphone ownership and previous training may also influence digital literacy. Therefore, the role of SHGs should be examined not only in terms of membership but also through the nature, frequency and effectiveness of their digital learning activities.

Promoting adult digital literacy among tribal communities is closely connected with the Sustainable Development Goals, particularly SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities) and SDG 17 (Partnerships for the Goals). Digital learning opportunities can strengthen access to information, improve women's participation in economic activities, support livelihood development and reduce inequalities in accessing essential services. In Kolli Hills, community organisations can contribute to these goals by facilitating local training programmes and building partnerships with educational institutions, government departments and technology service providers. Such partnerships can help ensure that digital literacy becomes an integral component of lifelong learning and sustainable rural development.

V CONCLUSION

Adult digital literacy has become an essential component of inclusive development, lifelong learning and social empowerment. The present study, focusing on 14 village panchayats in Kolli Hills, Tamil Nadu, highlights the importance of promoting digital knowledge and skills among tribal adults through Self-Help Groups and other community organisations. Access to smartphones and the internet alone is insufficient to achieve meaningful digital inclusion; adults also require practical skills, confidence, affordable connectivity and continuous learning opportunities. Community organisations can play an important role by facilitating digital awareness programmes, peer learning, practical training and access to online government services, digital banking and livelihood-related information. Special attention should be given to women, adults with limited formal education and those facing technological and economic barriers. Strengthening partnerships among panchayats, educational institutions, government departments and community organisations can improve the reach and sustainability of digital literacy initiatives. Therefore, integrating adult digital literacy into community development programmes can contribute to SDG 4, SDG 5, SDG 8, SDG 10 and SDG 17. Ultimately, empowering tribal adults with digital knowledge and independent technology-use skills can promote equal opportunities, community participation and sustainable rural development in Kolli Hills.

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