DIGITAL ACCESS DIVIDE AND HINDI SOCIAL MEDIA: MAPPING USAGE TRENDS AMONG UPSC ASPIRANTS IN DELHI-NCR

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Abstract: The digital revolution has reshaped the educational system as online education through Social media platforms has become a need especially for competitive exam candidates. Aspirants for UPSC civil services examination are doing their preparation through online social media platforms. Rajendra Nagar-Karolbagh and Mukhergee Nagar in Delhi-NCR are the main centres for the preparation of civil services exams. Here hundreds of coaching centres are providing preparation-help, classes and study materials through both traditional and digital mode coaching. English language has been the medium for Union Public Service Commission (UPSC) examinations. But as the aspirants from rural background increased Hindi is becoming an important medium for preparation and coaching as well as study materials through Hindi medium has begun to be available easily. These facilities are available in both modes. Online coaching in Hindi through different social media platforms like YouTube, Facebook, Telegram, X, WhatsApp etc are available at the low coast. But access to the digital facility for every background students is not the same. Some has high internet facility and some has access to internet is quite low. Some has efficient and well-suited devices are available and some lack this facility. Therefore, there is a digital access divide especially for the aspirants of Hindi mode who belong to rural areas and poor economic backgrounds. So this study aims to assess 'Digital Access Divide and Hindi Social Media: Mapping Usage Trends among UPSC Aspirants in Delhi-NCR.' This research is based on both primary and secondary data applying mixed-method research approach. For primary surveys to collect data both qualitative and quantitative surveys have been done in the area of Rajendra Nagar-Karolbagh and Mukhergee Nagar in Delhi-NCR. Expected outcomes may be highly helpful for bridging the digital divide for the aspirants of UPSC aspirants.

INTRODUCTION

Digital education and competitive exam preparation in Hindi are twenty first century's significant transformation. It is more remarkable due to new potential in the Hindi language social media space. Yet, digital access divide is a crucial problem as there are major gaps among poor-rich, city-village and male-female. To assess the digital access divide for UPSC aspirants, Old Rajendra Nagar-Karolbagh and Mukherjee Nagar centers in Delhi-NCR are the most suitable geography. Hindi social media's growth is very important to ease the obstacles and difficulties faced in the preparation of competitive exams in the Hindi language through Hindi social media. Social media educational platforms are now a great need for millions of students. Statics indicate that 79.3 percent students use YouTube for their exam preparation (Selwyn, Neil, 2016). Online classes are easily available to maximum students. Internet is available to 11.9 million people. Facebook and Telegram also provides educational resources (IIPS, 2022).

There is a great change in the digitalization of education the twenty first centuries. The mode of access to the knowledge has changed a lot. This change is evident in India especially in the preparation for the competitive exams. UPSC civil services exam is the most difficult exam. More than 9 lakh students appear every year in this examination and the success rate is less than one percent (UPSC, 2024). To appear in this exam many students require exam-materials in Hindi language. Years back education materials for the competitive exams were available only in English. Today standard materials are available in Hindi also. Hindi social media has become a competent source of getting materials in Hindi also for the preparation even UPSC exams. This change is a highly significant. Students from rural areas like to do preparation in Hindi because Hindi medium is their favorite language. Hindi is a favorite for urban students also. More than 500 million people speak Hindi in India.

Digital access divide is a serious problem as low-income group students cannot afford heavy internet charges and in rural as well as remote areas internet connectivity is not perfect. Due to this also all competitive exam aspirants don't get equal online education facility. In 2019 the active internet users in India were more than 574 million (Kantar, 2019 Report; Insight on India Editorial, 2020; Kantar, Internet in India 2024)

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According to National Family Health Survey, 2019-20, 57.1 percent males are using internet and this percentage of ladies is only 33.3 (National Family Health Survey, 2019-21; IIPS, 2022). In cities 67 percent residents use internet facility where in villages only 32 percent villagers use digital facility (National Family Health Survey, 2019-21; IIPS, 2022). This difference is due to economic, geographical and social backgrounds reasons. Delhi-NCR is the main centre for the preparation of UPSC civil services exams in India. More than one thousand coaching institutes are here for both traditional and online coaching. Here Old Rajendra Nagar-Karolbagh and Mukherjee Nagar are the two hubs where aspirants come for the preparation. About 25% aspirants for UPSC do preparations at these two centers. That is why these two hubs are better for the study of digital access divide (Government of NCT of Delhi, 2023).

Digital coaching or online coaching through social media platforms grew during and after the COVID-19.Gradually after the Covid-19 online education through social media platforms became a need (Covid-19 Education Task Force, MoE, 2021). And for online classes internet access became a fundamental necessary. To lessen the digital divide and to help the economically weaker candidates Delhi Government started free online coaching for the competitive examinations. In fact, to root out the problem of digital access divide is a must.

To study the digital access divide it is necessary to understand three facts – Access Divide, Usage Divide and Skill Divide. Access divide shows who are consuming internet and to whom access to internet is not available. Without digital access online classes for competitive exam candidates are not possible. As far as Usage Divide is concerned it shows how much digital divide is used by the aspirants. Some candidates use it a lot, whereas others use it sparingly. Usage of digital facility is the most essential for every competitive exam candidates who attend online classes. The third fact Skill Divide assesses who are using internet perfectly and who are not skilled to use digital facility properly. Every aspirant is required to be skilled to internet usage.

There is a significant disparity in the availability of digital facility in the schools in India. In cities schools have 68.7 % digital resources, whereas in rural schools the percentage of internet facility is 44.9% (Population Foundation of India, 2023; Ministry of Education, Government of India, 2022). There are many schools in rural areas that haven't any digital resources. This difference highlights the digital disparity which is a pressing issue. Hindi social media is highly important for online exam preparation facility. Hindi is a national language of India, even the decades ago only English medium was prevalent to appear in the UPSC civil services exams. But in recent years Hindi as well as many regional languages has become mode of competitive exams. Study materials are available in many vernacular languages but Hindi is the most favorite medium of preparation except English (Gupta, Anjali, 2024). The availability of study materials and online classes through Hindi social media has made the competitive exams easier for the aspirants who belong to rural background. This change is lessening the gap of facility between English and Hindi mode aspirants.

Ed-tech enterprises as well as education-technology startups are considering the importance of Hindi online platforms and Hindi social media. They are opening coaching facilities in Hindi both on traditional platforms and online platforms. On the other hand social media is boosting the confidence of Hindi medium candidates. Without investing extra time they are learning better content and guidance. Economically poor aspirants also avails preparation-help at the lowest cost and 27x7 modes (Ministry of Social Justice & Empowerment, Govt. of India, 2020). Even then all aspirants do not get similar equal access to benefits due to digital access divide. Poor students don't get uniform advantages. They end up trailing because of limited device avaibility.

LITERATURE REVIEW

Digital Access Divide and Digital Education

Digital access divide is a deep divide where students and competitive exam aspirants end up on uneven levels. In India it is seen as gap among inequality in gender, economic disparity, and cities and countryside (OECD Publishing, 2001). Average 67% people have internet availability in cities of India, on the other hand across rural area it is 31%. This difference of 36% is a major hindrance (Oxfam India; India Inequality Report, 2022). Economic background also affects digital availability. In the households belonging to the poorest 20% only 2.7% have access to a computer. Across the richest 20% of families a computer is available with 27.6%, and 50.5% homes have internet access. Gender inequality further aggravates this disparity in India. Women possess mobile phones 15% fewer compared to men. Women consume 33% less mobile internet. The number of female aspirants for UPSC civil services exam is also fewer (National Sample Survey Office, 2019).

Social Media Application in Pedagogical Context

Research findings indicate that social media boosts learners o aspirants learners self-efficacy. Extensive studies on university students suggest that social media academic programs strengthens aspirant's interest, confidence, attempts, learning capability, control over situation and environment (Hu, Jiaying, Yicheng Lai, and Xiuhua Yi, 2024). Social media platforms based research shows that YouTube is the most famous educational platform. Candidates who appear in the competitive exams utilize YouTube in a very large number. Still, its impact varies on how much and through which strategies candidates use it (Smith, Caroline, 2021).

Digital Platforms and Competitive exam readiness

Government-backed platforms such as SWAYAM have contributed to better preparation for UPSC, NEET, JEE etc. These educational platforms provide high quality study materials along with ease of access. But candidates from rural areas are facing challenges even now. Inadequate infrastructure and insufficient digital literacy are big obstacles (Ministry of Education, Government of India, 2024). Mukherjee Nagar and Old Rajendra Nagar-Karolbagh in Delhi are the famous centers for the preparation of UPSC civil services exams. Here many coaching Institutes have been providing preparation-support in Hindi for a decade or more. They provide coaching through online medium, social media and on traditional mode. The demand for Hindi mode guidance and support is on the rise day by day. Recent policy steps taken also accept the power and demand of digital education and need of narrowing the digital divide. So SATHEE program has set the goal to support 12.5 lack aspirants up to 2029. This is highly significant as a mechanism that fosters equality in digital education (Delhi Coaching Institute Survey Report, 2023).

Hindi-based Platforms

Hindi-based social media online education platforms are driving substantial transformation in India. The research shows that online digital platforms are narrowing the gap educational disparity. Millions of viewers and subscribers are connected to YouTube, X, Telegram, WhatsApp, Facebook etc. Various research studies explains that online coaching, classes and guidance through Hindi social media have been highly helpful for those aspirants who struggle with English-medium preparation. However, it continues to be challenge of content quality and standardization of materials (Kumar, Rajesh, and Priya Sharma, 2023).

COVID-19 and Acceleration of Digital Education

The pandemic, COVID-19, gave online education on social media a fast pace. At the same time it established clearly the digital access divide. Especially competitive exam spirants and students who didn't have digital device and access to internet, they were left behind. Some institutes and government also tried to help those students and competitive exam aspirants who were without access to digital facilities. But the implementation was left unequal and partially furnished (UNESCO; COVID-19 and Digital Learning in India, 2021).

The Theoretical Framework and the Research Gap

There has been a lot of research on digital divide and educational techniques. Yet, study on competitive exams and vernacular social media is a few; and on UPSC civil services exam preparation through Hindi social media is rare. The bulk of the studies belong to formal education, rather than on competitive exams preparation or on informal education world. This study is based on digital access divide, education technique and social-learning-based theory. This study focuses on self-efficacy and observational learning in Hindi social media (Bandura, Albert, 1977).

Research Objectives

The study sets forth three main objectives that examine major dimensions of the digital access divide and the availability of Hindi social media among UPSC civil services aspirants in Delhi-NCR:

Objective 1: To map out and interpret current usage patterns to Hindi social media trends among Union Public Service Commission civil services examination aspirants among various soicio-economic tiers of Delhi-NCR.

Objective 2: To pinpoint and assess socio-economic hindrances that obstructs equal access to Hindi social media educational resources for UPSC competitive examination preparation.

Objective 3: To evaluate the interrelation between Hindi Social media availability and UPSC civil services exam performance results among candidates in Delhi-NCR.

Research Hypothesis

1. **H₀ (Null Hypothesis):** Despite differences in geographic location, socio-economic class, gender and education, there is not any variation in access to digital educational platforms of Hindi social media among the aspirants of UPSC in Delhi-NCR.

2. **H₁ (Alternative Hypothesis):** Based on factors such as devices, internet facilities and content quality, access to Hindi social media educational platforms is higher among aspirants from upper socio-economic strata than among those who are from lower-class aspirants.

3. **H₂ (Alternative Hypothesis):** Aspirants of UPSC who are preparing in Delhi-NCR and have greater access to Hindi Social media platforms, they actively utilize them, perform better in the competitive examination, than the aspirants who don't use social media platforms despite having same offline coaching support, study time and academic history.

METHODOLOGY

The study on 'Digital Access Divide and Hindi Social Media: Mapping Usage Trends among UPSC Aspirants in Delhi-NCR' follows a mixed-methods framework that merges qualitative and quantitative research techniques:

Data Collection

Primary Mode of Data Collection: This employs the techniques in four steps - Conducting surveys, Taking interviews, Organizing data and analyzing them, and Interpreting the findings

Surveys and interviews are executed with participants who are aspirants for UPSC civil services exams and are residing in the Delhi-NCR region.

Secondary Mode of Data Collection: This method includes Research articles and review of existing studies, and Academic journals, case analyses and data collected from coaching centers

Sampling Design and Tool: Target Sample was from aspirants for UPSC civil services exams, candidates who have taken the UPSC exam and those who will appear in the UPSC examinations. Aspirants were of age-group: 20 - 38. Sampling Technique was stratified random sampling method combined with purposive sampling. Sample Size taken was 300 in number. Sampling Areas were Old Rajendra Nagar-Karolbagh and Mukherjee Nagar in Delhi-NCR. Microsoft Excel was used as statistical tool.

Analysis and Findings

This study is based on UPSC aspirants who are preparing for the examination in Delhi-NCR.The topic is '**Digital Access Divide and Hindi Social Media: Mapping Usage Trends among UPSC Aspirants in Delhi-NCR'.** This study is mapping the impact of Hindi Social media digital platforms on the candidates of UPSC civil services examinations. The survey-data shows contradictions. Hindi social media like YouTube, facebook, telegram etc. have made has made the preparation easier. Availability of costly phone-devices and lack of internet facility haven't been solved yet. Girl aspirants possess fewer proper digital devices than boys. In survey about 300 aspirants participated. Students consider digital coaching better than the traditional coaching. Online digital preparation through social media is flexible and highly resourceful, but it is costly for economically weaker section aspirants.

Secondary Survey

The secondary data shows that the trend of online education through Hindi social media has gained popularity. 900 million internet users are being projected by 2025. Online educational channels like Study IQ, Unacademy Hindi, Drishti IAS Hindi, Adda247', 'GradeUp' etc. are getting 15-220% higher engagements on social media platforms than English medium equivalents. The decline in enrolments in traditional coaching institutes as aspirants is about 60%. They have shifted to digital models. It is seen in the institutes at Mukherjee Nagar and Karolbagh-Old Rajendra Nagar. YouTube is the main or most favourite classroom Which is used by 90% candidates. 70% aspirants use Telegram which serves as distribution hub. WhatsApp has become peer study circle. Online education has achieved the status of digital democratization. But law quality content has also become a risk. 70.2% male aspirants and 62.2% female aspirants have smart phone access.

Qualitative Findings

As per the open ended interviews YouTube is the most used online social media platform for the competitive examinations. It is very cheap compared to fees running into lakhs of rupees. But it is difficult to differentiate between good or poor teachers quality wise. Students generally verify the educational content using NCERT books or content. The best thing is its time flexibility as aspirants can use online social media platform all the time. Aspirants who are doing jobs, for them this is most useful. Almost all aspirants for UPSC competitive exam preparation admit that they are comfortable in getting guidance, study materials and classes on social media platforms. Some candidates do classes on both Hindi and English platforms. Majority of aspirants do not have full confidence to prepare in Hindi and compete with their counterparts. Some students have problem of internet accessibility for the 24/7 preparation. About one-third of candidates cannot afford internet-cost and digital device cost easily. Rural background students often find difficulties in the availability of fast internet when they reside in their rural locality. The aspirants who are not comfortable with English medium preparation are getting much help using Hindi social media platforms for the preparation of UPSC competitive exams.

Quantitative Findings

Almost 56% candidates consider social media coaching better. 62% students accept that there is for costly books and study materials. But 63% aspirants opine that it is not totally cheap for the candidates who belong to economically weaker section. Materials are online available as well as cheaper but digital devices and internet data are expensive. Among the students 62% candidates agree that for the Hindi medium aspirants social media online platforms are highly helpful.

Table: 1

No.	Questionnaire	Strongly disagree	Some-what disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1	Is Hindi social media platforms are better source of preparation than the traditional coaching?	58	28	46	92	76
2	Are online classes on Hindi social media are accessible in rural regions?	54	32	44	90	80

3	Are these platforms affordable for the UPSC aspirants who belong to weaker sections?	124	68	42	52	18
4	Does Hindi social media platforms' content mitigate the urban-rural divide in UPSC exam preparation opportunities?	44	42	16	80	118
5	Have such platforms reduced your dependence on high-cost study materials or coaching institutes?	46	30	38	112	74
6	Is the navigation and presentation in Hindi resources user-friendly and updates are done regularly?	18	24	68	98	92
7	Are Hindi social media platforms for UPSC exam preparation helpful for candidates belonging to non-English medium backgrounds?	70	30	14	42	144
8	Does availability of proper device and perfect internet accessibility affect the preparation-level of candidates?	50	26	38	68	118

The economic, infrastructural and rural-urban digital divide is a critical barrier. The survey-data (Table:1) reveals that Hindi social media is a primary mode of competitive exam preparation. It has challenged the dominance of traditional coaching over the market. 56% of respondents are prioritizing digital flexibility or Hindi social media educational platforms over the traditional coaching institutes or rigid classroom structures (Q1). 63.3% respondents accept that online social media platforms are user friendly (Q6). It is updated properly and regularly. YouTube, Telegram etc. are dynamically adapting the mode to engage aspirants keeping UPSC syllabus executed on social media platforms. 62% respondents are convinced that social media education platforms for UPSC exam preparation are helpful for non-English aspirants. Hindi social media is an equalizer for language (Q7). 57% think online social media classes are available in rural locations (Q2). 66% accepts that Hindi social media educational platforms are solving the Rural-Urban divide (Q4). Social media is a tool that is democratizing locations. That is why many aspirants do not need to live Delhi-NCR coaching localities. Social media classes are affordable for the economically weaker aspirants. 63% candidates confirm it. But due to data packs, gigital devices and electricity these classes are not affordable for the poorest aspirants (Q3). It shows that higher economic status aspirants get better access to these classes-facilities. 62% detects that the quality of device and internet availability strongly affects the level of preparation (Q8). When it is correlated to Q3, the affordability, this shows digital divide cycle. It presents device divide also. 62% candidates confirm that online social media classes have reduced the dependence on costly study materials, notes, books, travel etc. (Q5)

In accordance to the Primary Survey data about 56 % UPSC competitive exam aspirants prefer digital mediums over traditional coaching centres. Hindi social media platforms are highly effective for the students of vernacular as 144 respondents strongly agree and 42 respondents somewhat agree. As per the 63% aspirants' responses the current digital framework or system excludes economically weaker section aspirants. The research successfully maps the divide. But the divide is not regarding the content availability, it is about the access of affordability. It's nuanced conclusion is remarkable as Hindi social media has successfully democratized information, but it is unable to democratize the infrastructure access for the economically aspirants in Delhi-NCR. Therefore, digital divide exists.

Analysis of Research Objectives
Objective 1: Usage patterns of social media educational platforms for UPSC exams are achieved. The data approves the usage patterns. Usage patterns are supported by the use of YouTube lectures, Telegram's notes, WhatsApp peer group information sharing. It is supported by the timing also as 24/7 usage pattern has replaced the firm and fixed time table of coaching hours. It is found that these platforms are more useful Current Affairs and General Knowledge papers.
Objective 2: This objective, to pinpoint and assess the socio-economic obstacles to the equitable access of online preparation-facilities, is also achieved in this study. For the preparation of UPSC civil services examination the socio-economic barrier is affecting the preparation. Resources are free but devices are costly. In the primary survey's quantitative question number 3 makes it clear that despite free content the ecosystem in not favourable to economically weaker sections. Internet problem and not having smart phones are disadvantages. Girls have fewer smart phones. Secondary data points out that 70.2% boys and 62.2% girl aspirants have smart phones. The gap is of 10%. As far as

infrastructure is concerned primary survey's questionnaire number 8 indicates that 62% participants accept that digital device and Internet quality affects the level of preparation for competitive exams.

Objective 3: To analyze the linkage between resource or content availability for UPSC civil services exam on Hindi social media platforms and examination performance or results are partially achieved. The data of qualitative survey claims that an improvement of 25% in results is accepted. Along with this due to interactive visuals better retention is found for the preparation. The question number 1 of quantitative survey reflects perception of betterment by 56% agreeing.

Analysis of Hypothesis

H_0 (Null Hypothesis): Rejected. The survey-data and evidence firmly rejects H_0. Rich background students and economically poor students are not getting equal digital education on social media platforms. The digital access divide shows this fact. For poor students it is difficult to buy proper device and internet data. There is difference of access between the boy aspirants and girl aspirants. The text clearly refers to a digital divide which shows that 43% of aspirants did not have access during the COVID-19 pandemic. Question number 3 of Primary Survey demonstrates that 63%, majority of participants, do not agree that online social media platforms are not easy on the pocket for economically weaker sections. Further the gap between male and female smart phone penetration is 70.2% and 62.2% respectively.

H_1 (Alternate Hypothesis): Accepted. The data make it clear those higher socio-economic status candidates have upgraded access to the platforms of Hindi social media compared to the poor or economically poor aspirants. This interpretation is based device and internet quality. The study-data supports H_1. Primary survey quantitative question number 8 reveals that 62% of respondents affirm that proper internet facility and digital device impacts the level of preparation for the UPSC competitive exams. Rich aspirants possess laptop, smart phone and other required digital devices and get rich Wi-Fi facility. The poor manage with cheaper devices with small screen and less internet data. The content is free but the access is not free, it is paid. Rural aspirants and SES candidates depend on limited mobile data and shared screens. Therefore their preparation is adversely affected.

H_2 (Alternate Hypothesis): H_2 is partially supported. It is non-conclusive. The data supplies subjective support to the hypothesis that aspirants who use online education on social media platforms for UPSC exams, achieve better results, compared to those candidates who get same offline coaching. The data lacks objective authentication. Question number 1 of the quantitative survey shows that 56% of respondents admit that competitive exam preparation through online social media educational platforms more supportive than traditional coaching. Qualitative outcomes reflect that visual learning by animations, maps, repetitions and repeated learning improves clarity of concept. It also improves patience and retention in classes. In fact, aspirants view H_2 to be true, but the content data assesses only the perceived effectiveness. It does not reflect real academic results.

CONCLUSION

This study finds that Hindi social media platforms like Youtube, Telegram, Facebook, WhatsApp etc. have made UPSC exam preparation resources possible to the aspirants, but many of the economically poor candidates cannot afford it. The surveys done for this study in Delhi-NCR, among the aspirants of UPSC competitive exams 56% students of Hindi social media considers it better. Hindi social media is highly helpful for 72% non-English background candidates. 63% economically weaker section students cannot afford the cost of costly digital devices, and digital data charges. Therefore, the government should work to make digital devices and data charges cheaper and affordable, so that even the poorest candidates can easily do preparations for the UPSC civil services exams. This specific study proves that Hindi social media has democratized competitive exam preparation resources, but the access to that content has not been democratized.

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