

## **Bridging the Digital Frontier: The Integration of Social Media Strategy and Promotion in India's Top 10 Institutes of Technology**

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### **Abstract**

The rise of globalization has elevated standards for higher education and intensified competition among universities. As a result, higher education institutions increasingly turn to online visibility to gain a competitive advantage. This study examines the social media engagement strategies of India's top 10 Indian Institutes of Technology (IITs), chosen based on their prestigious rankings in the National Institutional Ranking Framework (NIRF). Utilizing a quantitative analysis approach, the research employs social media analytics tools like SocialBlade and Phylax, alongside manual data collection, to analyze data from platforms such as YouTube, Facebook, LinkedIn, Instagram, and Twitter (now X). The study thoroughly examines metrics including subscribers, likes, posts, views, followers, and engagement rates, revealing the profound impact of social media on higher education institutions. The findings indicate that YouTube, followed by Instagram, leads in user engagement rates among these platforms. Conversely, Facebook, despite having the highest number of followers, shows a relatively lower engagement rate. This detailed analysis offers critical insights into the digital landscape of higher education, emphasizing the role of professional data collection and analysis in crafting effective social media strategies. Such strategies are crucial for enhancing the brand value of educational institutions and navigating the competitive online environment.

**Keywords:** Higher Education, Social Media, Social Media Analytics, Digital Waves, Branding, Indian Institute of Technology, India.

### **Introduction**

In the digital transformation era, social media's impact on higher education institutions has garnered increasing attention and importance. Echoing Victor Hugo's sentiment, "No power on

earth can stop an idea whose time has come," social media has emerged as a potent force in this digital age. Far from just a platform for sharing photos and status updates, social media has evolved into a multifaceted tool with significant implications for higher education. Its influence spans various dimensions, including student recruitment, engagement, academic research dissemination, alumni relations, and institutional branding. Irfan, Rasli, Sulaiman, Sami and Qureshi (2018) highlight that social media's role extends beyond entertainment, becoming a crucial resource for students in their university selection process. This highlights the expanding influence of social media in transforming the educational landscape, reflecting a broader shift toward digital platforms in various aspects of life, including education. There are currently 886 million internet users in India, representing 58 percent of the population (IAMAI & KANTAR, 2024). This aligns with the global trend, where approximately 5.24 billion people are internet users and around 63.9 percent of the worldwide population actively engages with social media platforms, as noted by Chaffey (2025). One notable trend is the predominant use of mobile phones to access the internet among almost all internet users in India. Mobile phones have become the primary gateway to digital content, including entertainment, communication, and social media.

Amid this digital revolution, social media emerges as the paramount connectivity medium, transcending boundaries to influence individuals, institutions, and organizations across sectors. As the demands of 21st-century students propel education into the realm of technology-assisted learning, social media platforms such as Facebook, Twitter, LinkedIn, Instagram, and YouTube have become the primary channels for disseminating information to targeted audiences (Zachos, Paraskevopoulou-Kollia & Anagnostopoulos, 2018; Chaffey, 2025). The substantial presence of the target audience on social media platforms presents a unique opportunity to harness this extensive user base for promotional activities and cultivate brand value for educational institutions. Effective branding can enhance enrollment, reputation, fundraising endeavors, and multifaceted outcomes. Institutions worldwide recognize the transformative power of branding and strategically engage in these efforts to attract top-tier students, faculty, researchers, and staff. It is said that "A product can be quickly outdated; a successful brand is timeless" (Aaker, 1991).

With establishing a robust institutional brand, marketing efforts seamlessly leverage the institution's users, who often become inadvertent advocates, catalyzing promotional activities. Word-of-mouth recommendations, renowned for their influence over large audiences, gain substantial momentum through social media platforms, facilitating activities such as sharing, liking, and following. There has been a significant publication on social media's influence on education. However, this paper focuses on how social media marketing contributes to building brand value for academic institutions. To contribute to a better understanding and insight for organizations to design social media advertising to attract more customers and encourage them to select their brand institutions.

### Research Objectives

- Examine the evolution of social media interaction approaches used by India's top ten Indian Institutes of Technology, also known as IITs, on various platforms.
- Analyze the differences in follower counts, likes, comments, and engagement rates amongst IITs on various social networking sites to determine the underlying variables.
- Analyze the relationship between follower count and engagement levels on IIT

Facebook profiles, focusing on audience interaction and the development of communities.

- Examine the efficiency of YouTube content initiatives, focusing on the link between the content's quality, the amount, subscribers count, and views.

- Examine Twitter's involvement in IIT audience involvement, focusing on the interaction between tweet frequency, content engagement, and community formation.

Below are the detailed aspects of our research focus:

- How do Indian Institutes of Technology (IITs) strategically engage with social media across various platforms?

- What specific disparities exist in follower counts, likes, comments, and engagement rates among IITs on social media?

- What implications does this have for understanding the impact of social media engagement within academic institutions?

- How does social media advertising impact the perceived value of the user community?

Building a solid brand for a higher education institution depends on favorable perceptions from external stakeholders, which enhances the institution's image. Equally important is generating positive impressions among internal audiences-faculty, staff, and students who contribute to a shared sense of pride in the institution (Shampeny, 2003). A university's brand represents its ability to meet student needs, build trust, and support recruitment efforts. The mention of the university's name should evoke specific associations, emotions, and a positive image (Bennett & Ali-Choudhury, 2007). This study's significance lies in its potential to offer valuable insights into the evolving landscape of higher education institutions in the digital age. By examining current social media practices, analyzing their impact, and providing recommendations for effective strategies, this research aims to enrich the field with actionable knowledge and practical guidance for higher education institutions.

## **Literature Review**

### **Impact of social media on education**

Social media has become a powerful force in today's digital age, impacting various industries, including education. Defined by Kaplan and Haenlein (2010) as an online platform for creating, sharing, and engaging with content, social media is particularly popular among younger generations (Irfan et al. 2018), reflecting its integration into daily life. This behavior offers insights into broader digital trends, shaping communication, collaboration, and access to information. In higher education, social media is vital in academic and administrative activities, facilitating seamless communication and knowledge exchange (Joosten, 2012). It has also transformed research practices, allowing researchers to publish and engage with a broader audience (Novotný, 2018). Universities use social media to enrich academic offerings, engage stakeholders, and build communities (Merrill, 2011), supporting various educational aspects, from delivering instructional materials to facilitating administrative communication (Hamid, Waycott, Kurnia & Chang, 2015). The rise of social media in education enhances teaching, learning, and collaboration, with platforms like YouTube and Twitter offering educational content and promoting digital literacy and 21st-century skills (Junco, Heiberger & Loken, 2011; Greenhow & Gleason, 2012).

Additionally, social media fosters informal learning and networking, supporting lifelong learning and alumni engagement (Carter, 2018). In higher education, social media facilitates

connections and collaboration among lecturers and students, as well as among students, compared to traditional educational systems (Everson, Gundlach & Miller, 2013). Its immediacy allows for swift action on altruistic impulses, spreading positive messages (Tuten & Solomon, 2018). Moreover, social media's multitasking capabilities enhance communication efficiency, enabling simultaneous conversations across platforms (Martin, 2015). These trends underscore social media's increasing significance in education, with the potential to transform teaching, learning, and institutional management.

### **Social media analytics tools**

Social media analytics tools are essential for analyzing data from social media platforms. They monitor brand mentions, track audience demographics, measure engagement metrics, conduct sentiment analysis, and identify trends and patterns in social media conversations (Kaplan & Haenlein, 2010). These tools are vital for understanding audience behavior and optimizing social media strategies. In marketing and business intelligence, they track campaign performance, understand customer sentiment, identify growth opportunities, guide strategy, and improve return on investment (ROI) (Smith, Morgan & Monks, 2017). They also inform decision-making in higher education, helping institutions track their online presence and understand student preferences, as well as in healthcare, monitoring public health trends, and gauging public sentiment towards healthcare policies (Huang & Li, 2018; Abedin, Babar & Abbasi, 2014). These tools have significant implications for marketing, business intelligence, and decision-making in various industries, but addressing challenges and exploring diverse applications are crucial for their continued effectiveness.

### **The role of social media in marketing and branding**

In recent years, social media has emerged as a significant influencer across various industries, including education (Hawkins & Vel, 2013). Within higher education, it plays a crucial role in institutional branding, marketing, and recruitment (Kaplan & Haenlein, 2010), becoming an essential component of strategic marketing (Kumar & Pandey, 2020). Information sharing is pivotal in establishing sustainable marketing relationships (Bbenkele, 2007), offering marketers opportunities to enhance brand value and customer satisfaction (Fornell & Johnson, 1996; Szymanski & Henard, 2001). Social Media Marketing in higher education involves platforms like Facebook, Twitter, LinkedIn, Instagram, and YouTube (Zachos et al., 2018; Chaffey, 2025), with studies indicating its significant impact on consumer decisions, especially among younger demographics (Ogunyombo, Oyero & Azeez 2017). Global student mobility trends reshape international education, creating new opportunities and challenges (Feng & Horta, 2021). In response, universities prioritize marketing strategies for student and faculty recruitment and retention (Rauschnabel, 2016). However, despite recognizing the potential of social media, there is a lack of coherent knowledge on developing effective digital marketing strategies (Hanna, 2011). The digital space is expected to play a critical role in expanding platforms for business transactions (Mishra, 2020). Yet, there remains a disparity between the positive perceptions of social media and its practical usage in education (Keenan, Slater & Matthan, 2018). Effectively establishing a brand in higher education can lead to higher enrollment and enhanced fundraising (Hanover Research, 2014). Branding in social media marketing involves building awareness, recognition, recall, and action for a brand (Gunelius, 2010). Many institutions prioritize branding efforts to foster meaningful dialogues about their

brand values with prospective students (Nguyen et al., 2020). Social media platforms have seen increased usage for brand-related activities, likely heightened by the pandemic (Knowles, Ettenson, Lynch & Dollens, 2020). Empirical evidence suggests that a robust brand gives universities advantages over competitors (Casidy, 2013). Social media strategy is integral to brand marketing, influencing educational brands (Owyang, 2009). The potency of social media can significantly shape a brand's reputation, influencing its success or failure (Kietzmann, Hermkens, McCarthy & Silvestre, 2011). Brand equity in higher education comprises brand awareness, association, perceived quality, loyalty, and market behaviour (Aaker, 1996).

### **Social media strategies for higher education institutions**

The influence of social media marketing on consumer decisions, especially among younger demographics, has been extensively studied (Ogunyombo et al., 2017). This highlights the need for tailored social media strategies that align with the preferences and behaviors of the target audience. Institutions that effectively integrate social media into their marketing can boost brand awareness, recruitment outcomes, and stakeholder relationships (Fornell & Johnson, 1996; Szymanski & Henard, 2001). The global higher education landscape is rapidly changing due to trends in student mobility and increased competition (Feng & Horta, 2021). Universities prioritize digital marketing strategies to stand out and attract top talent (Rauschnabel, 2016). However, there is a gap between recognizing social media's potential and leveraging it effectively (Hanna, 2011). Institutions need comprehensive social media strategies aligned with their marketing objectives and appealing to their target audience (Mishra, 2020; Keenan et al., 2018). Effective branding in social media marketing involves crafting a compelling narrative communicating the institution's values, strengths, and unique attributes (Nguyen et al., 2020). This narrative should be consistent across all social media platforms to reinforce the institution's brand identity and establish a robust digital presence (Hanover Research, 2014; Gunelius, 2010). In conclusion, social media has become a potent tool for higher education institutions to engage with their audience, strengthen their brand, and achieve marketing objectives. However, institutions must develop and execute strategic social media strategies aligned with broader marketing goals to maximize their impact.

### **Materials and Methods**

This research aimed to analyze publicly available numerical data on social media using Social Blade and Phylanx, which are recognized for their extensive social media statistics. Employing a quantitative analysis approach, the study integrated these advanced analytics tools with manual data collection methods to evaluate a range of metrics, including subscriber counts, likes, posts, views, followers, and engagement rates (Socialblade, 2022). The engagement rate, which measures the average interaction each social media content receives from its followers, is a key metric for evaluating content performance (Yost, Zhang & Qi, 2021). Researchers widely use Social Blade and similar platforms due to their comprehensive datasets and robust capabilities in analyzing social media trends and user behavior. Their detailed metrics and insights make them ideal for studying user growth, engagement patterns, and organizational online presence (Maresova, Hruska & Kuca, 2020; Pavlicek, Potančok & Čermák, 2020).

The analysis focused on the top Indian Institutes of Technology (IITs) across major social media platforms like YouTube, Facebook, LinkedIn, Instagram, and Twitter (now X). The selected institutions IIT Madras, IIT Delhi, IIT Bombay, IIT Kanpur, IIT Kharagpur, IIT

Roorkee, IIT Guwahati, IIT Hyderabad, IIT Varanasi, and IIT Dhanbad—were chosen based on their designation as Institutes of National Importance in technical education, as recognized by the National Institutional Ranking Framework (NIRF). The NIRF is India's premier higher education ranking system. It evaluates institutions based on parameters such as "Teaching, Learning and Resources," "Research and Professional Practices," "Graduation Outcomes," "Outreach and Inclusivity," and "Perception" (National Institutional Ranking Framework, 2022). The academic excellence, significant research contributions, and global recognition of these IITs make them ideal subjects for examining the impact of social media in the context of leading technical institutions (Krishna & Chandra, 2019).

The research methodology began with systematically compiling social media handle names for the selected IITs from their official websites. This initial phase involved comprehensive manual data collection to ensure coverage of all relevant handles, particularly those inaccessible online. The compiled handle names were then entered into Social Blade and Phylanx, two advanced social media analytics tools known for their extensive datasets and analytical capabilities. These tools facilitated the collection of detailed statistics and growth metrics across various social media platforms. Key parameters gathered included handle names, number of followers, posts, likes, views, engagement rates, and average comments. This approach was designed to establish a robust dataset that accurately reflects the target institutions' active social media presence and performance. Additional manual data collection efforts were undertaken to address potential data, especially for platforms not fully covered by Social Blade and Phylanx. This supplementary data ensured the dataset was as complete and representative as possible. The collected data underwent a rigorous process of systematic tabulation and analysis. Statistical methods were employed to quantify and interpret the metrics, while visual representations, such as charts and graphs, were used to highlight trends and patterns. This comprehensive analysis evaluated the effectiveness of the selected IITs' social media utilization, branding, and marketing strategies. It is essential to acknowledge the limitations of this study, including its exclusive focus on the top 10 IITs, potential variations in data accuracy due to the availability and reliability of information from social media platforms, and the constraints of the research period. To ensure the reliability of the findings, results were cross-verified using multiple sources.

## Results

The collected data is presented in tabular format (Table 1), encompassing various parameters such as handle name, number of followers, tweets, views, subscribers, posts, likes, engagement rate, and average comments.

Table 1  
Facebook usage by Top 10 IIT institutes

Institute Name	Handle	Created on	Followers	Likes	Talking about this page	Reviews
IIT Madras	reachiitm	21-02-2013	312.5K	2,99,881	9,795	NA
IIT Bombay	iitbombay	11-11-2011	108K	92,135	1,258	4.7 (976 Reviews)
IIT Delhi	IITDelhi	07-06-2019	49K	41,766	875	5.0 (53 Reviews)
IIT Kanpur	iitkanpur	23-08-2015	40K	36,239	1,659	4.6 (295 Reviews)
IIT Kharagpur	iitkgp	07-07-2008	374K	3,65,028	892	4.7 (5,623 Reviews)
IIT Roorkee	iitroorkee.icc	12-06-2015	44K	40,494	187	NA
IIT Guwahati	iitgwt	24-08-2011	172K	1,69,761	686	4.7 (1,777 Reviews)
IIT Hyderabad	iithyderabad	11-04-2010	14.4K	14,411	98	4.6 (36 Reviews)
IIT Varanasi	pr.iitbhu	10-06-2011	19.6K	19,690	17	4.9 (86 Reviews)
IIT Dhanbad	iitismdhn	06-04-2018	12K	11,080	123	5.0 (8 Reviews)

Subsequently, the tabular data is visualized in line charts to provide meaningful insights into the usage of these social media platforms among the selected institutions (Figure 1).

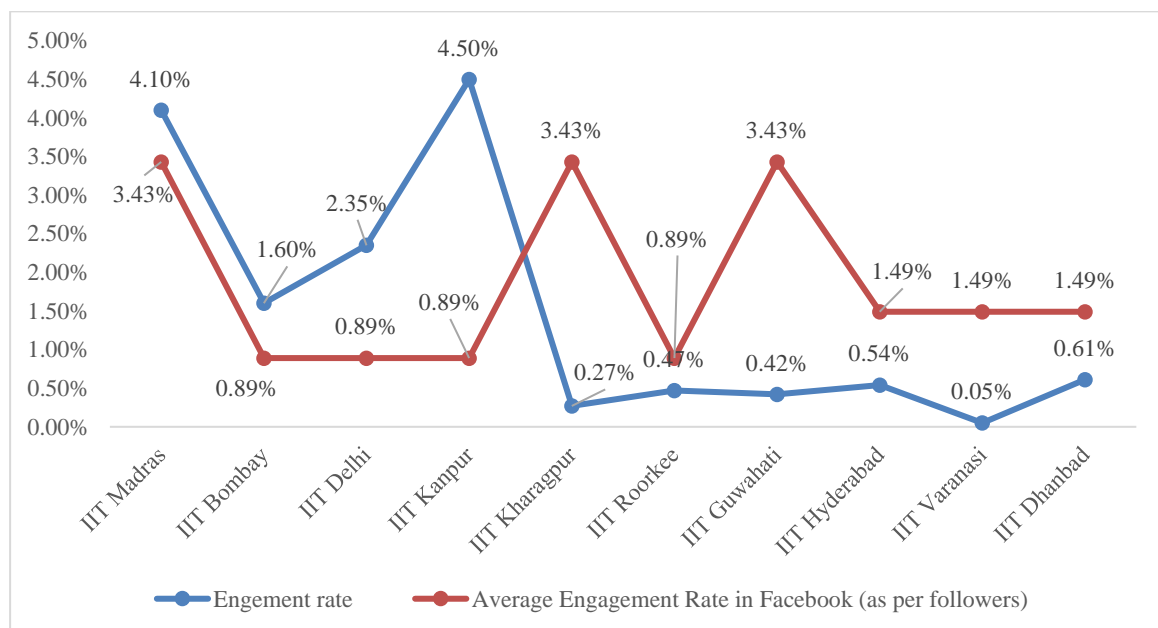


Figure 1: Facebook engagement rate by top 10 IIT institutes

The graphical data presents a notable contrast in Facebook engagement among three

prominent Indian Institutes of Technology (IITs). Notably, IIT Kharagpur emerges as the leader with an impressive 374,000 followers, followed closely by IIT Madras with 312,500 followers, while IIT Dhanbad lags considerably with only 12,000 followers. This discrepancy underscores each institution's diverse approaches to cultivating its online audiences. Despite the variations in follower count, the data indicates a relatively high user engagement across all IITs on Facebook. While Twitter is a discussion platform, Facebook remains the primary channel for university-generated content dissemination, as documented in prior research (Bélanger, Bali & Longden, 2014). The article suggests that academic-oriented Facebook groups play a vital role in student communication and learning activities, albeit not extensively (Aleksandrova & Parusheva, 2019). Analysis of Facebook likes further reveals a strong correlation between follower count and likes for IIT Kharagpur and IIT Madras, which aligns with previous studies (Lund, 2019). Conversely, IIT Dhanbad garners the lowest likes, aligning with its lower follower count. According to Dixon (2024), Facebook, the first social network to surpass one billion registered accounts, now has over three billion monthly active users. Meta Platforms, which owns Facebook, WhatsApp, Facebook Messenger, and Instagram—each with over one billion monthly active users—reported about four billion monthly users across its core apps in Q3 2023. This highlights the critical role of effective social media utilization for institutional outreach and engagement, emphasizing how follower count impacts user interaction and the varied online strategies used by educational institutions.

### Instagram

Table 2 presents a comprehensive analysis of Instagram engagement across several Indian Institutes of Technology (IITs), illuminating the efficacy of their online presence and audience interaction tactics. Notably, IIT Delhi emerges as the leader with a substantial follower count of 141,000, indicating its strong appeal to Instagram users. However, this research reveals that a high follower count does not necessarily correlate with engagement, as evidenced by IIT Dhanbad's remarkable engagement rate of 11.61% despite having fewer followers. This underscores the significance of quality content and interaction strategies in fostering audience engagement. Additionally, IIT Bombay stands out with the highest average number of comments at 28, highlighting its active Instagram community. Conversely, IITs such as Kanpur, Kharagpur, Roorkee, and Hyderabad trail behind in both followers and average comments, indicating lower engagement levels.

Table 2

*Instagram Usage by Top 10 IIT Institutes*

Name of the Institute	Handle	Followers	Posts	Average Likes	Average Comments
IIT Madras	reachiitm	53.6K	2,721	660	3
IIT Bombay	iitbombay_ecell	58.4K	1,156	991	28
IIT Delhi	iitdelhi	141K	374	5,410	22
IIT Kanpur	iit.Kanpur	34.2K	1,125	387	1
IIT Kharagpur	iit.kgp	16.1K	1,198	585	1
IIT Roorkee	iitroorkee	23.4K	874	403	1
IIT Guwahati	iitgwt	16.6K	1,063	655	2
IIT Hyderabad	iithyderabad	7.4K	2,236	91	1
IIT Varanasi	iitbhu.varanasi	17.3K	190	597	2

Name of the Institute	Handle	Followers	Posts	Average Likes	Average Comments
IIT Dhanbad	iit.ism	12.7K	366	2,576	22

Notably, IIT Dhanbad's success in engagement is evident through its relatively high likes and comments despite its lower follower count. These findings underscore the varied approaches of different IITs on Instagram and their differing levels of popularity and audience interaction. It underlines that beyond follower count, content quality and engagement strategies are pivotal in social media success for academic institutions. This underscores the complexity of social media strategies in academia, requiring careful consideration to connect with audiences on platforms like Instagram effectively. Additionally, the research contextualizes the significance of Instagram over the past decade, emphasizing its appeal to younger demographics as a leading photo-sharing platform (Desai & Han, 2019). It is also evident that Instagram has maintained a strong engagement rate even though it has a relatively low number of followers as compared to Facebook (Figure 2).

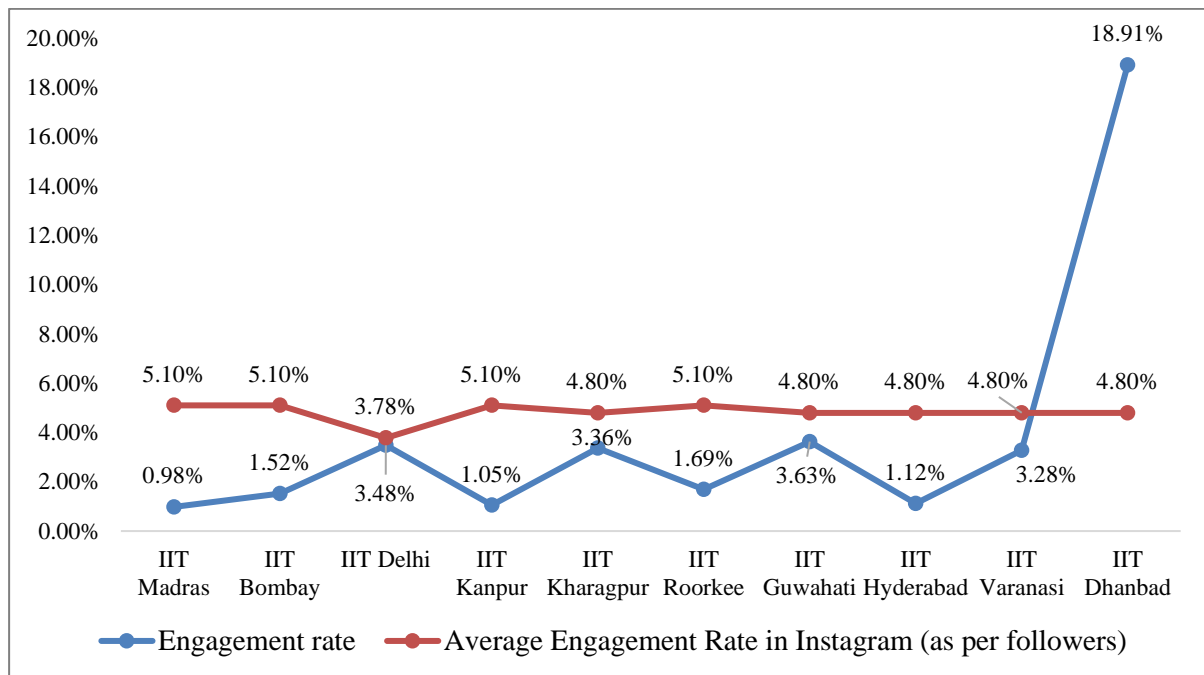


Figure 2: Instagram Engagement Rate by Top 10 IIT Institutes

## YouTube

The findings from the analysis of YouTube engagement strategies among Indian Institutes of Technology (IITs) provide valuable insights into their diverse approaches and potential implications for online audience outreach. Notably, IIT Bombay and IIT Madras emerge as leading performers in YouTube subscribers, with 51,300 and 35,500 subscribers, respectively, highlighting their success in attracting and retaining a substantial YouTube following. Conversely, IIT Dhanbad trails significantly with only 4,100 subscribers, indicating notable differences in their ability to engage online audiences. Moreover, examining video content generation reveals IIT Kanpur's leadership with 727 videos, showcasing an active content-sharing approach. However, despite fewer videos, the comparatively lower subscriber counts of IIT Madras suggest the critical importance of content quality over quantity. Additionally, the

analysis of YouTube views places IIT Madras at the forefront with 2,299,757 views, closely followed by IIT Bombay with 2,037,055 views, while IIT Dhanbad lags with only 213,920 views (Table 3). This disparity in viewership underscores varying levels of online engagement and outreach effectiveness among the IITs, emphasizing the necessity of crafting compelling content and engagement strategies to connect with a broader online audience effectively.

*Table 3*  
*YouTube Usage by Top 10 IIT Institutes*

Institute Name	Handle	Created on	Subscribers	Videos Posted	Video Views	Average Interaction per Video
IIT Madras	iitmadrasofficial	29-01-2013	35.5K	427	22,99,757	29
IIT Bombay	IITBombayOfficialChannel	16-09-2006	51.3K	227	20,37,055	62
IIT Delhi	IITDelhiOfficial	08-07-2016	18.8K	193	8,79,225	18
IIT Kanpur	iitkanpurofficial	28-12-2013	10.1K	727	17,84,202	24
IIT Kharagpur	iitkharagpuronline	17-11-2011	21.8K	168	12,43,600	217
IIT Roorkee	iitroorkeeofficialchannel	20-06-2015	9.1K	329	5,67,041	13
IIT Guwahati	iitguwahatiofficial	14-02-2020	7.2K	148	3,80,704	19
IIT Hyderabad	iithyderabadofficial	30-07-2018	6.2K	355	4,76,101	13
IIT Varanasi	outreachclubiitbhuvanasi	13-06-2017	6.2K	116	11,95,441	83
IIT Dhanbad	iitismdhanbad1926	06-04-2018	4.1K	139	2,13,920	134

Even though YouTube is not primarily intended for educational purposes, its versatile and diverse user-generated content has made it widely used in educational contexts (Allgaier, 2019). The leading role of YouTube in user engagement among these academic institutions has underlying reasons. The decision to use YouTube or Facebook as a platform hinge on your target audience, the type of content you produce, your objectives, and your overall strategy. Each platform has distinct advantages and features. Your choice of platform can also be affected by factors like your industry, audience demographics, and brand identity (Ahmad, 2024). Research indicates that YouTube is extremely popular among students for educational purposes, with higher engagement rates than other social media platforms (Figure 3).

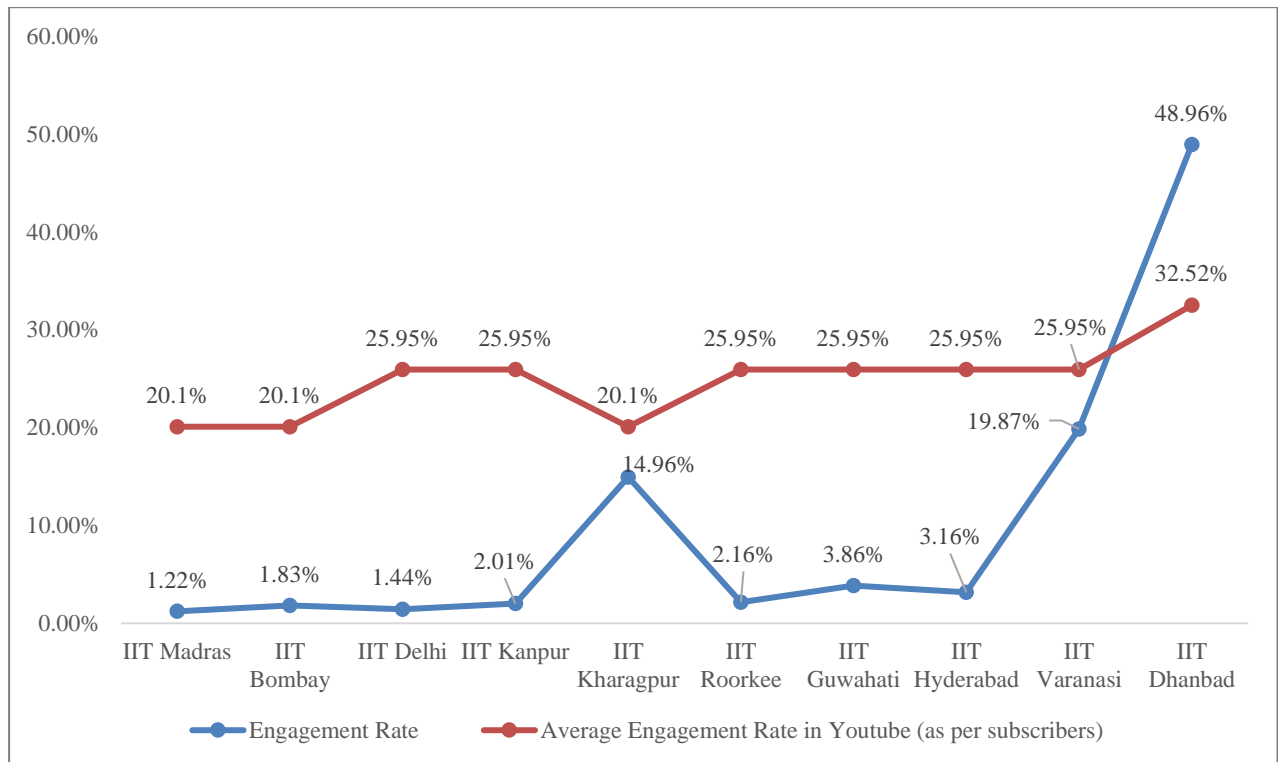


Figure 3: YouTube Engagement Rate by Top 10 IIT Institutes

Over the past decade, YouTube has emerged as the leading video-based social network in university education, providing diverse and accessible learning materials through various educational channels, tutorials, and lectures (Černá & Borkovcová, 2020; Shoufan & Mohamed, 2022). Its interactive features, such as comments, likes, and shares, promote high engagement and active participation, transforming how students access and interact with educational content in higher education. This research also confirms that YouTube's engagement rate is significantly higher than that of other social media platforms within these institutions.

### Twitter (renamed as X)

This research finding highlights Twitter's prominent role as a preferred platform for information dissemination among Indian Institutes of Technology (IITs). Notably, IIT Bombay leads with the highest number of Twitter followers, reaching an impressive 208,200, followed closely by IIT Madras. In contrast, IIT Dhanbad records the lowest follower count at 18,300. A detailed examination of Twitter activity across various IITs reveals significant disparities. IIT Roorkee is the most active institution, with 8957 tweets, closely followed by IIT Madras, indicating robust engagement despite varying follower counts. While Twitter is a discussion platform, Facebook remains the primary channel for university-initiated posts, aligning with prior research observations (Bélanger et al., 2014). Conversely, IIT Varanasi demonstrates the lowest Twitter engagement, with only 474 tweets (Table 4). This underscores IIT Roorkee's effective audience engagement despite its comparatively lower follower count. Interestingly, despite IIT Bombay's substantial follower base, it exhibits the lowest tweet frequency, posing a paradox worthy of further investigation. These findings underscore the varied Twitter engagement strategies among IITs and highlight the need for deeper exploration into factors

influencing tweet frequency and audience interaction.

Table 4  
Twitter Usage by Top 10 IIT Institutes

Institute Name	Handle	Created on	Followers	Tweets	Average Likes	Average Retweets
IIT Madras	iitmadras	29-01-2013	174.7K	8,041	8	288
IIT Bombay	iitbombay	03-02-2009	208.2K	3,317	103	52
IIT Delhi	iitdelhi	30-03-2009	135.1K	3,663	838	246
IIT Kanpur	iitkanpur	01-09-2011	119.3K	7,878	15	10
IIT Kharagpur	iitkgp	03-08-2012	111.4K	4,789	24	3
IIT Roorkee	iitroorkee	15-06-2015	56.9K	8,957	11	20
IIT Guwahati	iitguwahati	15-01-2012	75.2K	6,811	13	13
IIT Hyderabad	iithyderabad	23-08-2014	45.2K	4,384	10	15
IIT Varanasi	iitbhu_varanasi	27-02-2020	29.7K	474	9	518
IIT Dhanbad	iitism_dhanbad	05-04-2018	18.3K	2,253	4	98

This study shows that Twitter engagement rates are lower than other social media platforms (Figure 4). Humanities scholars tend to share scientific content on Twitter, yet their engagement reflected in likes, retweets, and comments remains notably low (Guenther, Wilhelm, Oschatz & Brück, 2023). This suggests a disconnect between the content shared and the interaction it receives, indicating a need for further research into scholarly communication and engagement in the Humanities. Future studies should explore this topic in greater depth.

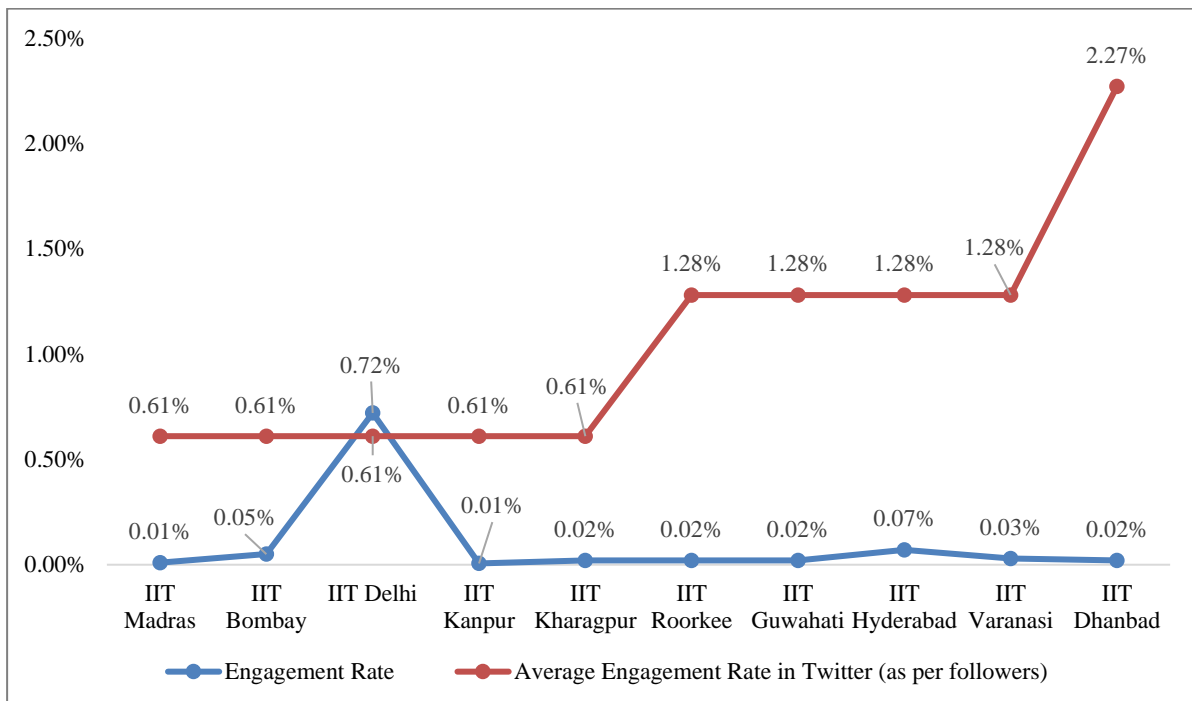


Figure 4: Twitter (X) Engagement Rate by Top 10 IIT Institutes

### LinkedIn

LinkedIn has emerged as a prominent social media platform for students, faculty, and both employed and unemployed individuals. As indicated in Table 5, IIT Bombay stands out with

the highest number of LinkedIn followers, totaling 420,000, closely trailed by IIT Madras, which garners 326,000 followers on the platform. In contrast, IIT Hyderabad exhibits the lowest number of LinkedIn followers, with a modest count of 50,000. These statistics underscore the varying degrees of engagement and outreach among these Indian Institutes of Technology on LinkedIn, reflecting diverse strategies and priorities in leveraging this professional networking platform. This research delves into the social media impact of the top ten Indian Institutes of Technology (IITs), utilizing data extracted from their official websites. The study scrutinizes the active presence of these institutions across multiple platforms, including Facebook, Instagram, Twitter, YouTube, and LinkedIn. Noteworthy findings include IIT Dhanbad's remarkable engagement rate on Instagram and correlations between Facebook activity and follower counts.

Additionally, IIT Delhi leads in YouTube views, while IIT Kanpur excels in the frequency of posts. IIT Bombay emerges as a frontrunner in LinkedIn activity, whereas IIT Roorkee exhibits a unique profile with a lower follower count but a high engagement rate. Conclusively, this research identifies IIT Hyderabad as lagging significantly behind its counterparts in overall social media impact among the top IITs. It also lags in all the social media platforms: Facebook, Instagram, Twitter, YouTube, and LinkedIn. Scholars increasingly utilize social networks like LinkedIn to enhance teaching, research, and professional development, facilitating collaboration, research dissemination, and networking (Romero-Hall, Gomez-Vasquez, Forstmane, Ripine & Da Silva, 2024). The study found that six of the top ten institutes maintain a strong presence on these networks, emphasizing their role in fostering academic connections and career advancement. This widespread adoption underscores the significant contribution of these platforms to academic and professional growth.

*Table 5*  
*LinkedIn Usage by Top 10 IIT Institutes*

Institute Name	Handle	LinkedIn followers	Number of Alumni
IIT Madras	reachiitm	326K	78K
IIT Bombay	indian-institute-of-technology-bombay	420K	82K
IIT Delhi	iitdelhi	282K	76K
IIT Kanpur	indian-institute-of-technology-kanpur	289K	52K
IIT Kharagpur	indian-institute-of-technology-kharagpur	202K	73K
IIT Roorkee	indian-institute-of-technology-roorkee	155K	53K
IIT Guwahati	iitg	90K	28K
IIT Hyderabad	iithyderabad	50K	9K
IIT Varanasi	iitbhu-varanasi	74K	38K
IIT Dhanbad	iitism	54K	30K

### Discussion

The social media engagement strategies used by India's top 10 Indian Institutes of Technology (IITs) are constantly evolving, as this study reveals across various platforms, underlining the paramount importance of establishing and maintaining a compelling online presence and fostering meaningful audience interactions in the digital age. The data demonstrates significant disparities in follower counts, likes, comments, and engagement rates among the IITs. IIT Kharagpur's dominance on Facebook emphasizes the value of cultivating

a substantial online community. The correlation between follower counts and engagement is evident, highlighting the impact of an extensive digital following. Moderate-to-strong correlations were observed between the number of Facebook followers and levels of interactions on universities' Facebook pages (Lund, 2019). Regarding Instagram, while IIT Delhi boasts many followers, its engagement rate is relatively average.

In contrast, IIT Dhanbad attracts more active participation and interaction with its posts, resulting in the highest engagement rate, even though it has the second-lowest followers. This shows that the quality of what IIT Dhanbad shares and how it engages with its audience is really important in getting people to be more involved. Meanwhile, IIT Bombay's exceptional average comments indicate an active and engaged community.

On YouTube, the achievements of IIT Delhi and IIT Madras in subscribers underscore the importance of content quality and quantity. At the same time, the disparities in viewership reveal the necessity of compelling content and engagement strategies. While having a subscriber count almost close to that of IIT Delhi and even a higher number of video posts, IIT Madras lags significantly in video views, with IIT Delhi having three times as many views. This observation highlights IIT Delhi's practical influence on its audience, shedding light on factors such as content quality, consumer interest, and the formulation of strategies aimed at capturing the attention of its consumers. It's essential to recognize that posting more frequently doesn't necessarily guarantee more attention from consumers, especially if the less frequent posts are more appealing. What matters is the quality of the content rather than the quantity (Peruta & Shields, 2016).

Looking at how Indian Institutes of Technology (IITs) use Twitter, we see some interesting things. IIT Roorkee tweets the most (8,957), while IIT Varanasi tweets the least (only 474). Strangely, IIT Bombay, even though it has the most followers, has a relatively low number of tweets, which is curious and needs more investigation. This shows that IIT Roorkee is good at engaging its audience. The results of this study demonstrate that social media platforms are increasingly utilized to attract current and potential clients (Maresova, Klimova & Tuček, 2015). High user engagement allows institutions to attract prospective users (Sivakumar, Jayasingh & Shaik, 2023). Social networking is a valuable tool for information dissemination and student engagement, although the type of media used does not always correlate with increased engagement (Soares, Limongi & Cohen, 2022). Additionally, social media remains a vital channel for promoting advertising campaigns and communicating with students (Salem, 2020). Academic Institute posts primarily focus on campus news and events, reinforcing the importance of self-promotion to build an audience (Bélanger et al., 2014).

Our research findings underscore the importance of effective social media utilization for institutional outreach and engagement, highlighting the impact of follower count on user interaction. It is also evident that Instagram has maintained a strong engagement rate despite having a relatively lower follower count than Facebook among these institutions. Additionally, the prominent role of YouTube in user engagement among these academic institutions is noteworthy. According to Ahmad (2024), Choosing YouTube and Facebook as a platform hinge on factors such as the target audience, content type, objectives, and overall strategy. This study indicates that Twitter engagement rates are generally lower than other social media platforms. Specifically, scholarly content in the Humanities tends to receive fewer interactions on Twitter, such as likes, retweets, and comments (Guenther et al., 2023). This suggests a disconnect between shared content and user engagement, highlighting the need for further

research into scholarly communication and engagement within the Humanities. Future studies should focus on identifying strategies to enhance visibility and interaction on this platform. The significant presence of LinkedIn among the top Indian Institutes of Technology (IITs) reflects an increasing trend of scholars utilizing the platform for teaching, research, and professional development. The active engagement of six of the top ten institutes on LinkedIn underscores its critical role in academic networking and career advancement (Romero-Hall et al., 2024). Overall, this research explored the penetration of social media within higher education institutions (HEIs) and underscored the potential for HEIs to leverage these platforms effectively. Applying the insights gained, HEIs can enhance their marketing strategies, establish a distinct brand presence in a competitive environment, and communicate more effectively with their target audiences (Salem, 2020). Harnessing the power of social media is essential for HEIs to engage their communities and achieve their institutional objectives.

### Conclusion

This study set out to investigate the social media engagement strategies of India's top 10 Indian Institutes of Technology (IITs), focusing on their online presence across platforms like YouTube, Facebook, LinkedIn, Instagram, and Twitter (now X). The primary objectives were to analyze the effectiveness of their social media strategies, identify key engagement metrics, and understand the role of social media in enhancing institutional visibility. The findings revealed distinct engagement patterns across platforms. YouTube emerged as the leading platform for user engagement, with IIT Bombay and IIT Madras attracting the most subscribers and views. Instagram displayed high engagement rates, notably with IIT Dhanbad achieving a remarkable 11.61% engagement despite a lower follower count. Facebook, while having the highest follower numbers, exhibited lower engagement rates. Twitter served as a platform for discussions rather than high engagement, with IIT Roorkee being the most active in terms of tweet frequency, but IIT Delhi has a high engagement rate. LinkedIn demonstrated its growing importance for academic networking, with IIT Bombay leading in followers. These insights underscore the significance of tailored content and platform-specific strategies for maximizing engagement. Institutions prioritizing quality content over quantity tend to achieve better interaction rates (Peruta & Shields, 2016). Integrating effective social media strategies is crucial for enhancing higher education institutions' online presence and engagement. As digital platforms continue to shape academic communication, embracing platform-specific strategy will be essential for fostering meaningful connections and amplifying institutional impact in the ever-expanding digital landscape.

However, this research is not without its limitations. The reliance on content analysis as the primary method for data collection restricted the depth of understanding regarding the broader influence of social media across all IITs. The absence of qualitative methods prevented a more nuanced exploration of these platforms' multifaceted impacts. Additionally, using "Social Blade and Phylanx" as data collection tools introduced potential variability, acknowledging the possibility of discrepancies in the data obtained. To address these limitations, future studies are encouraged to adopt more comprehensive methods and tools to capture a deeper understanding of social media's role in institutional branding and engagement. Investigations into user demographics, such as category, gender, age, and experience, could offer richer insights into audience behavior. Expanding the research scope to include all IITs, rather than limiting the analysis to the top 10, would provide a more holistic view, enabling the development of broader

engagement strategies. Furthermore, exploring the impact of social media on students' academic and personal growth could reveal additional benefits for institutional visibility and community building. By addressing these aspects, future research can provide a more comprehensive understanding of social media's role in shaping higher education institutions' digital presence and engagement.

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