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Devotion in the Digital Age: What Drives Engagement with Official Temple Content on YouTube in India

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Abstract - Indian Temples increased greatly over the recent past, yet there is little research on factors underlying devotees' engagement with this content. Previous work on religious videos on YouTube has either broadly surveyed all content or qualitatively described online darshan, without use of actual data to explicitly model engagement with the official channels of Indian temples. Based on consumer engagement theory and uses and gratifications theory, this research examined the effects of content format, timing of festival or event, video duration, language of video title and day of uploading on views and engagement rate. Views and engagement rate of a sample of 8,511 videos posted between January and September 2026 on 14 temple channels of 10 Indian states and Union territories were collected from YouTube Data API v3 and analysed by multiple linear regression with control variables of video age and channel size. Shorts and live streams received 162% and 108% more views than recorded long videos, but video engagement rate for Shorts and live streams was 4% and 33% lower than recorded long videos. Same video type released at festivals received 23% more views with no change in engagement rate, and videos released on weekends had 14% fewer views. With little research on Indian temples' official YouTube content, this study uniquely and empirically viewed temples as non-profit religious service brands and used actual YouTube data to examine different content formats and release timing. Finding related to the conference theme of Digital Economy, Business Analytics and Strategic Management will assist temple trusts, destination marketing organisations and digital marketers in selecting formats and timing.

Key-words: Digital Marketing, Consumer Engagement, YouTube, Religious Marketing, Temple Content

INTRODUCTION

India is the biggest market for YouTube. In January 2025, YouTube's advertising audience in India was approximately 491 million users, nearly double the number of users in the United States, which has the second highest number of users (Data Reportal, 2025). In India, YouTube Shorts was introduced in 2020, a year before the global launch, and YouTube's CEO reported that Shorts had "trillions of views" in India by 2024 (Gutelle, 2024a). Indians turn to YouTube for entertainment and information, and an increasing proportion of what they are watching is religious.

Religion, as a contributor to the economy The big religion industry in India If religious tourism was a country, it would be the third largest in the world- over 105 million trips to religious sites in 2020 increased to 1,439 million in 2022 (KPMG in India & PHDCCI, 2025). An estimate in the same report suggested that spiritual tourism could be worth almost USD 59 billion by 2028. Large temples are not only shrines but they are also service organisations where they cater to pilgrims, donations, festivities, rituals et cetera, and many devotee visits are via the internet.

The COVID-19 pandemic moved most of this congregational worship online. As shrines closed down in 2020, temple trusts and the state endowment departments began live streaming pujas, aartis and festivals, allowing devotees to 'come darshan' from home (Mukherjee, 2022). The Government of India launched Temple 360 portal in 2022, a platform for 'online darshan' of the 12

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Jyotirlingas and the four Dhams. Some of India's biggest trusts such as Tirumala Tirupati Devasthanams, Shree Kashi Vishwanath Mandir Trust, Shree Somnath Trust and Shri Saibaba Sansthan Trust established official YouTube channels streaming live darshan, posting ritual videos and short clips online every day. The 14 trust accounts examined in this study uploaded 8,511 videos between 01/01/2026 and 09/30/2026, which garnered over 60 million views.

Content decisions few temple trusts have evidence to inform The trusts need to decide between live streams, recorded videos and Shorts, they need to decide how long videos should be, they need to decide whether to use a regional language or English, they need to decide what time of day to upload. Digital religion research describes darshan online predominantly through ethnography and qualitative research (Scheifinger, 2009; Karapanagiotis, 2013; Chakraborty & Biswal, 2025), engagement with youtubes through quantitative analysis, with a focus on brands, influencers and entertainment (Khan, 2017; Munaro et al., 2021; Violot et al., 2024). The author did not find any study that quantitatively models factors contributing to engagement with the official youtubes of Indian temples.

This paper considers temples as non-profit religious service brands and employ data from the platform obtained through the YouTube Data API v3. It investigates the effect of content format, festival timing, video duration, title language, and day of upload on reach (views) and participation (engagement rate). The paper uses consumer engagement theory (Brodie et al., 2011) and considers the Uses and gratifications theory (Katz et al., 1973;Khan, 2017). In line with the conference theme - Digital Economy, Business Analytics and Strategic Management, the outcomes provide temple trusts, religious tourism board, and digital marketers direction on formats to focus upon and when to publish for reach and participation.

LITERATURE REVIEW

1. Customer Engagement: Conceptual Domain, Fundamental Propositions and Implications for Research
(Brodie, Hollebeek, Jurić & Ilić, 2011)
Publication: Journal of Service Research
Year: 2011

This conceptual paper explores the engagement literature and defines customer engagement as an active, idiosyncratic, and context-dependent psychological state experienced by the customer that results from interactive, co-creative encounters with a focal object such as a brand. Based on engagement as a multidimensional construct with a cognitive, emotional and behavioural component, the authors formulate five basic propositions, one of them being the varying level of engagement intensity, depending on the situation. The paper provides the theoretical ground for distinguishing participation and exposure, which helps to explain why this study uses two engagement indicators: views as an indicator of reach and likes and comments per view as an indicator of behavioural engagement.

2. Customer Engagement Behavior: Theoretical Foundations and Future Research Directions
(van Doorn, Lemon, Mittal, Nass, Pick, Pirner & Verhoef, 2010)
Journal: Journal of Service Research
Year: 2010

The conceptual paper conceptualises customer engagement behaviour as a customer's behavioural manifestation toward a brand or firm that is beyond purchase and driven by motivational forces. Behaviours mentioned in the study include positive word of mouth, recommendations, helping other customers and writing reviews. The paper separates engagement from buying, making the construct applicable to organisations that do not sell anything. This study provides guidance for the current research by suggesting that likes and comments are appropriate indicators of engagement behaviour, and by demonstrating that temples can foster engagement as a non-commercial brand without a sale.

3. Consumer Engagement within a Virtual Brand Community: An Exploratory Study
(Brodie, Ilic, Juric & Hollebeek, 2013)
Journal: Journal of Business Research
Year: 2013

Employing netnography in an online brand community, this study investigates the evolving path of consumer engagement. The authors conclude that engagement is multi-dimensional and dynamic, and is realised through sub-processes of sharing, learning, co-developing and socialising, at different intensity levels. Consumers are likely to remain in low-intensity watch-and-read mode for a long time period before acting at high intensity level. This study helps explain why a large audience can have a low engagement rate: many temple viewers could be in lowintensity watch-and-read mode.

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4. Consumer Brand Engagement in Social Media – A Conceptualization, Measurement Scale Development and Validation
(Hollebeek, Glynn & Brodie, 2014)
Journal: Journal of Interactive Marketing
Year: 2014

A 10-item measure of social media consumer brand engagement is constructed and tested by a series of survey studies, employing structural equation modelling. They find three factors to comprise the scale: cognitive processing, affection, and activation. Only the activation factor manifests in platform-visible actions, which is likes and comments (awareness and devotion does not show as they evoke internally). This study echoes the present research in conceptualising the engagement rate as a measure of activation, and corroborates the reason the limitation that platform data cannot measure those mentally-and-devotionally invoking parts of engagement.

5. Popularity on Brand Fan Page Posts: An Empirical Study on the Effectiveness of Social Media Marketing
(de Vries, Gensler & Leeflang, 2012)
Journal: Journal of Interactive Marketing
Year: 2012

The paper investigates features of brand posts that lead to popularity on Facebook fan pages. Analyzing 355 posts from 11 international brands and using OLS regressions of log-transformed likes and comments, the authors find that visually stimulating and interactive features of posts increase both likes and comments, but asking a question increases comments. For this research, it provides a methodological template for use of log-transformed OLS on platform data, and a precedent for one feature having differential effects on various engagement markers.

6. Uses and Gratifications Research
(Katz, Blumler & Gurevitch, 1973)
Journal: Public Opinion Quarterly
Year: 1973

This seminal article introduces the uses and gratifications approach to media research. The authors suggest that audiences are active, and select media to fulfill their social and psychological needs, so the question academics should ask is what do people do with media rather than what media do to people. This paradigm has been adopted and extended to most new media, including social media. This reference informs the current study as it offers the theoretical basis for what might drive devotees to select different formats to meet various needs (e.g., presence with live darshan, instantaneous blessing with Shorts).

7. Social Media Engagement: What Motivates User Participation and Consumption on YouTube?
(Khan, 2017)
Journal: Computers in Human Behavior
Year: 2017

Applying uses and gratifications theory to YouTube, the survey study distinguishes between two forms of engagement: participation (consisting of liking, disliking, commenting, sharing and uploading) and consumption (viewing videos and reading comments). The author observes that various motives (entertainment, information and social connection) each predict different types of engagement behaviour. The study is directly relevant to present research, which measures participation through engagement rate and consumption through views, and hypothesises the effects of temple content formats on both.

8. Social Motivations of Live-Streaming Viewer Engagement on Twitch
(Hilvert-Bruce, Neill, Sjöblom & Hamari, 2018)
Journal: Computers in Human Behavior
Year: 2018

2,227 Twitch users completed this study, which examined an eight-factor uses and gratifications model with multiple and ordinal regressions. Engagement with live streams was accounted for by social interaction, sense of community, meeting new people, entertainment, information seeking and lack of external support, and viewers who favored smaller channels were more social in their motivations. This study demonstrates how social Twitch viewing is and is useful as a comparative resource, as channel devotees exhibited fewer joiners.

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9. The Interplay between Faith and Faithless in a Networked Society
(Campbell, 2012)
Journal: Journal of the American Academy of Religion
Year: 2012

The present study was inspired by this theoretical discussion of "networked religion", based on five characteristics: networked community, storied identities, shifting authority, convergent practice, and a multisite reality. Campbell (2010) states that religion now flows through online and offline realities, and that religious institutions should reestablish their authority within the network. This discussion inspires the present work in identifying the temple's official channel as an institution that puts its authority online, and in clarifying how offline temple activities influence online viewing.

10. Jagannath Temple & Darshan Online
(Scheifinger, 2009)
Journal of Contemporary Religion
Year: 2009

This paper looks at the way the Jagannath Temple in Puri is represented on the internet and how one can do darshan through the internet. By finding that it is not the darshan that diminishes the significance of the temples and the gods, Scheifinger finds that online darshan does not diminish the significance of temples and gods, which gives new insights into the topic of globalisation and the destruction of local temples and gods. This article provides the current research with some ideas for the interpretation that devotees watch videos of temples only to have darshan of the god, which can be seen from the high number of views but the low number of likes and comments per views.

11. Cyber Forms, Worshipable Forms: The Hindu Devotional Perspective on the Ontology of Cyber-Gods and -Goddesses
(Karapanagiotis, 2013)
Journal: International Journal of Hindu Studies
Year: 2013

This paper explores how temple devotees view images of deities displayed in the projection throughout the temple. According to Karapanagiotis, devotees also had little difficulty moving their puja online because darshan is a visual activity of looking at and being looked at by the deity, thus images seen on the screen can be worshipped as forms of the deity. This paper also offers an explanation for the data pattern of high viewing and low commenting on temple channels: seeing is a visual activity, and it is logical to watch more than to write.

12. A Digital Ethnography of the Diasporic Durga Puja Festivals in Pandemic Britain
(Mukherjee, 2022)
Journal: Religion
Year: 2022

Drawing on digital ethnography, the paper traces a case study of UK-based Hindu Bengali communities who hosted blended Durga Puja festivities in Autumn 2020. Pujas were performed by a limited number of people in a COVID "bubble" who streamed the pujas free of charge and devotees participated in anjali from their living rooms. It demonstrates how streamed festival rituals generated feelings of being together for a geographically dispersed assemblage of spectators. It contributes to our current research on both festival live streams and festival timing because it demonstrates how festival streams draw in remote viewers who participate by watching the pujas.

13. Sacred Narratives and Virtual Spaces A Triangulated Qualitative Inquiry into Digital Darshan and Mythological Experience at the Maha Kumbh
(Chakraborty & Biswal, 2025)
Published in: Tourism Recreation Research
Year: 2025

The paper draws on phenomenological interviews, silent ethnographic observation and analysis of digital discourse to explore how the devotees at the Maha Kumbh experience devotion via the digital media. The paper theorizes digital darshan and presents a typology of engagement beginning with surface engagement. It associates digital devotion with religious tourism. The study is relevant for the present research in that it presents more recent India specific evidence for the widely dispersed but shallow engagement created around mass-reach devotional content around festivals.

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14. An Empirical Study into the Role of Market Orientation on Church Engagement
(Mulyanegara, Tsarenko & Mavondo, 2010)
Publication: International Journal of Nonprofit and Voluntary Sector Marketing
Year: 2010

This paper employs a survey-derived structural model of the relationship between market orientation and church memberships. The researchers discover that market orientation has a positive association with church memberships, but a competitor orientation is negatively associated with church memberships. This paper is relevant to our research in that it also considers temple trusts as service organisations, with audience-centred choices such as language and format having the potential to influence their reach.

15. Should You Engage or Not? Attributes of Video Content on YouTube and Its Influence on Digital Consumer Engagement
(Munaro, Hübner Barcelos, Francisco Maffezzolli, Santos Rodrigues & Cabrera Paraiso, 2021)
Journal: Journal of Consumer Behaviour
Year: 2021

This research simulates viewing time, as well as likes, dislikes, and comments, for over 11,000 videos from 150 digital influencers on YouTube. The authors demonstrate how language features, linguistics style, subjectivity, emotional valence, and video category impact popularity, and how the identical feature may have varying impacts on different measures. This is the second-largest design closest to the design utilized in the present study. It lends support to the current research in that it justifies the usage of language in the title and video length as predictors and demonstrates why views and engagement need to be modelled separately.

16. A Look at The Engagement and Trends of Content Production
(Violot, Elmas, Bilogrevic & Humbert, 2024)
Conference Name: Proceedings of the 16th ACM Web Science Conference (Web Sci '24)
Year: 2024

The first comparison of Shorts with regular videos over time and across channels and categories. The authors conclude that Shorts get more views and moreLikes per view, but fewer comments per view and they don't do as well in education and politics. Views andLikes correlate strong (r = 0.848), while comments do not correlate strongly with views orLikes. This study is a direct precursor to the current one on Shorts and is the primary benchmark for the current study's main conclusion that the lower engagement of Shorts primarily stems from comments.

17. Social Mediatization of Religion: The Case of Islamic Videos on YouTube
(Al-Zaman, 2022)
Journal: Heliyon
Year: 2022

This research investigates 73,120 Islamic videos from 18,927 YouTube channels published across 2011-20. There was a strong positive correlation between views and likes (r = 0.862), and user engagement was not significantly related to the video length. This is one of only a handful of sizable quantitative studies of religious contents on YouTube. It provides background to this research for comparison in regards to the video-length result, given that the temple videos displayed a mild but significant association with length and engagement.

18. The Digital Form of God: Storytelling, Visuals and How Users Connect with Religious Videos on YouTube
(Chen, Xin, Xiao, Xiao, Xiao, Zhang, Shen & Lu, 2026)
Journal: Proceedings of the International AAAI Conference on Web and Social Media(ICWSM)
Year: 2026

This paper collected 1,100 religious videos and nearly 2 million comments about religion on YouTube (Christianity, Islam, Hinduism, Buddhism, Judaism) through the YouTube Data API v3, and classified content of those videos with large language models. Non Shorts videos had 2.19 higher average view rate, Shorts videos had 1.55 higher average like rate, and Hindu videos had the most B-roll and iconic imagery used. The 1,100 videos were all "first ranked" for keywords related to the religions studied. This paper is relevant to the current study as the closest study of religious content on YouTube, as well as a point of contrast in terms of whether temple channels showed the same inverse pattern for Shorts.

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19. Human Sexual Cycles Are Culture-Driven and Match Collective Moods
(Wood, Varela, Bollen, Rocha & Gonçalves-Sá, 2017)
Journal: Scientific Reports
Year: 2017

This study from Google search and Twitter data in many countries demonstrates that online activity levels spike during the dates of major religious festivals like Christmas in Christian-majority countries and Eid al-Fitr in Muslim-majority countries, in the northern and southern hemispheres, respectively. Tweets reflect the collective mood of the nation on certain dates. The present study is helped by this in terms of analyzing the festival window and the finding that Hindu festivals are likely to increase temple content viewing.

Research gap

The review finds three gaps. Almost all online darshan research is qualitative and does not explore what increases participation. Quantitative YouTube research explores brands, influencers and entertainment channels only, with one study sampling highly ranked videos rather than official institutional channels of temples. No study, controlling for video age and channel size, has simultaneously estimated how content format, timing of festival, title language and day of upload influence reach and participation in official temple channels in India. This study fills these gaps.

Objectives and Rationale

1. To examine how content format - live streams, Shorts and recorded long-form videos - impacts the number of views and engagement rate of videos on the official temple YouTube channels in India.
2. Assess how the timing of the festival, video length, title language and the day uploaded impacts the views and engagement rate on these videos.
3. To assess what these implications might mean for the digital content strategy of temple trusts and religious tourism boards.

These objectives reflect both the research gap and the theory discussed above. Format, length, language and timing all translate into type of construct – temple trusts control all four every day, so they are treated as potential determinants of reach and participation. The consumer engagement theory (Brodie et al., 2011) and Khan's (2017) differentiation of consumption and participation led me to hypothesise that they might have different influences on reach and participation, hence I present results for both forms of analysis and engagement rate. Festival timing is included as the Hindu devotional cycle aligns offline life with festival dates, and Wood et al. (2017) demonstrate that religious calendars influence online consumer behaviour also. The last goal links the statistical explanations to the decisions that managers have to make, appropriate for the business analytics and strategic management track of the conference.

RESEARCH METHODOLOGY

Scope

We analyse all the videos published in the period 1 January 2026–30 September 2026 by the official YouTube channels of 14 top Indian temples, from ten states and union territories (Uttar Pradesh, Andhra Pradesh, Jammu and Kashmir, Odisha, Madhya Pradesh, Gujarat, Maharashtra, Karnataka, Tamil Nadu, Kerala). The sample therefore varies by place, deity and language. The research is based on theory about consumer engagement with content, and the theory of uses and gratifications. It only considers what is immediately observable on YouTube (views, likes and comments); attitudes and other offline behaviour of devotees are not addressed.

Population

The population is constituted by all videos published on Indian temples and temple trusts' official YouTube channels. The unit of analysis is the individual video.

Sampling

Sampling occurred at two levels: First, temple channels, purposively selected from the most popular temples in India; second, all videos published by those channels during the period of the study; so, the final sample is a census of channel content. The channels: all the channels were listed in their official website links or based on the official handle and channel name, and 14 temple channels were purposively selected from the most popular temples in India, listed below, as they are considered leading examples: Tirumala Tirupati Devasthanams (SVBC TTD); Shree Kashi Vishwanath Mandir Trust; Shri Mata Vaishno Devi Shrine Board; Shree Jagannatha Temple Administration (Puri); Shri Mahakaleshwar Jyotirlinga (Ujjain); Shri Omkareshwar Jyotirlinga; Somnath

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Temple; Shree Siddhivinayak Ganapati Temple Trust; Shree Saibaba Sansthan Trust (Shirdi); Shri Ram Janmabhoomi Teerth Kshetra (Ayodhya); Shrimant Dagdusheth Halwai Ganpati Trust (Pune); ISKCON Bangalore; Mylapore Kapaleeswarar Temple (Chennai); and Guruvayur Devaswom. Thereafter, any video uploaded on any of those channels during the period of study was included, making it a census for each channel. (Table 1): Final sample.

Table 1: Sample selection

Step	Videos
Videos retrieved, 1 January to 30 September 2026	8,542
Less: upcoming or still-live broadcasts at the time of collection	27
Less: published after 30 September 2026 (Indian Standard Time)	1
Less: videos with fewer than 10 views	3
Final sample	8,511

Source: Author's computation from YouTube Data API v3.

Data Collection and Source

Secondary data were used in the study. Video and channel data were collected on 18 October 2026 using the YouTube Data API v3 (Google for Developers, n.d.) by a Python script. For each channel, the script collected the list of videos uploaded, and then for each video it collected the title, date and time of release, number of minutes duration, number of views, number of likes, number of comments, how many comments were to be moderated, whether it is a live video, whether it is a chat, and the number of video comments, and the number of channel subscriptions. Festival dates for 2026 were obtained from the published Hindu festival calendar (Hindu Blog, 2025). No primary data or questionnaire was used.

Video engagement rate is (likes + comments) / views * 100. Live is 1 if the video was streamed live. Shorts is 1 for not live videos 180 seconds or shorter; YouTube has been allowing Shorts that are 3 minutes or shorter since October 2024 (Gutelle, 2024b). The reference category for full videos is recorded, long-form. Festival is 1 if posted 3 days before to 3 days after one of 13 major Hindu festivals at the time, such as Maha Shivaratri, Ram Navami, Krishna Janmashtami and Ganesh Chaturthi. Regional language is 1 if the title is written in an Indian script such as Devanagari, Telugu, Tamil, or Malayalam, and 0 if in English. Weekend is 1 for videos posted on Saturday or Sunday Indian Standard Time. Video age is the number of days from publication to data collection date; channel size is the number of subscribers to the channel. The number of views, duration, comments, video age, subscribers, and comments are heavily skewed, so were log-transformed. For the 439 videos with comments disabled, the number of comments was set to zero.

Hypotheses

- H1: Live streams have (a) more views and (b) a higher engagement rate than recorded long-form videos.
- H2: Shorts have (a) more total views (b) but less engagement than published long-forms.
- H3: (a) Videos uploaded during festival periods have (b) more views and (b) higher engagement rate.
- H4:Video length is significantly associated with (a) views and (b) engagement rate.
- H5: (a) Videos with titles in their regional language will receive (a) more views and (b) a higher engagement rate than videos with titles in English.
- H6: (a) Weekend videos get (b) a higher engagement rate (eg. Likes, shares, comments) than videos uploaded on any other day.

Empirical Model

The following two models were estimated via OLS:

The dependent variable is the number of views, ("Models" are presented in the below): Model 1: $\ln(\text{Views})_i = \beta_0 + \beta_1 \text{Live}_i + \beta_2 \text{Shorts}_i + \beta_3 \text{Festival}_i + \beta_4 \ln(\text{Duration})_i + \beta_5 \text{Regional}_i + \beta_6 \text{Weekend}_i + \beta_7 \ln(\text{Age})_i + \beta_8 \ln(\text{Subscribers})_i + \varepsilon_i$

$$\textit{Model 2: Engagement Rate}_i = \gamma_0 + \gamma_1 \textit{Live}_i + \gamma_2 \textit{Shorts}_i + \gamma_3 \textit{Festival}_i + \gamma_4 \textit{ln(Duration)}_i + \gamma_5 \textit{Regional}_i + \gamma_6 \textit{Weekend}_i + \gamma_7 \textit{ln(Age)}_i + \gamma_8 \textit{ln(Subscribers)}_i + u_i$$

Where, $_i$ is the view number. Since Model 1 is in logs of views, one coefficient β for dummy-variables here means that views change by (e^β 1)×100 per cent. Standard errors are robust to heteroskedasticity (HC3) and checked for multicollinearity with variance inflation factors (VIF). To check the robustness, we re-estimate both model with channel fixed effects, cluster standard errors by channel (i.e. Compare each video only with other videos from the same channel).

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DATA ANALYSIS, RESULTS AND INTERPRETATION

Tools and techniques

The API returned JSON data which was converted into data frame and dumped as csv files in python (pandas). Descriptive statistics, crosstabs, bar plots, vif tests, and OLS regressions were run in python using pandas, statsmodels and matplotlib packages.

Descriptive statistics

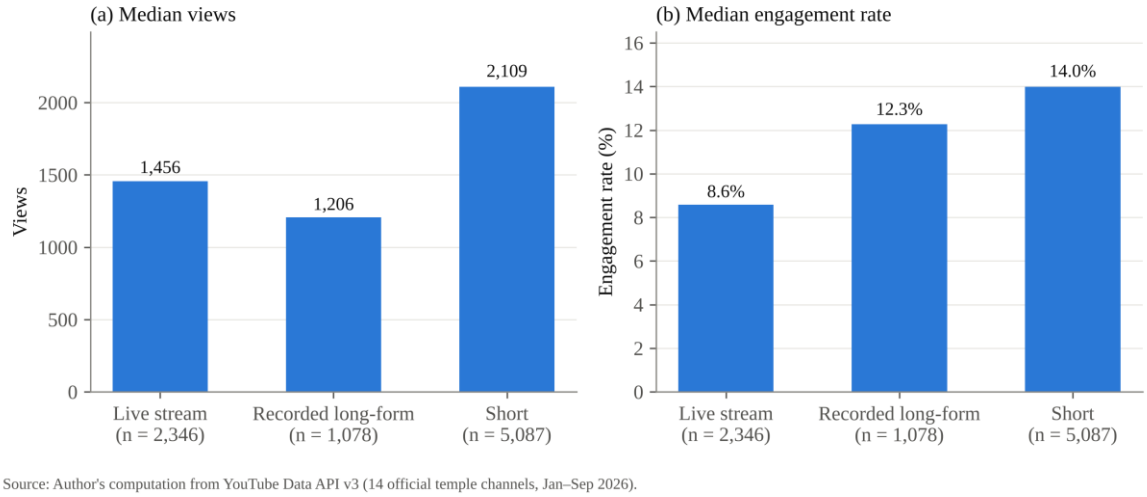
Table 2: Descriptive statistics (N = 8,511)

Variable	Mean	Median	SD	Min	Max
Views	7,085	1,772	45,953	11	2,577,094
Likes	469	197	918	0	40,945
Comments	55	11	180	0	1,091
Engagement rate (%)	13.00	11.11	9.30	0.00	78.57
Duration (minutes)	61.2	1.7	156.7	0.03	715.0
Video age (days)	148.6	148	81.4	17	289
Channel subscribers	318,194	91,500	376,701	1,790	1,110,000
Live stream (share)	0.276			0	1
Shorts (share)	0.598			0	1
Festival period (share)	0.308			0	1
Regional-language title (share)	0.554			0	1
Weekend upload (share)	0.294			0	1

Source: Computed by the author from YouTube Data API v3.

The mean (7,085) is four times the median (1,772) since a handful of videos attracted very high viewership. An average video received 11 likes and comments for every 100 views. Shorts comprise 59.8% of all uploads, live streams 27.6%, and recorded long form 12.7% - so short form already dominates most temple channel output. Around 31% of videos were posted within three days of a festival and 55% had regional-language titles. By script, 3,794 titles used English, 2,558 Devanagari, 1,628 Telugu and 425 Malayalam, the rest Odia, Tamil, Gujarati and Kannada.

Figure 1: Median views and engagement rate by content format



Source: Author's computation from YouTube Data API v3 (14 official temple channels, Jan–Sep 2026).

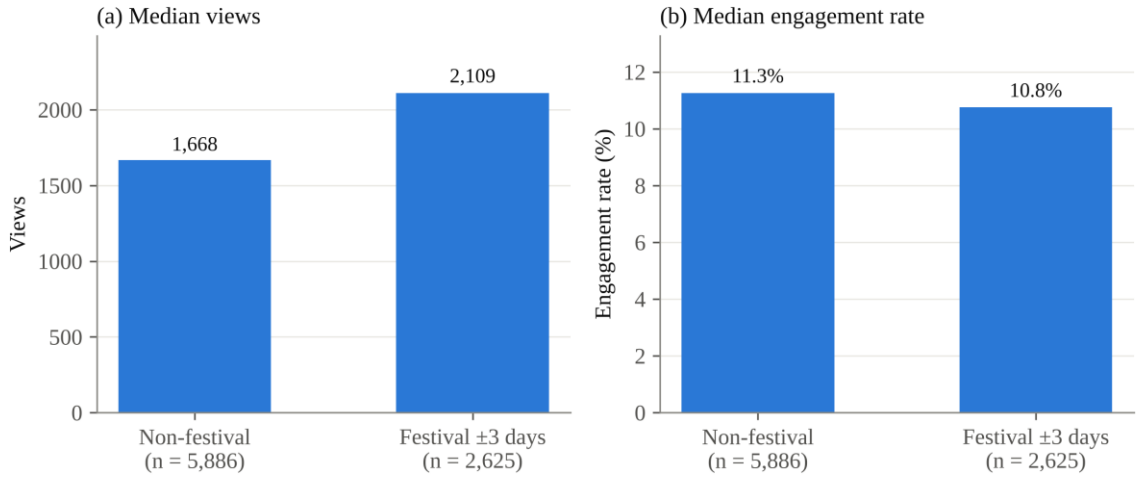
Source: Author's calculation from YouTube Data API v3 (14 official temple channels, Jan -Sept 2026).

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Unadjusted comparisons: Shorts had the highest median views (2109) and engagement rate (14.0%). Live streams had more views (1456 versus 1206) but the lowest engagement rate (8.6%). However, these simple comparisons take no account of different channel sizes or age of video - factors that the regression models account for.

Figure 2: Median views and engagement rate in festival and non-festival times



Source: Author's computation from YouTube Data API v3 (14 official temple channels, Jan–Sep 2026).

Source: Author's calculated from YouTube Data API v3 (14 Official temple channels, Jan-Sep 2026)

Videos uploaded within 3 days of a festival had higher median views (2,109 vs. 1,668) and a marginally lower median engagement rate (10.8% vs. 11.3%).

Multicollinearity

All the VIFs were lower than 5 (live 3.46; Shorts 3.62; festival 1.00; ln duration 4.71; regional language 1.13; weekend 1.01; ln video age 1.03; ln subscribers 1.09). Duration is correlated with the format as we expect the live streams to be long, the Shorts to be short, etc., but these VIFs are low enough to not pose any serious collinearity problems.

Regression results

Table 3: OLS regression results

Variable	Model 1: ln(Views)	Model 2: Engagement rate (%)
Live stream (vs recorded)	0.730*** (0.071)	−6.496*** (0.405)
Shorts (vs recorded)	0.965*** (0.070)	−5.074*** (0.425)
Festival period	0.209*** (0.030)	−0.234 (0.188)
ln(Duration)	0.128*** (0.015)	−0.596*** (0.080)
Regional-language title	0.129*** (0.030)	−5.219*** (0.191)
Weekend upload	−0.154*** (0.031)	−0.012 (0.189)
ln(Video age)	−0.105*** (0.022)	2.077*** (0.116)
ln(Subscribers)	0.720*** (0.010)	−1.840*** (0.072)
Constant	−2.116*** (0.187)	35.774*** (1.215)
Observations	8,511	8,511
R^2	0.450	0.280
Adjusted R^2	0.450	0.279
F-statistic	950.1***	456.9***

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Note: Heteroskedasticity-robust (HC3) standard errors in parentheses. * p < 0.01. Format recorded long form video is the base category. Source: Created by the author from YouTube Data API v3.

All models are significant overall (p < 0.01). Model 1 accounts for 45% of the variation in log views and model 2 accounts for 28% of the variation in engagement rate - an acceptable amount of variance for cross-sectional social media data.

Controlling for other factors, Shorts attracted approximately 162% more views than the recorded long-form videos (e^0.965 1) and approximately 108% more views than the live streams (e^0.730 1). Engagement rates were lower for Shorts and live streams by 5.1 percentage points and 6.5 percentage points, respectively. Shorts and live streams attract more views, but recorded videos generate more likes and comments per view.

Videos uploaded three days before or after a festival had about 23% more views (e^0.209 1) and no significant difference in engagement rate compared to other videos (p = 0.21). A festival viewer was just as likely to Like or Comment on a video as any other viewer.

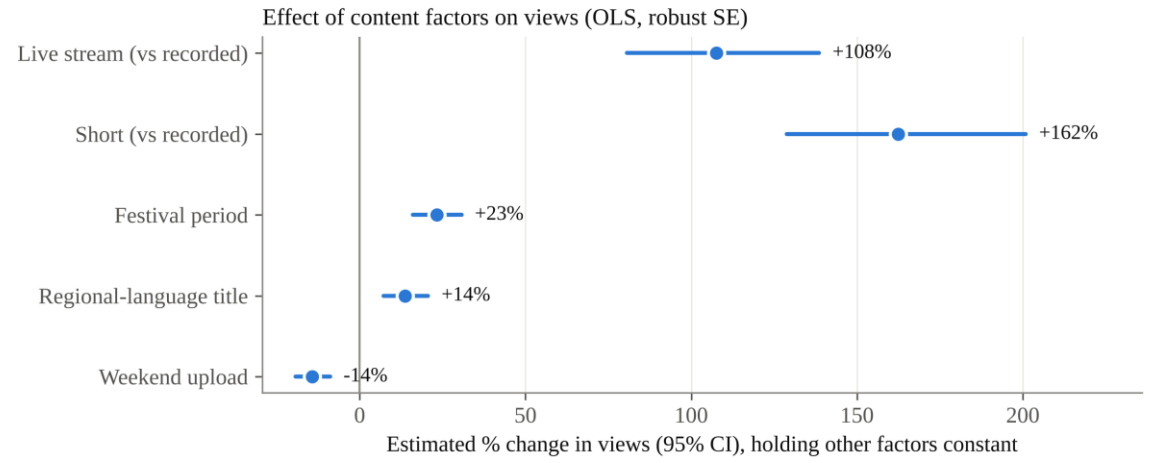
For every 10% increase in the length of the video, views grew by approximately 1.3% and the engagement rate was approximately 0.06 percentage points lower.

Videos with regional-language titles garnered approximately 14% more views(e^0.129 1), but their engagement rate was 5.2 percentage points lower than videos with English titles.

Weekend uploads saw approximately 14% (e 0.154 1) fewer views than weekday uploads, and there was no difference in engagement rate (p = 0.95).

Of the control variables, bigger channels had more views (a 10% increase in subscribers was accompanied by 7% more views), but lower engagement. Holding other variables fixed, older videos tended to have marginally fewer views and somewhat higher engagement, given that likes and comments are accumulated after views plateau.

Figure 3: Effect of each factor on number of views (Model 1)



Source: Author's computation from YouTube Data API v3 (14 official temple channels, Jan–Sep 2026).

Source: Author's calculation from YouTube Data API v3 (14 official temple channels, January to September 2026). Points: the percentage change; lines: 95% confidence interval.

Robustness checks

Two additional robustness checks were performed on the findings. For the second, engagement was disaggregated into likes per 100 views and comments per 100 views. The lesser engagement rate of Shorts and live streams is primarily due to a lower number of comments per view (by 4.07 and 4.45 points, respectively, as shown in Table 4), while for regional-language videos, the engagement rate is lower due to fewer likes per view (by 5.48 points), although the number of comments per view was slightly higher (+0.26).

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Table 4: Likes & comments ratio (per 100 views)

Variable	Likes per 100 views	Comments per 100 views
Live stream (vs recorded)	−2.049***	−4.446***
Shorts (vs recorded)	−1.001***	−4.073***
Festival period	−0.256	0.022
ln(Duration)	−0.498***	−0.099***
Regional-language title	−5.483***	0.264***
Weekend upload	0.073	−0.085
R^2	0.256	0.380

Note: OLS with HC3 robust standard errors; controls for ln(video age) and ln(subscribers) included. * p < 0.01. Source: Author's computation from YouTube Data API v3.

In the second, both models were re-estimated with channel fixed effects and standard errors clustered by channel. Effect of Shorts on views (+1.78, p<0.01) and engagement rate (5.99, p<0.05), effect of festival timing on views (+0.21, p<0.05), effect of duration, and effect of weekend uploads on views (0.14, p<0.01) remained significant. Effect of live streams on views and effect of regional-language titles did not. These two results, therefore, are partly due to channel differences, for example, that the channel primarily streams live or that the channel generally publishes in a regional language and are thus weakened by comparisons of videos within the same channel.

Table 5: Summary of hypothesis testing

Hypothesis	Result
H1a: Live streams receive more views	Supported (not robust within channels)
H1b: Live streams have a higher engagement rate	Not supported (significantly lower)
H2a: Shorts receive more views	Supported
H2b: Shorts have a lower engagement rate	Supported
H3a: Festival videos receive more views	Supported
H3b: Festival videos have a higher engagement rate	Not supported (no significant effect)
H4: Video length is associated with views and engagement rate	Supported (more views, lower rate)
H5a: Regional-language titles receive more views	Supported (not robust within channels)
H5b: Regional-language titles have a higher engagement rate	Not supported (significantly lower)
H6a: Weekend uploads receive more views	Not supported (significantly fewer)
H6b: Weekend uploads have a higher engagement rate	Not supported (no significant effect)

Source: Author's calculations using Tables 3 and 4.

RESULTS AND DISCUSSION

Findings

- The way the content was formatted had the most significant impact on reach. Shorts had about 162% more views and live streams about 108% more views than recorded long-form videos (Objective 1).
- Engagement was higher for recorded long-form videos than for other types. Shorts and live streams were 5 to 6.5 points lower (Objective 1).
- The reason for the lower engagement for Shorts and live streams was primarily the reduced amount of comments per view; the difference in likes was substantially less (Objective 1).
- The time of festivals increased views by 23% and we gained in engagement rate (Objective 2).
- Videos over a minute in duration had slightly more views and a lower engagement rate (Objective 2).

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- Titles in the regional language gained an average of 14% more views, with less Likes per view and marginally more Comments per view (Objective 2).
- Weekend uploads averaged approximately 14% less viewership than weekday uploads with similar engagement (Objective 2).
- The variables that increased views were not the same as those that increased interaction, so temple trusts should select their formats and timings depending on whether they are after reach or participation (Objective 3).

DISCUSSION

In all models, the variables that caused more views (Shorts, live streams, festival timing, regional-language titles) did not cause a proportional increase in either the proportion of viewers liking or commenting. This confirms Khan's (2017) argument that there is a distinction between consumption and participation on YouTube, and shows that this applies to non-commercial content, as well as the (commercial) religious content that Khan studied. It also supports Brodie et al. (2013) and others' suggestion that intensity of engagement can vary: in this case many temple viewers appear to remain in a lowintensity consuming "watching" state.

The Shorts results are similar to those of Violot et al. (2024) who concluded that Shorts receive more views than regular videos but fewer comments per view. Temple content results again mirror this pattern, and the comment count is again the main driver of the difference in engagement rate. They also found more likes per view for Shorts, whereas here I found slightly fewer once controls were added; again this is likely to be the result of sampling. Violot et al. focused on top performing religious Shorts, whereas Chen et al. (2026) found lower average views for Shorts than for regular religious videos (a gap likely to be attributable to their sampling strategy). They took the 50 most viewed videos for religious keywords whereas mine include all uploads of official temple channels (whose Shorts are more likely to appear to non-subscribers via the Shorts feed).

The live-stream results are at odds with Hilvert-Bruce et al. (2018), who found a high level of sociality in Twitch live streaming. Two reasons are likely. Devotional streams fulfill a different expectation – darshan is a meditation of the seeing the deity, Karapanagiotis (2013). Hence a devotee watching a live aarti has no need of commenting; as Scheifinger (2009) and Mukherjee (2022) describe, streamed Durga Puja is equally a performing presence. Secondly, the comment count from the YouTube Data API omits live-chat messages, stored in a different endpoint; the results therefore under-report interaction in live darshan, consistent with the finding that 80 per cent of the remaining live-stream gap is in comments.

The festival effect supports the argument by Wood et al. (2017) that religious calendars structure collective behaviour online and Campbell's (2012, 2013) claim that online and offline religious practice are inextricably linked. Views increased significantly by festival but, likes and comments increased proportionately maintaining the original level of engagement. Festivals may introduce a lot of one off devotees and diaspora viewers who watch more than they like or comment, which is similar to the surface level engagement Chakraborty and Biswal (2025) found at the Maha Kumbh. No other study has attempted to quantify festival effects on YouTube before; this is the first result.

Long videos also fared slightly worse in engagement and slightly better in views, which follows Munaro et al. (2021)'s finding that one characteristic can drive the different metrics in opposite directions. Al-Zaman (2022) found no significant correlation between length and engagement for Islamic videos. As long temple videos such as full aartis and utsavams are meant to be experienced passively for an extended period of time, they get many more views, though not necessarily many more likes or comments.

Region wise-language titles attracted a proportionally larger number of views. As Mulyanegara et al. (2010) have observed, user-centred media may also be disproportionately seen: here, we mean 'adapted to one's own language'.They also showed the two regional-language videos accumulated fewer likes per view: perhaps a more specialized audience with demographically more older

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viewers or virgin internet users more interested in devotional rather than digital practices watch these videos, but are less likely to respond to it by liking it; nevertheless, regional-language videos attracted slightly more comments per view, so the 'devots' who do engage in commenting would also prefer to type in their own language.

The loadings on weekends were lower, but many marketers have presumed viewers are more likely to consume such content at weekends given more time on hand. Consumption of devotional content appears to be governed by daily routines and ritual rhythms – morning aarti and the deities associated with the days of the week. Devotees also prefer to visit temples physically during the weekend and consume less content online. De Vries et al. (2012) also found time to be an actionable moderator of content performance for managers and this explanation was not explicitly tested in this study so remains a possibility.

Channel size was a good predictor of views, though it was negatively correlated with engagement rate, as people from larger audiences tend to engage less per person, a common finding in the online context and in relation to a strong religious brand (Mulyanegara, 2011). Overall, the temple channels are similar to other online service brands except they have very active viewerships and very limited comments.

MANAGERIAL IMPLICATIONS

- Temple trusts seeking to access a newer audience are advised to upload Shorts consistently (darshan, alankaram and festival Shorts), as the Shorts received the maximum growth.
- Long-form written content including ritual descriptions, the history and discourses of the temple received the highest average number of comments and likes per view and is good for trusts looking to build an engaged community.
- Festival periods increased views by approximately 23% – trusts should plan their content calendar with increased uploads during the major festivals.
- Uploads during weekdays were more viewed than uploads on weekend. So any must-see videos should be uploaded between Monday to Friday.
- Local-language subtitles can extend access. They could include a very straightforward way to participate, like encouraging fans to express their prayers by commenting on a video.
- API comment totals do not include live chat, hence the trusts need to monitor live-chat activity from YouTube Studio in assessing the live darshan.

LIMITATIONS

They include 9 months of data and 14 channels, so that generalizability to smaller temples is limited. The engagement rate omits live-chat comments, shares and watch time, as the public API has not shared them. Language is identified from the title's script, which only estimates the language in the spoken content of the video. Shorts are identified based on length (180 seconds or less), though this might be too long for some short regular videos; others may still be a regular video (may be longer) but for some reason short. The live-streaming and language effects subdued over channels; they only provide partial evidence of between-channel differences. As with any regression on observational data, the results depict correlations, not causations.

CONCLUSION

This study asked what influences viewers' engagement with official temple content on YouTube in India – 8,511 videos published by 14 official temple channels from January to September 2026. Shorts and live streams gained orders of magnitude more views than the recorded long-form videos but little to no added likes or comments per view. Festival time increased views of the video by approximately 23% with no change in interaction, non-Hindi titles increased views, and publishing on weekdays increased views

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and comments compared to weekends. Using a consumer engagement paradigm and a uses and gratifications framework, temples are treated as a non-profit religious service brand. The results provides practical advice for temple trusts: produce Shorts and publish during festival times for reach; produce recorded videos to gain interaction; and publish during weekdays.

This research may be extended in a variety of ways in the future. Upload figures on the temple trust's YouTube Studio for the temples could be enriched by engagement metrics such as shares, live chat comments and watch time. Interviews or surveys of devotees could be used to ascertain why a much higher proportion of viewers watched than engaged with the videos, particularly regionally-language and older viewers. All data of the previous year on YouTube, Sabarimala, Diwali and Navratri seasons, other smaller temples, religious groups and other religions' videos on Instagram and WhatsApp could also be used.

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