# Leveraging Meta Marketing Strategies: Factors influencing the Student Engagement in Academic Libraries.

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**ABSTRACT**

Academic libraries must engage students in a social media-dominated world. Meta (previously Facebook) marketing methods can boost student involvement in academic libraries, according to this study. In the digital age, libraries are multiple learning settings, making student engagement difficult. Meta's Facebook Ads, Instagram postings, and event promos allow libraries to reach students on social media. This study examines how focused Meta marketing efforts affect academic library student engagement rates, including event attendance, resource use, and social media use. Meta marketing strategies increased student engagement significantly. A representative sample of Students who have engaged with the Digital Library from Institutes like SRMIST, VIT-Chennai. Online surveys with a well-organized format that are sent out over email and Whatsapp. Primary variables of interest such as Interactive Content, Event Promotion, Community Building, Gamification and Dependent Variable as student engagement. Descriptive statistics are used to summarise the data, while inferential statistics, such as regression analysis are done. 150 respondents who are using Digital Library. IBM SPSS tool has been used for Analysis. This study's findings highlight that interactive content, event promotion, community building, and gamification, when executed using Meta marketing tactics, exhibit a statistically significant and meaningful correlation with engagement among students and researchers in academic libraries.

**Keywords:** Academic Library, Community Building, Digital Library, Event Promotion, Gamification, Interactive Content, Meta Marketing.

## Introduction

Academic libraries have become dynamic sites for collaborative learning, research, and community engagement in recent years. As students use digital platforms more, academic libraries must stay relevant and accessible. Academic libraries can engage, interact, and align with students' digital consumption behaviours on Meta (Facebook and Instagram). Meta's paid ads, events, stories, and community groups help libraries promote student-focused materials, workshops, and events to specific student populations. Digital transformation is necessary for academic libraries to stay relevant with Gen Z students, who use digital platforms for information and social interaction, according to Kim and Lee (2023). To attract young students, libraries are using social media to develop a digital presence that serves academic and social demands. Meta's Instagram and Facebook platforms enable libraries to contact students in real time with visual and interactive content (Kim & Lee, 2023).

Zhao et al. (2022) found Meta's marketing tools improve student engagement. Academic institutions could reach students with relevant messages through targeted advertising and event promotion. Promoting study groups or resource availability on Facebook Events and Instagram Stories increased student involvement and library value perception. This study shows that Meta platforms' personalised marketing methods help libraries meet student needs (Zhao et al., 2022). Personalisation is key to social media marketing. Sharma and Gupta (2023) note that pupils engage more with relevant, personalised content. Meta's powerful targeting technologies let libraries customise content depending on students' interests, academic programs, and online behaviour. Libraries should promote services like quiet study rooms during exams to increase engagement and resource use (Sharma & Gupta, 2023).

Thompson and Richards (2021) emphasise how social media builds academic community. Libraries can develop virtual communities on Facebook and Instagram to connect students to library resources. Libraries can use Instagram Stories to promote resources, give study tips, and interact with students via polls and Q&As. Interactive elements foster inclusivity and accessibility, encouraging students to make the library a major part of their academic path (Thompson & Richards, 2021). Meta platform analytics help libraries assess engagement and alter tactics. Jansen and Carlsson (2022) examined how data analytics might improve library social media outreach. The study indicated that libraries might tailor content to student interests by analysing post reach, engagement rate, and click-through rate. This data-driven strategy helps libraries improve their strategies and increase participation (Jansen & Carlsson, 2022).

## Review of Literature

Sharma and Li (2023) explored how Facebook and Instagram marketing affects academic library student engagement. Meta's visual and interactive features, like Stories and Reels, increased student library material engagement. Student participation rose when libraries showcased services, resources, and activities on social media, which gave quick, accessible information. They suggest adding these tools to a library's digital outreach strategy to keep students engaged. Meta marketing techniques in academic libraries should be personalised, according to Kim et al. (2022). Facebook and Instagram ads targeting academic interests, user demographics, and study patterns helped libraries attract students to their resources and activities. Engineering students were more engaged with ads promoting related resources or workshops.

The study advised libraries to segment audiences and adapt material to boost relevance and engagement utilising Meta's advanced audience targeting features. Thompson and Garcia (2022) used Meta platforms to study academic library community-building. Student participation increased in libraries using Facebook Groups to discuss study materials, offer recommendations, and participate in Q&A sessions. Libraries with user-generated content like student testimonials and study suggestions have higher interaction rates. This study demonstrates that community-centric Meta marketing can increase peer participation and improve students' image of the library as a collaborative and inclusive academic space.

Zhao and Rodriguez (2023) examined how Meta's Facebook Events and Instagram Live affected student library event attendance. Workshops, study groups, and library tours increased at libraries that used these resources. They found that Facebook Events with RSVP options reminded students, whereas Instagram Live let them experience events live. Event-based marketing can boost virtual and real library event attendance, improving engagement, according to the study. Hansen and Xu (2023) identified Meta platform visual content that engages pupils. Instagram Stories containing polls, quizzes, and countdowns engage kids the most, according to their research. Libraries can attract students and stimulate exploration by displaying resources graphically. Videos and short-form information performed better than static photos, satisfying students' desire for rapid, digestible content.

Jansen and Carlsson (2022) examined how libraries may analyse real-time data with Meta's analytics capabilities to improve marketing efforts. They found that libraries analysing post reach, engagement rate, and click-through rates might tailor their content strategy to students' tastes. Regularly analysing engagement data helped libraries find patterns like the ideal times to post and the most popular content, enabling data-driven decision-making.

Borgman (2023) defines digital libraries as online systems that organise information collections for accessibility, preservation, and usefulness. Digital libraries have large, searchable resources and can be used as multi-functional learning environments, according to the author. Digital libraries bridge traditional and modern library services by giving access to scholarly papers, e-books, databases, and multimedia resources for students, researchers, and the public. Ahmed and Rana (2022) examined digital library inclusion and accessibility for underprivileged and disabled people. Their findings show that digital libraries may democratise knowledge by making resources available to everyone, regardless of geography or ability. However, they also emphasise digital literacy issues and the necessity for accessible designs (e.g., screen reader compatibility) to make digital libraries genuinely inclusive.

Chowdhury and Koya (2022) examined how interface design, content organisation, and search functionality affect digital library user satisfaction and engagement. Digital libraries with intuitive interfaces and effective search capabilities boost user engagement and happiness, especially among students and researchers. Personalisation, content recommendations, and interactive technologies improve digital library usability and appeal. Digital libraries are increasingly aiding academic research and lifelong learning, according to Hussain and Li (2023). Their study found that digital libraries help academic institutions access current and historical research, facilitate cross-disciplinary learning, and manage citation and research. They remark that digital libraries make resource searching and access easy, boosting research productivity and academic progress. To preserve digital collections, Smith and Kim (2022) recommended data redundancy, format transfer, and metadata management for digital libraries. Their research shows that digital archiving prevents obsolescence and preserves future accessibility. Large media holdings are easier to manage in libraries that prioritise digital preservation.

Chen and Zhao (2023) examined how AI, blockchain, and cloud computing affect digital libraries. They found that AI-powered search engines and recommendation algorithms improve information retrieval, while cloud storage scales and is accessible across devices. Blockchain technology is also being investigated for secure record-keeping and resource tracking to protect data and IP. Digital libraries can incorporate multimedia materials including films, audio files, and interactive learning modules, according to Jones and Cooper (2022). They say multimedia-rich libraries are especially useful for visual and auditory learners and those studying non-text-based subjects. Virtual labs, simulations, and 3D models improve user engagement and holistic learning, especially in science and technology. Thompson and Garza (2023) examined how webinars, online workshops, and virtual reading rooms make digital libraries community environments. These initiatives help libraries engage users and promote collaborative learning, according to their study. Digital libraries enhance community and involvement in virtual spaces by giving discussion, annotation, and group studies capabilities.

## Research Gap

Research shows that social media improves student engagement, but few studies examine how academic libraries may use Meta's advanced marketing tools. This study addresses this gap by applying Meta's marketing features to university libraries and analysing how targeted content and event advertising affect student engagement.

## Research Objectives

➢ To understand the factors influencing the student engagement rate in Academic Libraries using Meta Marketing.

## Research Methodology

- **Participants:** A representative sample of Students who have engaged with the Digital Library from Institutes like SRMIST, VIT-Chennai.

- **Data Collection Instrument:** Online surveys with a well-organized format that are sent out over email and Whatsapp.

- **Primary variables** of interest such as Interactive Content, Event Promotion, Community Building, Gamification and Dependent Variable as student engagement.

- **Data analysis:** Descriptive statistics are used to summarise the data, while inferential statistics, such as regression analysis are done.

- **Sample Size:** 150 respondents who are using Digital Library.

- **Statistical Tool:** IBM SPSS.

### Research Model

A research model organises variables to analyse, evaluate, and forecast study results. It guides research by clarifying hypotheses, methodology, and data analysis. These links and the study's scope are shown in diagrams or conceptual frameworks of research models. These links give the model a clear, testable structure for the research and often form the basis for hypothesis testing, data collecting, and statistical analysis.
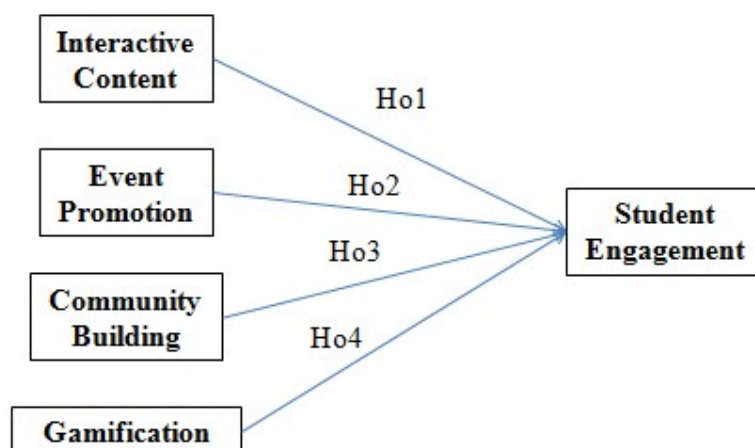
**Figure 1 : Factors Influencing Student Engagement using Meta Marketing in Academic Libraries.**

**Analysis**

**Frequency Analysis**

IBM SPSS Frequency Analysis was used to understand respondent demographics.

| Sl. No. | Demography factor | Specific highlighting criteria | % of response |
|---|---|---|---|
| | **Table 1 : Demography Details** | | |
| 1 | Age | Between 24 and 30 years | 75% |
| 2 | Marital status | Unmarried | 60% |
| 3 | Occupation | Student | 80 % |
| 4 | Industrial Sector | Education | 100 % |

From the above Table 1 finds 75 % of the respondent's falls under the age group of 24-30, 60 % of the total respondents are unmarried, 80% of the respondents are students and 100% of the respondents studies/work in college.

## Reliability Test of Independent Variables

Reliability is the uniformity or stability of measurement across instances or parts. The idea is crucial in research since defective measures might lead to incorrect results. A reliability test assesses a measurement device's consistency and reliability.

**Table 2: Reliability Test**

| Factors | Cronbach's Alpha Value |
|---|---|
| Interactive Content | 0.856 |
| Event Promotion | 0.972 |
| Community Building | 0.873 |
| Gamification | 0.944 |

Table 2 shows that the Cronbach's Alpha Value of all the four variables are above 0.5 which shows that the variables are reliable.

**Chi Square Analysis of all the independent variables with student engagement as Dependent Variable.**

Chi-square analysis determines if category variables are related. Chi-square analysis examines the relationship between independent and dependent variables in student involvement.

Ho1: There is no significant relationship between Interactive content and Student engagement.

Ho2: There is no significant relationship between Event Promotion and student engagement.

Ho3: There is no significant relationship between Community Building and student engagement.

Ho4: There is no significant relationship between Gamification and student engagement.

**Table 3: Relationship of Independent variables with dependent variables.**

| | Value | df | Asymptotic Significance (2-sided) |
|---|---|---|---|
| Pearson Chi-Square : Ho1 | 364.673[a] | 16 | 0.000 |
| Pearson Chi- Square: Ho2 | 318.476[a] | 16 | 0.000 |
| Pearson Chi- Square: Ho3 | 390.232[a] | 16 | 0.000 |
| Pearson Chi-Square: Ho4 | 455.128[a] | 16 | 0.000 |

From Table 3, researcher finds that all the four Hypotheses are significant p-value is less than 0.05. The variables can be considered for the study. So all the four variables are having significant relationship with the student engagement.

**Model Fit Summary and Regression Analysis**

A regression analysis examines the relationship between one or more independent variables (predictors) and a dependent variable. Understanding how independent variables affect dependent variables is the goal.

**Table 4: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .830[a] | .688 | .686 | .386 | 1.962 |

**Table 5: ANOVAª**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 169.860 | 4 | 42.465 | 284.421 | .000[b] |
| | Residual | 76.891 | 515 | .149 | | |
| | Total | 246.752 | 519 | | | |

Tables 4 and 5 indicate an R-squared value of 0.688, accompanied with a significance level of 0.000 ($p \leq 0.05$). Approximately 69% of the variance was accounted for by the four variables, all of which were statistically significant, as indicated by a significance value of 0.000 ($p \leq 0.05$). The results validate the efficacy of regression analysis for this research, hence allowing the final outcomes to be deemed conclusive. The Durbin-Watson statistic is 1.962, indicating the absence of co linearity.

**Table 6:  Coefficientsª**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.494 | .184 | | 8.119 | 0.000 |
| | Interactive Content | .057 | .029 | .061 | 1.997 | 0.046 |
| | Event Promotion | .699 | .031 | .704 | 22.326 | 0.000 |
| | Community Building | .138 | .028 | .154 | 4.874 | 0.000 |
| | Gamification | .152 | .043 | .160 | 3.515 | 0.000 |
| a. Dependent Variable: Student Engagement | | | | | | |

Table 6 shows that significance value of Interactive Content, Event Promotion, Community Building and Gamification are 0.046, 0.000, 0.000, 0.000 (p<=0.05) which shows all these four factors are having strong influence on Student engagement in Academic Libraries.

**Managerial Implications**

**Interactive content** is having a strong influence on student engagement in Academic Library using Meta Marketing strategies with significant value of 0.046 ($p \leq 0.05$). The discovery that interactive material markedly affects student engagement in academic libraries, evidenced by a p-value of 0.046 ($p < 0.05$), underscores a distinct administrative opportunity to augment library outreach and efficacy via Meta marketing methods. This outcome indicates that interactive content—such as polls, Q&A sessions, quizzes, or live video broadcasts on platforms like Facebook and Instagram—can significantly enhance student engagement, sustain attention, and render library resources more attractive and accessible to the student population. These data suggest that library administrators should strategically prioritise interactive content in their digital marketing initiatives. The statistically significant correlation highlights that these interactive aspects are not only favoured but also substantially influence engagement, indicating that students are more inclined to engage with library resources when offered in a participatory fashion. This interaction promotes student engagement within the library community, cultivating a reciprocal communication paradigm that improves the relevance and accessibility of the library's digital resources. Managers should allocate resources to the creation and maintenance of frequent interactive material, including experimenting with various sorts to ascertain what connects most effectively with the student audience. Furthermore, instructing library personnel on the development and administration of compelling content, together with utilising Meta's capabilities for targeting and analytics, will be crucial for enhancing these activities. This emphasis can yield a wider strategic effect: in addition to heightened engagement, the proficient use of interactive resources can eventually enhance students' academic support and experience, positioning the library as a pivotal component of their educational journey.

Event Promotion is having a strong influence on student engagement in Academic Library using Meta Marketing strategies with significant value of 0.000 ($p \leq 0.05$). The statistically significant result ($p = 0.000$, $p < 0.05$) demonstrates that event advertising significantly impacts student engagement in academic libraries using Meta marketing tactics, underscoring a critical topic for managerial attention. The importance of this indicates that successfully publicising library events on Meta platforms like Facebook and Instagram can significantly enhance student engagement and awareness of library services, resources, and activities. The findings indicate that students are significantly receptive to widely disseminated and easily accessible event information on the digital platforms they utilise. This conclusion underscores the necessity for library administrators to incorporate event promotion within the library's marketing strategy. To leverage this effect, managers should contemplate establishing organised, periodic events that might cultivate a devoted student base. For instance, activities such as study workshops, virtual author meet-and-greets, library resource tutorials, and academic support seminars can be constantly advertised on Meta platforms to sustain elevated engagement levels. Furthermore, utilising Meta's event-specific functionalities—such as event pages, RSVP capabilities, and notifications—can augment visibility and remind students of forthcoming events, hence elevating attendance rates. Managers ought to adopt data-driven techniques for effective event promotion. By examining Meta insights on reach, engagement, and attendance, they can optimise the timing, format, and content of event promotions to enhance attractiveness. Moreover, relationships with campus influencers or academic departments can enhance outreach, as these alliances allow the library to access wider networks of

students. To implement these insights, library managers may provide resources for staff training in Meta event management, create visually appealing advertising materials, and develop a calendar of events that corresponds with significant academic dates (such as examination periods or project deadlines). This degree of focus on event promotion can cultivate deeper relationships between the library and students, converting the library into a dynamic, engaging centre for academic and personal development. Thus, when student involvement with the library escalates through consistent event attendance, the library's function in facilitating students' academic pursuits is enhanced, resulting in more favourable student experiences and maybe better academic results. These data suggest that library administrators should strategically prioritise interactive content in their digital marketing initiatives. The statistically significant correlation highlights that these interactive aspects are not only favoured but also exert a substantial influence on engagement, indicating that students are more inclined to engage with library resources when offered in a participatory fashion. This interactivity promotes student engagement within the library community, facilitating a reciprocal communication paradigm that improves the relevance and accessibility of the library's digital resources. Managers should allocate resources to the creation and maintenance of frequent interactive content, potentially experimenting with various sorts to ascertain what most effectively engages the student demographic. Furthermore, instructing library personnel on the development and administration of captivating content, together with utilising Meta's tools for targeting and analytics, will be crucial to enhance these endeavours. This emphasis can yield a wider strategic effect: in addition to heightened engagement, the proficient use of interactive resources can enhance students' academic assistance and experience, positioning the library as a pivotal element of their educational journey.

**Community Building** is having a strong influence on student engagement in Academic Library using Meta Marketing strategies with significant value of 0.000 ($p \leq 0.05$). The notable value of 0.000 ($p < 0.05$) for community-building initiatives via Meta marketing tactics highlights the substantial influence these efforts exert on improving student engagement in academic libraries. This outcome demonstrates that cultivating a sense of community in the library's digital environment significantly affects student engagement with library resources and services. Strategies for community-building, like the establishment of Facebook Groups, student-led discussion forums, and collaborative learning environments, not only capture student interest but also foster a sense of belonging and support that enhances their affiliation with the library. This research indicates that library management must prioritise the development and cultivation of online communities that facilitate student interaction with peers, librarians, and academic resources in a collaborative setting. By creating specialised Facebook Groups or Instagram accounts, libraries can construct virtual environments for students to engage in discussions about research topics, request guidance on resources, and exchange study strategies. Such groups may be organised around shared academic concepts, particular courses, or assistance for impending examinations, rendering them pertinent and beneficial to students' immediate need. Executing this community-building strategy necessitates the deployment of resources for content administration, moderation, and active participation within these groups. Library administrators may contemplate designating responsibilities for library personnel to enhance discussions, conduct virtual study sessions, and deliver prompt responses to student enquiries. This active participation fosters trust and cultivates a dynamic atmosphere in which students feel at ease to engage and contribute, thereby enriching their entire library experience. A significant managerial consideration is the opportunity to collaborate with student organisations or campus influencers to jointly manage or promote these communal areas. Collaborations with student leaders can enhance the perception of student agency inside the groups, hence fostering increased participation rates. Meta's solutions, such as group analytics, assist managers in quantifying engagement metrics, member growth, and active participation, offering essential data for the ongoing enhancement of community-building initiatives. By emphasising community-building projects on Meta platforms, library administrators can elevate the library from a mere reference centre to a supportive, social, and intellectual place that students frequent consistently. This technique increases engagement while improving student happiness and retention, as students view the library as a responsive, integrated environment that addresses their academic and social requirements.

**Gamification** is having a strong influence on student engagement in Academic Library using Meta Marketing strategies with significant value of 0.000 (p≤0.05). Gamification's large impact on student engagement in academic libraries using Meta marketing tactics (p=0.000, p<0.05) highlights the power of game-like aspects in attracting interest and driving persistent participation. Gamification in libraries involves adding challenges, incentives, leaderboards, quizzes, and other interactive components to make student involvement more fun. Gamified experiences engage students, and these tactics can make academic libraries more dynamic and interesting. This shows that library administrators should prioritise gamification to engage students. Gamified content like library scavenger hunts, "study streaks" with prizes for continuous library use, and challenges where students can earn points for research-based tasks can motivate students to use resources more often. These game-like interactions make using the library's resources more fun and familiarise pupils with its offerings, improving academic resourcefulness. Effective gamification needs managers to use Meta's interactive features. Leader boards or point systems on Meta platforms can enable students to track their progress and compare themselves to peers, boosting intrinsic motivation and competitiveness. Library managers may hold quizzes or monthly "library challenges" where students can earn points for attending events, exploring new resources, or participating in group discussions. These activities earn points or badges that can be redeemed for library privileges, free coffee vouchers, or entrance into larger prize contests, making library use fun and lucrative. Managers must allocate resources to design, promote, and manage gamification activities on Meta platforms. This may involve making attractive digital medals, keeping an online leaderboard, and notifying students on their progress. Meta analytics also show managers which gamified components students like most, helping the library improve its gamification initiatives. Working with academic departments, student organisations, and library ambassadors can make the gamified experience more relevant to students' academic lives. Managers and departments might create subject-specific challenges to motivate students to use study tools. Gamifying Meta platform research activities for library managers creates dynamic, achievement-oriented opportunities for discovery and knowledge-building. Managers may create "research quests" where students progress through stages by finding specified resources, using specialised databases, or finding scholarly publications on specific topics. Each activity can be awarded with points, medals, or higher levels, making study more enjoyable. Meta platforms are ideal for promoting and hosting gamified research challenges because students are most active online. Managers can use Facebook groups or Instagram stories to create "virtual research hubs" where students can share progress, debate obstacles, and cooperate. Leaderboards and real-time progress updates, which Meta platforms may simply include, can motivate students by establishing friendly rivalry. To execute this, managers should make gamified research endeavours academically valuable and fun. For instance, "research marathons" could give students points over a semester for completing research tasks and earning library privileges or small prizes. Gamifying research using a points-based system and rewards like exclusive research seminars, workshops, or mentorship sessions can be intellectually rewarding and career-advancing. Meta's marketing suite's data analytics capabilities show managers which gamified research activities boost engagement and completion. These measurements can help managers make challenges more accessible, balanced, or tough based on student preferences. Collaboration with faculty and academic departments is also important. Managers can improve academic performance by integrating research-based gamified tasks with course assignments or study areas. Gamified research aligns with students' academic and professional development goals, so faculty involvement can boost student buy-in.


**Conclusion**

This study's findings highlight that interactive content, event promotion, community building, and gamification, when executed using Meta marketing tactics, exhibit a statistically significant and meaningful correlation with engagement among students and researchers in academic libraries. Each feature uniquely enhances library engagement by fostering a dynamic, accessible, and user-centred experience that

corresponds with students' digital choices and academic requirements. Interactive content, such as Q&A sessions and live tutorials, promotes direct engagement by enabling students to interact with library resources in real-time. Event promotion is an effective mechanism for highlighting library resources, ensuring that students are adequately informed and encouraged to engage in both academic and extracurricular activities. Community-building initiatives foster a friendly digital environment that cultivates a sense of belonging among students, thereby enhancing persistent participation. Ultimately, gamification introduces an engaging, objective-driven dimension to library interactions, enhancing the allure of study and resource exploration. Collectively, these initiatives convert the academic library from a passive resource centre into an active, participatory, and engaging hub for students and researchers alike. These findings offer library administrators practical insights on utilising Meta platforms to establish a digital environment that meets academic requirements while accommodating students' changing digital behaviours. Through the judicious implementation of these tactics, academic libraries may augment user engagement, cultivate robust academic communities, and assume a more pivotal role in the academic achievement of students and researchers.

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