RESEARCH PAPER

Instagram Content Consumption, Checking Behavior, and Self-Reported Academic Performance among University Students: An Exploratory Study at Guru Nanak Dev University, Amritsar

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Abstract
Instagram has become a prominent channel through which university students encounter educational information, entertainment, peer-generated material, and lifestyle content. Its academic implications may depend not only on time spent on the platform but also on checking frequency and the nature of content consumed. This exploratory study examined Instagram-use patterns, content exposure, academic engagement, distraction, and self-reported academic performance among students responding to a survey at Guru Nanak Dev University (GNDU), Amritsar. A cross-sectional online questionnaire yielded 41 usable responses collected between 30 September and 15 October 2026. The analysis comprised descriptive statistics, internal-consistency estimates, and Spearman rank-order correlations. Most respondents reported using Instagram for at least one hour per day (80.5%), and Reels were the most frequently selected feature (78.0%). The five-item self-reported academic-performance scale showed high internal consistency (Cronbach's $\alpha = .919$). Daily checking frequency was negatively associated with self-reported academic performance ($\rho = -.354$, $p = .023$), whereas daily duration was not significantly associated with performance ($\rho = -.017$, $p = .918$). Academic engagement was positively associated with performance ($\rho = .449$, $p = .003$). Educational-content exposure was not significantly associated with performance ($\rho = .195$, $p = .221$), although positive perceptions of Instagram's educational value were associated with academic engagement ($\rho = .314$, $p = .046$).
Keywords: Instagram, social media, academic engagement, academic performance, university students, content consumption, India

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Introduction

Social media platforms are embedded in the everyday communication and information practices of many university students. Instagram is particularly relevant to student life because it combines short-form video, images, Stories, messaging, creator content, and networked communities within a single mobile application. Students may encounter study advice, educational explainers, career information, current affairs, and peer networks alongside entertainment, influencer, lifestyle, and commercial material. The educational significance of Instagram therefore cannot be captured adequately by a binary distinction between use and non-use. The purpose, content, intensity, and situational context of use may all be relevant to students' academic experiences.

Research on social networking and academic outcomes has produced mixed findings. Some studies associate non-academic use and media multitasking with poorer academic outcomes, whereas others identify more complex or conditional relationships. Lau (2017), for example, found that social-media multitasking and non-academic use were negatively associated with cumulative grade point average, while academic use did not significantly predict GPA. Using automated mobile-app tracking and institutional

performance data, Tafesse (2022) reported an inverted U-shaped association, indicating that the relationship may not be uniformly linear. These findings caution against if every additional minute of social-media use has the same academic implications.

Instagram-specific evidence suggests that the relationship between platform use and academic outcomes may operate through behavioral processes. In a survey of 378 Turkish university students, Pekpazar et al. (2021) found that Instagram addiction was associated with procrastination; its direct association with academic performance was not significant, while procrastination helped explain the indirect relationship. Closson and Bond (2019) likewise showed that platform-specific use, use during class, and use for procrastination were relevant to university adjustment. Taken together, these studies indicate that repeated checking, interruption, and displacement of academic activity merit examination alongside total duration.

The present study examines these issues in the context of Guru Nanak Dev University, Amritsar. It considers the types of content respondents report encountering, how frequently they check Instagram, and how they evaluate their academic engagement and performance. The study addresses a local empirical gap by examining checking frequency, content exposure, perceived educational value, distraction, and self-reported academic performance together in a single exploration survey. Given the small, non-representative sample of 41 respondents, the study is not designed to estimate university-wide prevalence or establish causal effects. Rather, it provides a preliminary account of associations within the responses obtained.

I. 2. Literature Review

A. 2.1 Social media use and academic performance

The relationship between social-media use and academic performance is heterogeneous. Lau (2017) distinguished academic from non-academic use and found that non-academic activity and multitasking were more clearly associated with lower GPA than academic use. Barton et al. (2021), examining 659 undergraduate and graduate students, identified attention and motivation as meaningful predictors of academic performance. Their findings reinforce the importance of examining social-media practices alongside students' attentional and motivational resources rather than treating platform exposure as an isolated predictor.

Tafesse (2022) extended this discussion by measuring social-networking activity through smartphone tracking and academic performance through institutional records. The study reported an inverted U-shaped relationship: moderate use was positively associated with academic performance, whereas heavier use was negatively associated with it. These finding challenges linear models that assume a uniform association across all levels of use. The present study cannot test a curvilinear relationship, but the evidence underscores the importance of measuring different dimensions of use.

B. 2.2 Instagram, procrastination, and academic engagement

Instagram's design enables repeated brief checking, scrolling, and switching between content formats. Such interruptions may occur during study periods even when total daily use is not especially high. Pekpazar et al. (2021) found that Instagram addiction was associated with procrastination among Turkish university students, although its direct association with academic performance was not significant. Their findings support examining procrastination as a possible behavioral pathway; they do not establish that every form of Instagram use results in academic delay. Closson and Bond (2019) compared several social-networking platforms and found that platform-specific patterns, use during class, and use for procrastination were relevant to students' university adjustment. Their findings also suggest that different platforms may have different associations with adjustment. This reinforces the value of platform-specific and context-sensitive analysis rather than treating social media as a single, uniform category.

C. 2.3 Educational content and the dual potential of Instagram

Instagram can provide informal access to learning resources, subject-related information, career guidance, and peer exchange. However, exposure to educational content does not necessarily translate into improved achievement. Students must identify, evaluate, retain, and apply information, and educational material may appear alongside entertainment or promotional content. Al Mosharrafa et al. (2024), studying university students in Bangladesh, reported relationships among social-media use, mental health, and academic performance within a structural model. Their findings illustrate the possible role of intervening psychological and educational processes, although their measures and modelling strategy differ from the brief exploratory questionnaire used here.

Meta-analytic evidence also indicates a modest negative association between social-networking addiction and academic achievement. Salari et al. (2025) reported a pooled correlation of $\rho = -.172$. This

result concerns problematic or addictive use, rather than ordinary exposure to content categories, and should not be interpreted as evidence that all social-media use is harmful. Overall, literature supports a dual-use perspective: social platforms may provide educational affordances while also enabling distraction, multitasking, and procrastination.

D. 2.4 Conceptual framing

The study is informed by three complementary conceptual perspectives. A uses-and-gratifications perspective regards users as active participants who select media to meet informational, educational, social, and entertainment needs. This orientation supports examining content categories and perceived purposes rather than assuming a uniform effect of Instagram. Time-displacement and media-multitasking perspectives suggest that non-academic activity and interruptions may compete with study time and attention. Self-regulated learning, in turn, foregrounds planning, sustained attention, effort regulation, and the capacity to resume academic tasks after interruptions. These perspectives are used as sensitizing concepts; the present survey does not directly test a formal theoretical model.

II. 3. Research Objectives and Hypotheses

3.1 objectives:

1. To describe Instagram-use patterns and checking frequency among respondents to the GNDU, Amritsar survey.
2. To identify the types of Instagram content encountered by respondents and describe their perceptions of its educational value and distracting potential.
3. To examine the associations among Instagram-use behavior, content exposure, academic engagement, distraction/procrastination, and self-reported academic performance.

3.2 Hypotheses:

- H1: Instagram-use intensity indicators are significantly associated with self-reported academic performance.
- H2: Educational content exposure and positive perceptions of Instagram's educational value are positively associated with academic engagement and self-reported academic performance.
- H3: Entertainment-oriented content exposure and Instagram-related distraction/procrastination are negatively associated with self-reported academic performance.

III. 4. Methodology

A. 4.1 Research design

The study employed a quantitative, cross-sectional online survey design. Data were collected at a single time point using a questionnaire administered through Google Forms. This design is suitable for describing reported practices and examining bivariate associations. However, because exposure and outcome measures were collected concurrently, the design cannot establish temporal order or causal relationships.

B. 4.2 Study setting and participants

The study focused on students at Guru Nanak Dev University, Amritsar, Punjab, India. The response dataset contained 41 records. Respondents were predominantly 18–20 years old (n = 22, 53.7%), followed by those aged 21–23 years (n = 11, 26.8%). The sample comprised 28 women (68.3%) and 13 men (31.7%). Thirty-three respondents (80.5%) were undergraduates, five (12.2%) were postgraduate students, and three (7.3%) were PhD research scholars. The sampling strategy and recruitment procedure should be specified by the authors before submission; the available manuscript does not establish whether probability or non-probability sampling was used.

C. 4.3 Data collection and ethical considerations

The response timestamps indicate that data were collected between 30 September and 15 October 2026. The exported dataset contained a username/email identifier field. These identifiers were excluded from the analytical dataset and are not reported in this manuscript. Because identifying information was present in the export, the study should not be described as anonymous unless the authors can confirm that no identifying information was accessible or retained during data collection. The authors should add the applicable ethics committee approval or exemption details, informed-consent procedure, and data-protection arrangements. These details cannot be inferred from the supplied manuscript.

D. 4.4 Data preparation and statistical analysis

The response file was examined for duplicate records, missing values, and response coding. No exact duplicate response rows were identified. The only blank field occurred in the optional closing-comment column; the substantive scale items were complete. The username/email field, timestamp, and optional comment were excluded from inferential analysis. Agreement and frequency categories were coded numerically, and composite scores were calculated as item means to retain the original 1–5 response metric. The authors should provide the questionnaire or a complete item-to-construct mapping as a

supplementary file so that the construction and scoring of each composite can be independently assessed.

Internal consistency was assessed using Cronbach's alpha for conceptually coherent item groups. Alpha is reported as a sample-specific estimate and is not treated as evidence of construct validity or one-dimensionality. Spearman's rank-order correlation was used for bivariate associations because the predictors included ordinal categories and Likert-type composite scores and the sample was small. All tests were two-tailed, with $p < .05$ used as a conventional reference threshold. Given the exploratory design and the number of correlations examined, p values should be interpreted cautiously; no adjustment for multiple comparisons was applied. Regression and subgroup analyses were not conducted because the sample size ($N = 41$) would yield imprecise and potentially unstable estimates.

IV. 5. Results

A. 5.1 Respondent characteristics

Characteristic	**Category**	**n**	**%**
Gender	Female	28	68.3
	Male	13	31.7
Age	18–20	22	53.7
	21–23	11	26.8
	24–26	4	9.8
	26–28	1	2.4
	Above 28	3	7.3
Level of study	Undergraduate	33	80.5
	Postgraduate	5	12.2
	PhD research scholar	3	7.3

Note. Percentages are based on N = 41 and may not sum to 100.0 because of rounding.

B. 5.2 Instagram-use patterns

Indicator	**Category**	**n**	**%**
Years using Instagram	Less than 1 year	2	4.9
	1–2 years	5	12.2
	3–4 years	17	41.5
	More than 4 years	17	41.5
Daily time	Less than 30 minutes	5	12.2
	30–60 minutes	3	7.3
	1–2 hours	15	36.6
	2–3 hours	10	24.4
	More than 3 hours	8	19.5
Checking frequency	1–5 times	10	24.4
	6–10 times	7	17.1
	11–20 times	9	22.0
	21–30 times	11	26.8
	More than 30 times	4	9.8
Most-used feature	Reels	32	78.0
	Stories	5	12.2
	Direct messages	3	7.3
	Posts	1	2.4

Thirty-three respondents (80.5%) reported using Instagram for at least one hour per day. Reels were the most frequently selected feature (n = 32, 78.0%). These figures describe the respondents in this study and should not be generalized to the full GNDU student population.

C. 5.3 Reliability analysis

Scale/composite	**Items**	**Cronbach's α**
Instagram usage behaviour	7	.871
Positive educational perceptions	5	.803
Academic engagement	5	.799

Scale/composite	Items	Cronbach's α
Distraction/procrastination (non-duplicate items)	6	.880
Self-reported academic performance	5	.919

The internal-consistency estimates ranged from α = .799 to .919. The five-item self-reported academic-performance scale showed high internal consistency (α = .919). These estimates are based on a small sample and do not establish factorial or criterion validity. The Q9 content categories were treated as distinct exposure types rather than as indicators of a single underlying scale.

D. 5.4 Composite descriptive statistics

Construct (1–5 scale)	N	M	SD
Instagram usage behaviour	41	2.90	0.93
Educational content exposure	41	3.35	0.85
Positive educational perceptions	41	3.44	0.77
Entertainment/lifestyle exposure	41	3.63	0.89
Perceived distraction from content	41	3.14	1.10
Distraction/procrastination behaviour	41	2.59	0.82
Academic engagement	41	3.45	0.77
Self-reported academic performance	41	3.28	0.98

E. 5.5 Correlation analysis

Predictor	N	Spearman's ρ	p
Instagram usage behaviour composite	41	−.243	.126
Daily time spent on Instagram	41	−.017	.918
Daily checking frequency	41	−.354	.023
Educational content exposure	41	.195	.221
Positive educational perceptions	41	.285	.071
Entertainment/lifestyle content exposure	41	.204	.202
Perceived distraction from content	41	−.092	.567
Distraction/procrastination behaviour	41	−.216	.176
Academic engagement	41	.449	.003

Daily checking frequency had a statistically significant negative association with self-reported academic performance (ρ = −.354, p = .023). Daily duration was not significantly associated with performance (ρ = −.017, p = .918), nor was the broader usage-behaviour composite (ρ = −.243, p = .126). Academic engagement was positively associated with self-reported performance (ρ = .449, p = .003). Educational-content exposure had a positive but non-significant association with performance (ρ = .195, p = .221). Positive educational perceptions showed a positive but non-significant association with performance (ρ = .285, p = .071). Entertainment/lifestyle exposure, perceived distraction, and the distraction/procrastination composite were not significantly associated with performance.

In an additional exploratory analysis, positive educational perceptions were positively associated with academic engagement (ρ = .314, p = .046), whereas educational-content exposure itself was not (ρ = .128, p = .426). This nominally significant result should be interpreted cautiously because multiple exploratory correlations were examined and no multiplicity correction was applied.

F. 5.6 Hypothesis assessment

Hypothesis	Evidence	Assessment
H1: Instagram-use intensity indicators are associated with self-reported academic performance.	Checking frequency: ρ = −.354, p = .023; daily duration: ρ = −.017, p = .918; usage composite: ρ = −.243, p = .126.	Partially supported; only checking frequency was statistically significant.
H2: Educational content exposure/positive educational perceptions are positively associated with engagement and performance.	Educational exposure–performance: ρ = .195, p = .221; positive perceptions–performance: ρ = .285, p = .071; positive perceptions–engagement: ρ = .314, p = .046.	Partially supported for the exploratory association with engagement; not supported for academic performance at p < .05.
H3: Entertainment exposure and distraction/procrastination are negatively associated with performance.	Entertainment exposure: ρ = .204, p = .202; perceived distraction: ρ = −.092, p = .567; distraction/procrastination: ρ = −.216, p = .176.	Not supported by the available bivariate tests.

6. Discussion

The principal finding is the distinction between checking frequency and daily duration. In this sample, more frequent Instagram checking was associated with lower self-reported academic performance, whereas the broad daily-duration category was not significantly associated with performance. This pattern is consistent with the possibility that repeated checking and interruption may matter independently of total time spent on the platform. It does not demonstrate that frequent checking reduces academic achievement. The association may reflect other factors, including study routines, self-regulation, workload, academic confidence, or reverse directionality; for example, students experiencing academic difficulty may check social media more frequently.

This finding is broadly consistent with research distinguishing multitasking and non-academic platform activity from general access. Lau (2017) reported negative associations between social-media multitasking/non-academic activity and GPA, whereas academic use was not a significant predictor. Closson and Bond (2019) also highlighted the relevance of use during class and use for procrastination. The checking-frequency measure used here is not identical to multitasking or in-class use; therefore, this comparison is conceptual rather than a direct replication.

The non-significant association between daily time and self-reported performance cautions against treating duration as a sufficient indicator of academic risk. Tafesse (2022) identified a non-linear relationship using automated usage data and institutional records. The present sample cannot test such a curve: duration was measured in broad ordinal bands, and N = 41 is too small to support a reliable non-linear model. Nevertheless, the contrast between checking frequency and duration suggests that future studies should measure both dimensions separately and, where feasible, supplement self-reports with screen-time records.

The positive association between academic engagement and self-reported performance is consistent with research emphasising attention, motivation, and student engagement. Barton et al. (2021) found that attention and motivation predicted academic performance in a larger student sample. Su and Huang (2021) also reported a mediating role for student engagement in the relationship between social-media use and academic performance, although the direct effect of social-media use was non-significant in their study. In the present survey, respondents reporting stronger engagement also tended to report better academic performance. Because both constructs were measured in the same questionnaire and are conceptually related, common-method variance and overlap in self-evaluation may partly explain the association.

The content-related results are more nuanced. Educational-content exposure was not significantly associated with self-reported performance, although positive perceptions of Instagram's educational value were positively associated with engagement at the conventional .05 threshold. This distinction may indicate that encountering educational posts is not equivalent to using them in a purposeful learning process. Perceived usefulness or motivation may be more closely related to engagement than exposure frequency. However, the p = .046 result is exploratory and may not remain statistically significant after correction for multiple comparisons.

The absence of statistically significant negative associations for entertainment exposure, perceived distraction, and the distraction/procrastination composite should also be interpreted cautiously. These null findings may reflect limited statistical power, broad content categories, self-report measurement, or the small and compositionally uneven sample. They do

not establish that entertainment content is academically harmless. Pekpazar et al. (2021) reported a more complex pathway involving Instagram addiction and procrastination, including an indirect association with academic performance. The brief behavioural items in the present survey are not equivalent to a validated Instagram-addiction scale or a formal mediation model.

Taken together, the findings support a differentiated interpretation. Instagram may provide access to educational information and social interaction, while frequent checking may coincide with lower self-reported academic performance. The evidence remains preliminary and is specific to the respondents included in this survey. It supports further investigation of checking patterns, content use, and self-regulated learning rather than a general conclusion that Instagram either improves or harms academic achievement.

V. 7. Implications

For students, the findings suggest that monitoring repeated checking during study periods may be more useful than focusing exclusively on total daily screen time. Possible strategies include setting scheduled checking windows, disabling non-essential notifications during study sessions, and distinguishing purposeful academic searches from habitual scrolling. These are practical suggestions, not interventions evaluated by this study.

For teachers and university support services, the findings point to the potential value of digital-literacy activities that help students evaluate educational content, distinguish credible academic resources from influencer material, and use platform features intentionally. Rather than framing Instagram solely as a distraction, educators may consider how relevant educational accounts, subject explainers, and career information can be integrated into learning while maintaining boundaries around attention and study time.

VI. 8. Conclusion

This exploratory study examined Instagram content consumption and self-reported academic performance among 41 respondents associated with Guru Nanak Dev University, Amritsar. More frequent daily checking was negatively associated with self-reported academic performance, whereas total daily duration was not significantly associated with performance. Academic engagement was positively associated with self-reported performance. Educational-content exposure was not significantly associated with performance, although positive perceptions of educational value were associated with engagement in an exploratory analysis. Entertainment exposure and distraction/procrastination measures were not significantly related to performance in the available bivariate tests.

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