Student Reading Behaviors: A Diary Study

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Research Question

How do undergraduate students balance academic and leisure reading across different contexts, modalities, and times of day, and what does this reveal about how reading-focused products should be designed?

Introduction

During the first week of the Spring 2026 semester at the New Jersey Institute of Technology, approximately 50 students enrolled in Professor Adam Spryszynski's IS375 courses participated in a week-long diary study documenting their reading behaviors. Participants (also referred to as students and users throughout the report) recorded the content they read, which platform they used, the time of day, and their motivation for reading. Students were required to submit at least one entry per day, including days in which no reading occurred, with no upper limit on the total entries per day.

The study served a dual purpose: giving students firsthand experience as diary study participants, while also providing hands-on practice analyzing and interpreting qualitative data. The objective was to identify and examine patterns in student reading, including content, platform preferences, and motivations over a one-week period in January 2026. Due to an unexpected weather event that cancelled classes, some participants provided entries beyond the original study window.

By capturing in-the-moment data, the study was able to capture contextual factors, such as time of day and emotional states that can influence how individuals choose to consume different types of media. The result is a detailed breakdown of how reading is balanced in student life.

Method

The data was collected on an individual basis, with participants given general formatting guidelines with compliance varying significantly. Entries were uploaded to Canvas, anonymized and aggregated into a single PDF. Participants were not paid, but were incentivised to participate for assignment credit. This was an event-triggered diary study: participants logged an entry whenever a reading event occurred, or at the end of the day if no reading took place. The rationale for the research was intentionally withheld to reduce response bias and prevent participants from tailoring entries toward perceived expectations.

The Professor provided students the following entry structure:

1. Date and Time
2. What did you read? *(Novel, article, research paper, etc.)*
3. How did you read? *(Paper, digital, which platform?)*

4. Briefly describe the experience and motivation *(1 paragraph)*

During analysis, the aggregated data was separated into individual entries and organized using FigJam. Rather than omitting ambiguous entries, a **"chaff" category** was created for entries involving game dialogue, social media, text messages, or otherwise unclear material. This preserved data integrity while keeping the primary clusters analytically clean. Minor discrepancies in cluster counts between diagrams reflect deliberate re-categorization of ambiguous entries during iterative analysis – an artifact of qualitative affinity diagramming.

Summary of Data

The dataset reflects a wide variety of reading behaviors logged between January 20–28, 2026, comprising over **228 individual entries** across more than 50 participants. Content ranged from academic textbooks and course syllabi to manga, fanfiction, novels, and news articles. A substantial portion of entries recorded no reading activity, with participants citing exhaustion, work obligations, or social activities.

Clear patterns emerged across all three dimensions of analysis. Academic reading peaked during late morning and mid-afternoon, driven by a motivation to stay on top of coursework. Leisure reading increased in the evening and at night, commonly described as stress relief or escapism. Several non-reading entries expressed guilt or frustration, suggesting the study prompt itself may have introduced performance awareness among some participants.

Affinity Diagram 1

What did participants read?

The first diagram categorizes entries by the type of material consumed, providing a functional view of which media are most prominent in student daily life.

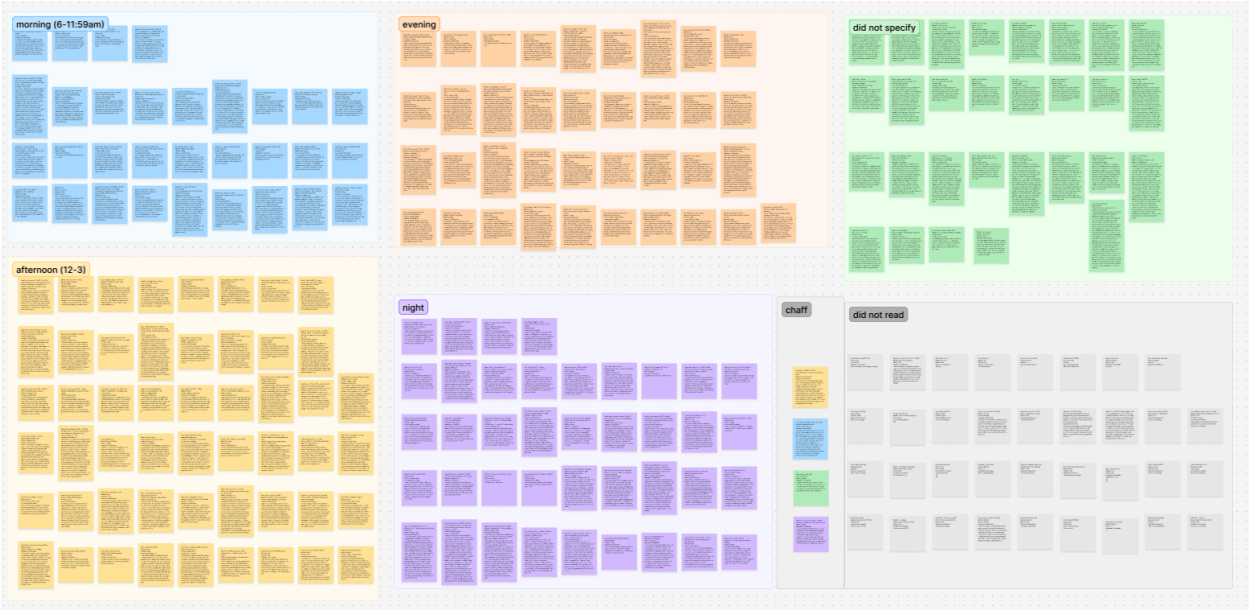
Category	Entries	Description
Articles	69	Personal interest articles, news, sports, fashion, technology, and assigned readings.
Books	68	Textbooks, novels, religious texts, self-improvement, and fiction
School	24	Syllabi, class slides, lab documents, and discussion posts
Manga/Comic	13	All logged manga and comic entries
Work/ Professional	4	Job seeking, networking, and employment contracts
Did Not Read	37	Entries recording no reading activity
Chaff	13	Game dialog, instruction manuals, menus, fanfiction, social media

The most significant relationship in this diagram is the near-identical size of the Articles (69) and Books (68) clusters. Participants split their reading time almost evenly between short-form, single-use content and sustained long-form reading. Together, these two clusters account for more than half of all entries (137), representing the highest-cognitive-load reading in the dataset. The School cluster (24) sits in clear relationship to both: while it represents the institutional backbone of student reading, the Articles and Books clusters encompass the bulk of actual subject matter. This distinction matters for product design: institutional reading and substantive reading place different demands on users, even when the content is hosted on the same platform.

The chaff category further highlights that what people consider "reading" varies widely. The fact that participants logged game dialogs, restaurant menus, and social media as reading events reveals this wide discrepancy. This is a direct consideration for how reading-adjacent products can define and measure engagement.

Affinity Diagram 2

When did participants read?



The second diagram organizes entries by time of day, mapping reading activity across the full waking cycle and providing a high-level view of when users are most engaged.

Category	Entries	Description
Morning (6:00am-11:59am)	31	Goal oriented, preparatory
Afternoon (12:00pm-3:59pm)	52	Peak volume; class gaps, transit, lunch breaks
Evening (4:00pm-7:59pm)	37	Wind-down, obligatory, forced productivity
Night (8:00pm-3:00am)	40	Decompression, fiction, personal interest
Did Not Specify	29	Excluded from time comparisons; retained for content analysis
Did Not Read	35	Competing factors; socializing, entertainment, exhaustion
Chaff	4	Unclear or non-traditional, retained for data integrity

The afternoon (52 entries) was the single largest time window, likely reflecting the natural gaps in a student's day; between classes, during transit, and lunch breaks. Several participants explicitly noted reading on the bus or during lunch.

Critically, the data does not support a single dominant reading window. In the dataset, reading occurs across all waking hours, with context and intent shifting throughout the day. Morning reading is intentional and preparatory. Afternoon reading is reactive and academically driven. Evening reading reflects obligations and fatigue. Night reading is the most personally motivated, with a clear shift towards fiction and leisure content. This demonstrated arc of obligation in the morning, academic peak in the afternoon, and personal fulfillment at night is consistent and stable enough to be a usable design signal.

Affinity Diagram 3

How did participants read?

The third diagram maps the modalities participants used, comparing digital and physical media consumption across all 228 data points. All entries fit cleanly into the clusters below with no chaff cluster present.

Category	Entries	Description
Digital (total)	**144**	
– Unspecified digital	90	No device identified; digital treated as default
– Phone / Mobile	29	Quick consumption, browsing, time-filling
– Computer / Laptop	20	Primarily academic and school-related
– iPad / Kindle	16	Dedicated reading sessions, fiction and coursework
Physical	**34**	Books, novels, contracts, religious texts, newspapers
Did Not Read	**37**	Retained for data integrity

Digital reading outpaces physical reading by more than 4:1. The largest sub-cluster, unspecified digital (90 entries), is itself the most structurally significant finding: digital reading is so default that participants rarely thought to name the device. The specifically named modalities suggest that mobile and computer likely account for a large portion of unspecified entries, as

phone and laptop were the two most frequently cited devices. For many participants, the device itself has become invisible – digital is simply how reading happens.

Notably, the "did not read" count (37) exceeds physical reading (34), which may suggest that when participants disengage from screens, they are more likely to stop reading entirely than to switch to a physical format. However, this should not be overstated – many participants may simply not have wanted to read, independent of screen fatigue. There is also a negative relationship between digital reading and sustained attention: several participants noted that notifications and screen distractions interrupted their sessions, pointing to an inherent tension between the convenience of digital reading and the focus it requires.

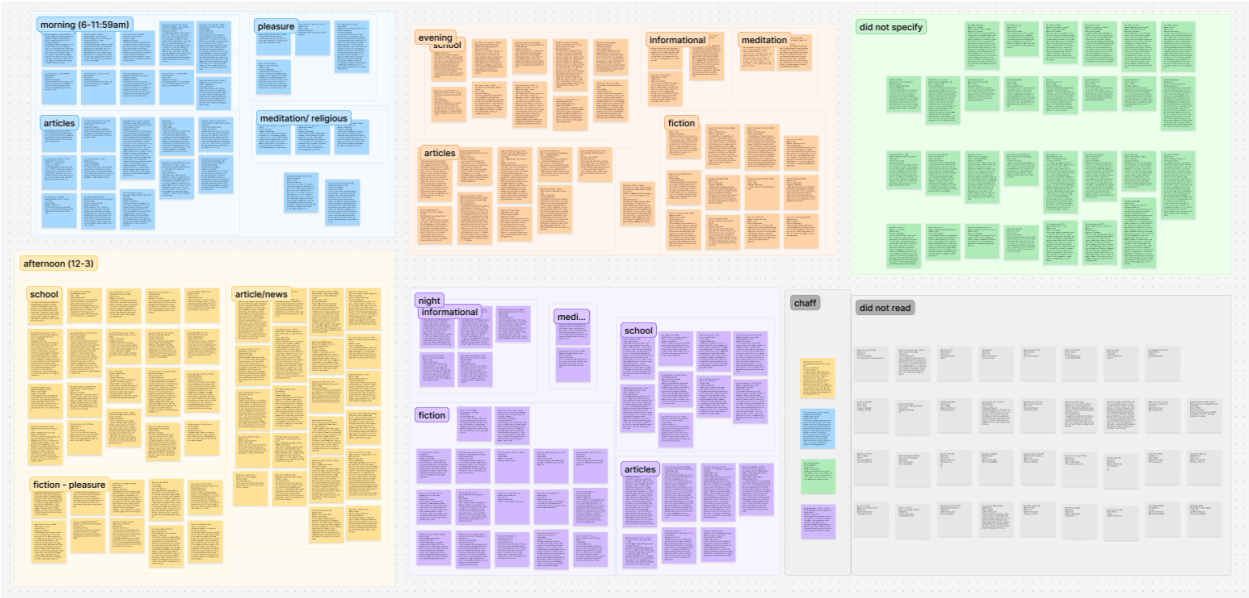
Relationships between Affinity Diagrams

Modality and Content:

Device choice and reading purpose are strongly linked:

- **Laptops** were used primarily for academic work (13 of 20 entries).
- **iPads** were used *exclusively* for academic work (10 entries), with zero leisure or personal reading logged. This is a striking finding: participants appear to have mentally categorized the iPad as a work tool, not a personal one, despite its form factor suggesting otherwise.
- **Mobile phones** dominated article and news consumption (14 entries) – quick, browsing-style reading during idle moments.
- **Kindles** were reserved entirely for fiction (6 entries), representing the most dedicated leisure reading device in the dataset.
- **Physical books** were used primarily for fiction (15 entries) and religious or self-improvement reading (7 entries) – the two most personally meaningful content types.

This pattern reinforces a consistent signal: physical and dedicated reading devices are reserved for content that users actually want to engage with, while digital multi-purpose devices carry the obligatory load.



Timing and content:

- Articles and current event reading peaked in the morning (12) and afternoon (22), aligned with students staying informed before and during the school day.
- Fiction reading increased steadily throughout the day: 4 in the morning, 10 in the afternoon, 12 in the evening, 17 at night. This suggests leisure reading is deferred until obligations are complete.
- Academic reading was the second most common activity across every time period: morning (10), afternoon (20), evening (10), and nighttime (9), with its peak in the afternoon most likely tied to class schedules, transit, and study gaps.

The data describes a clear and consistent daily arc: reading begins as obligation in the morning, peaks academically in the afternoon, and transitions toward personal fulfillment by evening and night.

Themes

Theme 1: Functional utility vs personal escapism: This is the most prominent theme in the data, and bridges the "why" between the the content users read and the modality they used to do so. Academic reading of textbooks, assigned articles and institutional documents is almost exclusively associated with higher-effort digital platforms, and described in language of obligation: something to be done, not enjoyed. In contrast, fiction, manga, and self-improvement reading appears on physical books and Kindles, accompanied by more positive emotional language. Participants reading for pleasure express engagement and desire, while those reading for school express duty and endurance. This distinction maps cleanly onto two fundamentally different user states, with different needs, tolerances for friction, and different attention levels.

Theme 2: Gap-Filling and Incidental Reading: Reading fits into student life opportunistically. Mobile phone usage during transit, lunch breaks, class downtime, and slow work shifts indicates that a large portion of reading is unplanned. Reading fills idle moments rather than occupying

dedicated time. Quick, frictionless access to digital content enables this behavior in a way that physical media cannot. The data also shows reading used to fill informational gaps: catching up on news, reviewing material before class, and staying current on personal interests. This said, not all gap-filling is passive; for some participants, reading fills a more intentional gap such as habit-building, spiritual practice, or self-improvement goals tied to the new semester. These are returning users with goals, not just time to kill.

Theme 3: Digital is Default:
Digital reading has moved beyond being a deliberate choice, For most participants, it is the unquestioned default, most visible in the 90 entries where participants didn't think to name a device at all. Physical media now requires active intentionality, where digital is the path of least resistance. The implications for product design are clear: users reading digitally are operating in an environment full of competing stimuli, and their attention cannot be assumed.

UX Implications

The findings from this study point to several concrete design principles relevant to any product where reading, information consumption, or content engagement is a core user behavior.

1. Design for emotional mode, not just task type: The clearest signal in this data is that users approach reading in two fundamentally different emotional states: obligation and desire. Obligation-driven users need efficiency: clear structure, progress indicators, and a direct path to completion. Desire-driven users need immersion: low friction, minimal interruption, and an interface that disappears into the background. Products that serve both should treat these as distinct modes, not a single unified experience. A feature that helps one will actively harm the other if applied indiscriminately.

2. Assume fragmentation, not focus: A significant portion of reading in this study was incidental, triggered by availability rather than intention. Users were reading opportunistically in two-minute windows – on a train, during a slow shift, in between classes. Designing for a user with a dedicated block of time and a clear goal is designing for the exception. Entry points should require zero setup. Content should be immediately surfaced. Session state such as reading position, progress, and context must be preserved seamlessly across fragmented sessions, because most users will leave and return repeatedly without finishing in a single sitting.

3. Recognize the two types of gap-filler: Not all incidental reading is the same. Passive gap-fillers are killing time and need effortless, low-commitment content access. Intentional gap-fillers are working toward a goal such as building a habit, staying informed, or improving themselves, and may respond well to features like streaks, progress tracking, and personalized recommendations. These are returning users with motivation, and they represent a higher-value engagement opportunity if the product supports their intent rather than treating them the same as passive browsers.

4. Time of day is a usable design signal: The daily arc in this data reflects obligation in the morning, peak academic engagement in the afternoon, personal and emotional reading at night, and is consistent enough to inform context-aware design decisions. Products serving mixed

content types could surface different material, adjust interaction density, or shift tone based on time of day or inferred session context. This behavioral pattern is present and stable in the data.

5. Mobile is not a secondary surface: Phone-based reading dominated quick consumption and gap-filling behavior, which collectively represents the highest-frequency reading windows in the dataset. Any product that treats mobile as a secondary or simplified version of a desktop experience will lose users precisely when they are most likely to engage. Mobile readability, scannability, and thumb-friendly interaction are not accommodations – they are the primary design target.

6. Protect attention actively: Digital reading does not occur in a focused environment. Users reported notifications and competing stimuli interrupting sessions, and the data suggests that when digital screen fatigue sets in, users stop reading entirely rather than switch to physical alternatives. This means the product itself must do the work of protecting the reading experience by reducing interruption, minimizing context-switching within the interface, and creating enough psychological separation from the broader device environment that sustained engagement becomes possible.

Limitations

The study's open-ended structure, while preserving authenticity and reducing response bias, introduced significant inconsistency in the data. Many participants omitted key details such as time of day or modality, increasing the effort required to categorize and interpret entries. A standardized input format requiring fields for time, content type, modality and motivation could significantly improve data quality in future iterations.

The sample population represents a meaningful constraint on generalizability. Participants were drawn exclusively from a single course at NJIT, limiting the sample to college students within a specific age range, geographic region, and institutional context. Reading behaviors observed here may reflect the demands of this population specifically rather than broader trends. Future research would benefit from a more diverse sample across institutions, age groups, and educational backgrounds to determine which findings hold broadly and which are specific to this context.

The timing of the study also likely inflated reading activity. Collected at the start of a new semester and shortly after the new year, participants may have been operating with higher motivation and more intentional habits than they would typically sustain long-term. The data may not accurately reflect typical mid-semester behavior, when workload pressure and fatigue tend to increase.

Finally, definitions of "reading" varied widely among participants, with some logging social media, game dialogue, and text messages while others applied a stricter standard. The explicit focus on reading in the study prompt may also have introduced performance bias, where participants consciously or unconsciously altered their behavior to align with perceived expectations. A broader diary study capturing a range of daily behaviors rather than explicitly mentioning reading could yield more naturalistic data.

Conclusions

This diary study demonstrates that student reading behavior is highly contextual, shaped by time of day, content type, and modality in interconnected ways. Several findings carry direct implications for UX design.

The data shows a clear dominance of digital reading, with over four times as many entries occurring on screen as opposed to physical media. Articles and books make up the majority of content consumed, revealing that students balance short-form informational reading with longer sustained materials. Academic and institutional reading was confined to digital platforms such as laptops, tablets, and iPads, while physical books and kindles were used mostly for leisure, spiritual, and self-improvement purposes. This pattern indicates that modality choice is not random, but closely linked to the specific task and emotional role of the reading activity. Digital platforms typically carry the functional load while physical or dedicated devices are reserved for personally meaningful content.

Reading for school and to catch up on current events peaked during afternoon hours, likely occurring between classes, during transit, or other breaks in participant's schedules. In contrast, fiction, manga, and personal interest reading increased significantly during evening and nighttime hours, when participants described seeking relaxation, escape, or enjoyment. Morning reading centered on preparation and staying informed, while as the day progressed reading shifted from obligation to personal fulfilment.

Collectively, the data suggests that reading is viewed more commonly as a flexible tool intertwined with modern student life rather than a consistent habit. Rather than declining as a whole, reading has adapted to modern schedules and technology. The ease and convenience of being able to read on a mobile phone any time and anywhere highlights how reading is actually used by many to fill idle moments rather than needing to be a dedicated activity. This study illustrates how context rather than preference alone, structures how, when, and why students engage with reading.

Next Steps

This study surfaces several directions worth pursuing in future research:

- Longitudinal replication capturing mid-semester behavior to test whether the patterns observed here (morning-to-night arc and the academic/leisure split) hold under higher workload conditions.
- Prototype testing applying the "emotional mode" design principle to a reading interface. Specifically testing whether separating obligation-mode and desire-mode entry points measurably improves engagement or task completion.
- Structured replication with participant IDs to enable individual-level analysis: Did certain participants consistently avoid reading? Did reading behavior cluster around specific personality types or course loads?

- This would also enable outlier interviews with participants who never read during the study window, or who read exclusively at night, to better understand the individual factors behind those patterns.

Reflection

While doing this study and writing the report, the main lesson I learned was how subjective qualitative analysis is. Before beginning the affinity diagramming process, I assumed categorizing the data would feel straightforward. Instead, I found myself repeatedly re-evaluating the same data and arriving at different, equally defensible conclusions. For example, one participant logged reading dialogue from Stardew Valley. As someone familiar with the game, I initially placed that entry into the "did not read" category, reasoning that gameplay text felt different from traditional reading. However when constructing other affinity diagrams I decided it was chaff instead. Neither were wrong, which was exactly the problem. This ambiguity is reflected in minor count discrepancies between diagrams, and is something I'd resolve in a future study by establishing explicit categorization rules before analysis begins.

The most difficult part of the experience for me was knowing when to stop, and trying not to over-refine. When creating affinity diagrams, I kept seeing new connections and different ways the data could be organized. There is no "correct" diagram, but so many different lenses that can be applied to the same dataset. Even coming back to already created affinity diagrams I found myself changing my mind and wanting to reorganize. Learning to commit to an interpretation and articulate why, rather than endlessly reorganizing, is a skill I want to keep developing.

If I were to redesign the study, I would implement a standardized digital form requiring participants to input time, modality, content type, and motivation in consistent fields to force formatting. I would also include participant identifiers such as numbering participants so I could compare between individuals. Did anybody not read the entire time? Did some people only read at specific times of the day? Being able to observe whether certain participants consistently read fiction, avoided reading altogether, or had varying experiences could provide better insight.

What surprised me most was how much I enjoyed the organizational work itself. Structuring ambiguous data into coherent patterns felt genuinely engaging, more so than I expected. I can see myself doing this kind of work professionally, though I want to improve my ability to communicate my reasoning to collaborators in real time, not just after the fact on paper. I generally enjoy organizing things, so to me it was pretty fun. I found organizing the data in my own mind significantly easier than explaining to others verbally or through writing.

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