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Reframing Financial Education in the Algorithmic Age: A Critical Inquiry into Digital Lending and Consumptive Culture among Indonesian University Students

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Research article

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ABSTRACT

This study conducts a critical inquiry into digital lending and consumptive culture among Indonesian university students, aiming to reframe financial education for the algorithmic age. Using a qualitative critical inquiry design analysed through reflexive thematic analysis, we interviewed 20 students from public, State Islamic (PTKIN), and private institutions who had used platforms such as ShopeePay Later, Kredivo, Akulaku, and Dana PayLater. The analysis produced four themes. First, frictionless onboarding, in which registration takes 10 to 30 minutes without adequate verification and is reinforced by limit-increase notifications and illusory discounts, operates as a structural trap that exploits students' psychological vulnerabilities. Second, borrowing motivations span a wide spectrum, from aspirational consumption such as game skins, concert tickets, and viral skincare to academic survival such as tuition, fieldwork costs, thesis components, and medicine for sick parents, indicating that failure in the education-financing system is a significant and overlooked structural dimension rather than the sole cause. Third, PTKIN students carry a spiritual conflict over *ribā* that compounds the burden, while accessible Islamic alternatives such as *qarḍ al-ḥasan* remain largely absent. Fourth, a severe pedagogical gap separates the normative financial education students receive from the algorithmic reality of the platforms, yet algorithmic awareness can emerge through dialogic reflection. Reframing financial education therefore requires intervention on several fronts at once: reform of the education-financing system, regulation of platform onboarding and collection practices, accessible Sharia-compliant credit for students who need it, and a critical financial pedagogy that equips students to resist algorithmic manipulation.

KEYWORDS

critical financial education, surveillance capitalism, digital lending, Indonesian university students, consumptive culture

INTRODUCTION

Digital financial technology has transformed how Indonesian university students access credit and manage money. In this study, digital lending is the umbrella term for the two overlapping products students most often meet: buy now pay later (BNPL or paylater) services and short-term online peer-to-peer loans, locally pinjaman online or pinjol, whether legally licensed or illegal. Platforms such as ShopeePay Later, Kredivo, Akulaku, and Dana PayLater have become embedded in students' everyday lives, driven by unprecedented internet penetration and aggressive social-media marketing. Recent data show paylater use among young people growing rapidly, with students forming one of the most active segments because of easy access and an almost frictionless registration process (Kredivo & Katadata Insight Center, 2024; Asosiasi Penyelenggara Jasa Internet Indonesia [APJII], 2024). The phenomenon is inseparable from campus social pressure, where consumptive lifestyles displayed on Instagram and TikTok create a fear of missing out (FOMO). Consumptive culture is used throughout this article to render the Indonesian perilaku konsumtif, which names spending driven by desire, display, and social comparison rather than by need. The Indonesian term carries a stronger moral charge than the English consumer culture, and that charge is part of what participants report.

A more troubling condition emerges from fieldwork: students' motivations are not always consumptive but often arise from academic survival and structural economic crisis. Some borrow to pay their single tuition fee (Uang Kuliah Tunggal, UKT), to cover laboratory or fieldwork costs, to buy a laptop for a thesis, or to purchase medicine for sick parents, while institutions provide no easily accessible emergency funding. The National Survey of Financial Literacy and Inclusion (Otoritas Jasa Keuangan & Badan Pusat Statistik, 2024) shows that students' financial literacy remains low, but interviews reveal a deeper problem: the financial education on offer is largely irrelevant to the algorithmic reality students face daily. Limit-increase notifications, illusory discounts, and psychological manipulation designed into fintech platforms make escaping a prolonged debt cycle harder still, a difficulty compounded by aggressive and sometimes illegal collection practices documented in the Indonesian market (Hidajat, 2020; Suryono, Budi, & Purwandari, 2021).

The problem grows more complex given students' sociocultural diversity, particularly at State Islamic Religious Higher Education institutions (Perguruan Tinggi Keagamaan Islam Negeri, PTKIN), where teachings on *ribā* generate a profound spiritual conflict. Indebted PTKIN students may suffer not only financial loss but prolonged guilt over violating religious principles, while lacking adequate access to Islamic alternatives such as qarḍ al-ḥasan or Baitul Mal wat Tamwil (BMT). At private campuses in regency areas and industrial zones, working students face income instability that exposes them to high interest and aggressive collection threatening both employment and study. Digital lending among Indonesian students is therefore not merely a matter of individual literacy but a systemic problem calling for a fundamental reorientation of financial education.

Literature Review

Research on digital financial literacy has grown alongside financial technology. Choung, Chatterjee, and Pak (2023) define it as awareness of the risks of digital financial products combined with the ability to use digital tools effectively, and their South Korean study links it positively to financial well-being, though this cannot be generalised to developing countries with weak consumer protection (Choung, Pak, & Chatterjee, 2025). Lo Prete (2022) adds that digital and financial literacy jointly determine the adoption of digital payments and personal financial management, yet does not address how lending platforms exploit the literacy gap through manipulative interface design.

Within the BNPL domain, Aalders (2023) shows how these services redefine indebted users as responsible consumers, obscuring the risk of long-term debt accumulation. Relja, Ward, and Zhao (2024) identify psychological drivers of BNPL use in the United Kingdom, including impulsivity and excessive optimism about repayment, while Powell et al. (2023) find that frequently late users report significantly lower financial well-being. Conducted largely in developed countries with stricter regulation, these studies cannot fully explain Indonesia, where oversight by the Financial Services Authority (OJK) remains weak and illegal lending is rampant (Hidajat, 2020; Suryono, Budi, & Purwandari, 2021). A similar pattern of fintech growth outpacing regulation appears in other emerging markets, most vividly in the collapse of peer-to-peer lending in China (Chen, Lai, & Lin, 2025) and in analyses of online consumer credit there (Zhao, Peng, & Li, 2022). Age is a further axis: Krupa and Buszko (2023) show that younger customers differ systematically from older adults in taking up FinTech products, making the student segment a distinctive object of study rather than a scaled-down adult market.

From the financial-socialization perspective, LeBaron-Black et al. (2023) find in a scoping review that parental communication about debt and the modelling of financial behaviour influence young adults into early adulthood, and Pak, Fan, and Chatterjee (2024) show that financial capability mediates the link between socialization and well-being. These studies assume parents possess adequate digital financial literacy, which is unrealistic in Indonesia, where most students' parents belong to a generation unfamiliar with fintech. Sehrawat, Vij, and Talan (2024) weigh parental socialization against socioeconomic characteristics for Gen Z's well-being, but still do not address the algorithmic dimension that shapes consumptive behaviour through personalized notifications and rewards.

The Indonesian context has begun to attract attention, though it remains limited. Aisjah (2024) combines financial parenting, financial self-efficacy, and social-media intensity to explain students' intention to use BNPL, finding the digital social environment dominant. Setiawan et al. (2022) analyse how digital financial literacy affects saving, spending, and future foresight, while Yanto et al. (2021) examine the role of peers and social media in building millennial financial literacy. A further body of recent Indonesian survey work links digital payment access, financial literacy, financial attitudes, and lifestyle to students' and Gen Z consumptive behaviour (Girsang & Dewi, 2024; Khofifah & Kardiyem, 2024; Kristyaningrum & Anindya, 2025; Pratama, Kusumawardhani, & Maulida, 2024; Santika & Yuhasril, 2025). These quantitative studies map determinant factors usefully, but their survey designs cannot capture the subjective experience of students entangled in debt, including how they negotiate identity, peer pressure, and conflicts of religious value that are often deeply personal (Lia & Natswa, 2021; Nurjannah, Nurdiana, & Ampa, 2023).

The theoretical framework derives from the critique of surveillance capitalism and the platform society. Zuboff (2019) defines surveillance capitalism as a new economic order in which technology firms produce not only goods and services but, above all, predictions about human behaviour sold on the market, and Cohen (2025) argues historically that this is the logical consequence of capitalist logic accelerated by digital technology. van Dijck, Poell, and de Waal (2018) add the platform society, in which online platforms are no longer neutral intermediaries but infrastructure shaping social, economic, and even democratic life. Beer (2019) shows in turn that the data gaze creates a power relation in which the monitored individual lacks equal access to their own data. Applied to digital lending among Indonesian students, this framework reveals that platforms do not merely facilitate transactions; they help shape desire, capitalise on psychological vulnerability, and foster a dependency that is structurally embedded rather than accidental.

Critical financial education provides the pedagogical response. Arthur (2016) argues that conventional financial literacy education, stressing only individual responsibility and saving, functions as a public pedagogy that consumerizes economic insecurity and delegitimizes collective solutions, and calls instead for teaching that questions the structures producing vulnerability. Panos and Wilson (2020) map the challenges and opportunities for responsible financial literacy in the fintech era, and Kass-Hanna, Lyons, and Liu (2022) show that building resilience through digital literacy in South Asia and Sub-Saharan Africa requires a contextual approach attentive to limited access to formal services. Yet no study has integrated critical pedagogy with an analysis of surveillance capitalism to reframe financial education for Indonesian students facing a predatory lending ecosystem, still less one that takes seriously the Islamic objections to *ribā* that shape how many PTKIN students experience it.

Research Gap

Three gaps follow from this literature. First, most studies on digital lending and BNPL use quantitative surveys that identify correlations but cannot capture the subjective experience, identity negotiation, and internal contradictions of students trapped in debt. Aisjah (2024), the closest Indonesian study to the present one, models intention to use BNPL from financial parenting, financial self-efficacy, and social-media intensity, and shows the digital social environment carrying the greatest weight. This study begins where that model ends. It asks what happens once intention has become debt, and it treats platform architecture and the education-financing system as objects of analysis rather than as unmodelled background. Second, the literature concentrates on developed-country contexts with mature regulation, leaving Indonesia, with weak consumer protection, non-transparent platforms, and strong religious values, greatly underexplored through in-depth qualitative research. Third, although the frameworks of surveillance capitalism and the platform society are well developed in media and communication studies, their application to financial education remains very limited, and no critical pedagogical model has been designed to equip students to confront the algorithmic manipulation of lending platforms. A study is therefore needed that not only describes consumptive behaviour but interrogates the systemic structures, power relations, and pedagogical failures underlying it.

Research Aims and Contribution

The inquiry asks how Indonesian university students come to use digital lending platforms, what that use costs them, and what follows for financial education in the algorithmic age. It explores students' subjective experiences of using lending platforms, analyses how structural factors such as social pressure, platform mechanisms, and higher-education financing contribute to debt entanglement, and identifies the elements of a critical financial pedagogy relevant to that reality. The theoretical contribution is the extension of the surveillance capitalism framework into financial education, long dominated by an individualistic normative approach. The practical contribution takes the form of policy-oriented proposals for campuses, regulators such as OJK, and curriculum developers, aimed at interventions that teach not only the technical skills of managing money but also critical awareness of platform architecture, algorithmic manipulation, and the structural pressures pushing students toward digital debt. The study uses semi-structured interviews with 20 students from various institution types, analysed through reflexive thematic analysis (Braun & Clarke, 2022, 2024) to capture the emic richness of participants' experiences.

METHOD

Research Design and Approach

This study uses a qualitative approach with a critical inquiry design to explore students' subjective experiences of digital loans and to analyse the systemic structures underlying them. The qualitative approach captures the complexity, contradictions, and emic nuances that quantitative surveys cannot reach, particularly in sensitive areas such as shame, spiritual guilt, trauma from debt collection, and the negotiation of social identity under peer and social-media pressure. The critical inquiry design moves the analysis beyond description toward the power relations embedded in platform architecture, the mechanisms of surveillance capitalism, and the gaps in education and regulation that leave students unprotected. That move follows Panos and Wilson's (2020) call to shift financial-literacy research toward a critical analysis of the structures that produce vulnerability. The analytic stance is abductive. Coding began close to the data and stayed open to unanticipated meanings, yet the interview guide and the interpretation were in explicit dialogue with surveillance capitalism (Zuboff, 2019; Cohen, 2025) and critical financial education (Arthur, 2016). We allowed the data to strain, qualify, and at points resist the theory.

Researcher Positionality and Reflexivity

Reflexive thematic analysis treats the researcher as a resource rather than a bias to eliminate, and so requires an explicit account of positionality. The team comprises scholars at Indonesian institutions working at the intersection of financial education and Islamic studies who know both campus financial pressures and the religious debates surrounding *ribā*. This afforded insider access, especially with PTKIN participants, for whom the spiritual dimension of debt could be discussed without translating basic concepts, while the team remained outsiders to each participant's institution and circumstances. Throughout, the researchers kept a reflective journal to track how their own commitments, including a normative sympathy for students under structural pressure, might shape which codes were foregrounded, and used team discussion to test interpretations against alternative readings.

Setting and Participants

The study was conducted at several Indonesian institutions selected purposively to represent diverse types: public universities (PTU) in large cities, PTKIN, and private universities (PTS) in regency areas and industrial zones. The assumption was that different contexts produce different experiences of digital loan use, a point Vasile, Panait, and Apostu (2024) support in noting that regional socioeconomic characteristics shape young adults' financial capability. Participants were 20 active students aged 18 to 26, in their second to tenth semesters. Recruitment combined open, purposive calls through cohort WhatsApp broadcasts and campus notice-board posters with snowball referrals from participants and academic advisers. The inclusion criterion was having used at least one digital lending platform (ShopeePay Later, Kredivo, Akulaku, Dana PayLater, or another legal or illegal online loan) within the past year. The group comprised 11 men and 9 women across law, Islamic family law, informatics engineering, mechanical engineering, accounting, management, agribusiness, Islamic da'wah management, and primary teacher education (PGSD), allowing cross-disciplinary analysis of how formal financial education, or its absence, relates to digital borrowing. Table 1 sets out the anonymised characteristics of all 20 participants.

Sample size was determined by information power (Malterud, Siersma, & Guassora, 2016) rather than data saturation. Given the focused aim, participants who each hold dense and specific experience of digital debt, strong researcher and participant dialogue, and an established theoretical scaffold, a modest sample carries high information power. We make no claim to statistical representativeness; the sample supports analytic, not statistical, transfer.

Data Collection and Analysis

Data came from semi-structured interviews of 45 to 90 minutes, guided by 18 questions developed from surveillance capitalism (Zuboff, 2019; Cohen, 2025) and critical financial education (Arthur, 2016). The guide covered five domains: the first experience of a digital loan, perceptions of access and risk, late payment and interaction with debt collectors, the influence of the social environment and social media, and prior financial education in the family and on campus. It closed with a reflection block (Questions 16 to 18) inviting participants to look back on how lending applications had shaped their decisions, analysed in the fourth theme. Interviews were held face to face at locations chosen by participants, audio recorded with consent, and transcribed verbatim in Indonesian. Because analysis and quotation crossed languages, transcription, coding, and theme development were carried out in Indonesian to preserve emic meaning; only the excerpts selected for presentation were translated into English by a bilingual team member and checked by a second bilingual reader against the original. Arabic and Islamic-finance terms such as *ribā*, *qarḍ al-ḥasan*, and *maqāṣid* were retained in transliteration to avoid flattening concepts that carry specific normative weight.

Analysis used reflexive thematic analysis (Braun & Clarke, 2022), following the reporting guidance of Braun and Clarke (2024). It began with familiarization through repeated reading of transcripts alongside the audio to capture intonation, pauses, and emotional emphasis, and moved to initial coding of both manifest content, such as statements about ease of registration, and latent content, such as a trembling voice when recounting how debt collectors contacted parents. Codes were grouped into five candidate themes, namely frictionless onboarding as a structural trap, motivations from FOMO to survival, the PTKIN context and spiritual conflict over *ribā*, the pedagogical gap between theory and reality, and emergent algorithmic awareness. Review refined these into four final themes, folding algorithmic awareness into the pedagogical-gap theme because the two formed one analytic movement from gap to critique, while the *ribā* theme was retained for its distinct normative logic. The final stage built an analytical narrative that interpreted rather than described participant accounts and actively sought data complicating the theory, including a contradictory case of participants already critical before any intervention. Trustworthiness rested on credibility through source triangulation across campus types, transferability through thick description, and dependability and confirmability through a documented audit trail; interpretive member checking with five participants was kept distinct from confirmatory re-interviews with seven participants whose accounts fell into the sensitive-data category.

Ethical Considerations and Safeguarding

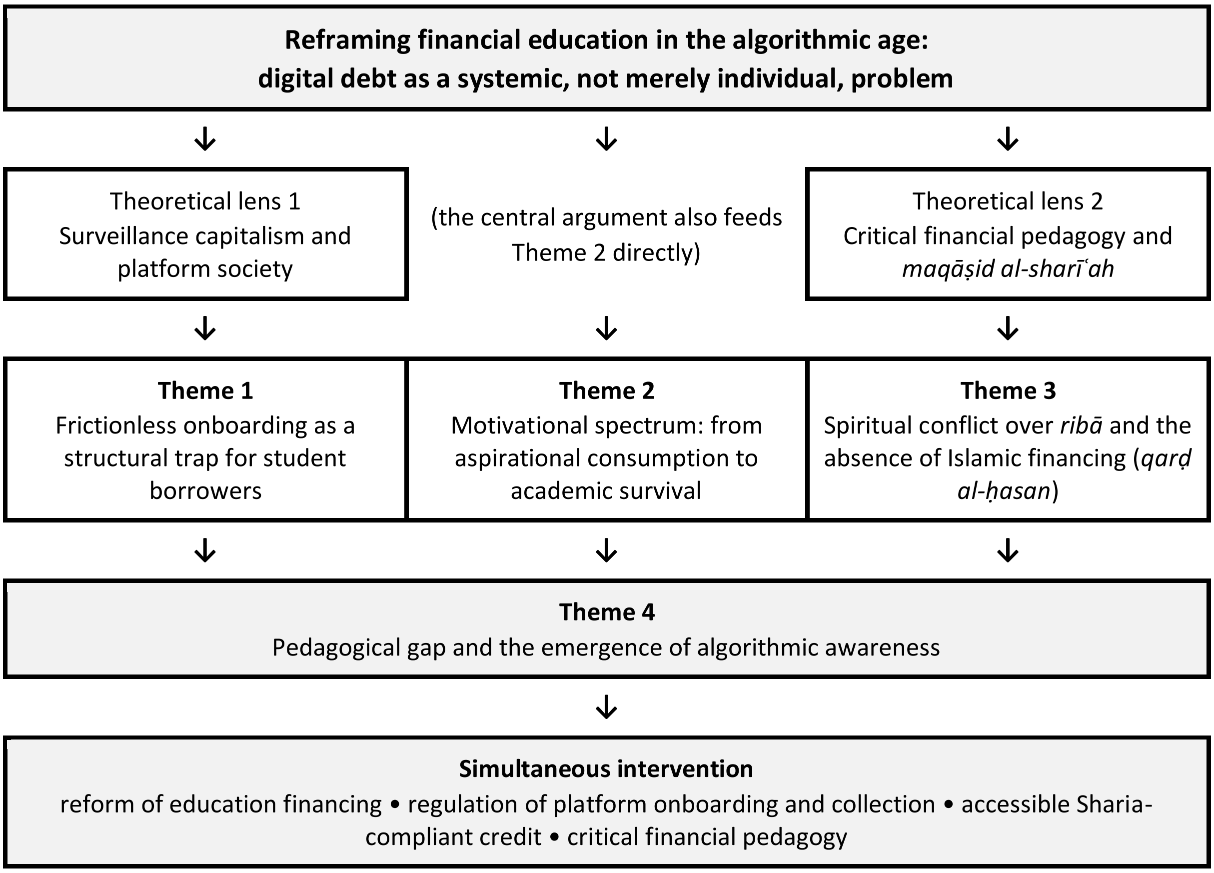
Ethical approval was obtained before fieldwork began. Informed consent covered the right to withdraw at any point, anonymization through the codes P01 to P20, verbatim quotation, and translation of selected excerpts into English. Consent also stated the limits of confidentiality. Participants were told that their accounts would be held in confidence with one exception: a disclosed intention to harm themselves carried an obligation on the research team to act. Suicidal ideation, self-harm, threats received during debt collection, and acute family financial crisis were identified in advance as the categories that would trigger that obligation.

The safeguarding protocol set out what followed. Where a participant made such a disclosure, or showed acute distress during an interview, the interviewer paused the recording and offered to end the session without consequence. The participant was then referred to mental-health counselling services accessible to them, through the campus counselling unit where one existed and through a named external service where it did not. Participants were offered the option of the interviewer making initial contact on their behalf. Referral was offered rather than imposed, and the interviewer recorded the outcome in the fieldnotes.

FINDINGS

Figure 1 presents the thematic map that organizes the analysis, linking the two theoretical lenses to the central argument, the four themes, and the multi-front intervention that follows from them. The four themes are elaborated below.

Figure 1. Thematic map of the study



Note. The map shows the central argument, the two theoretical lenses, the four themes, and the proposed multi-front intervention. Arrows indicate the direction of derivation, from the central argument and the two lenses to the four themes, and from the first three themes to the pedagogical theme.

Frictionless Onboarding and the Structural Trap of Digital Lending Platforms

Almost frictionless access emerged as the principal structural mechanism drawing students into a cycle of digital debt. All participants reported extreme registration speed, in which the process from entering data to disbursing funds took only 10 to 30 minutes with minimal requirements, typically a photograph of the national identity card and a selfie. A public-university student in the eighth semester (P01) said:

> *"It was very easy. I only uploaded a photograph of my identity card, a selfie, and my telephone number. Within ten minutes I was given a limit of Rp400,000. I was surprised that the requirements were so simple, with hardly any serious verification."*

A PTKIN student in the eighth semester (P08), who used four platforms at once, added that it took less than ten minutes for a Rp2 million limit with no check of ability to repay. Platforms deliberately design onboarding with minimal friction to lower new users' psychological threshold, a strategy Aalders (2023) identifies as redefining indebted users as responsible consumers when they are in fact placed in an asymmetric debt relationship.

Beyond technical ease, participants identified notifications and incentives that reinforce repeated borrowing. Messages such as "your limit has increased to 1 million," paylater-exclusive discounts, and "0 percent interest for 30 days" appeared periodically, personalized on the basis of purchase histories. An informatics engineering student in the fourth semester (P02) admitted being tempted to buy a game pad he did not need after a notification raised his limit to two million with an electronics discount. A regency-PTS student in the fourth semester (P13) was more critical:

> *"The limit-increase notifications always made my heart race. The free-shipping discount for paylater users also made me buy things simply because passing up the discount felt wasteful. I realised that the application was learning from my habits."*

This implicitly names the mechanism Zuboff (2019) describes, in which platforms produce predictions about user behaviour and sell them back as notifications and recommendations designed to trigger impulsive action. Cohen (2025) affirms that surveillance capitalism is the logical consequence of capitalist logic accelerated by digital technology, and this finding shows Indonesian students becoming a target of that exploitation.

Most worrying, almost no participant read the terms and conditions in full, and those who tried were overwhelmed by the document's length and legal terminology; even a law student (P01) admitted skimming the terms and focusing only on a small installment. This reinforces van Dijck, Poell, and de Waal's (2018) argument that platforms are infrastructure that shapes social and economic life rather than neutral intermediaries. An architecture that shows small monthly installments while concealing large effective interest, and that hides penalty clauses and data access behind a long "agree" button, is structural manipulation that leads students into a debt contract without adequate understanding. The failure to read is not mere negligence but the result of an interface designed to make risk information hard to access, a practice Beer (2019) calls the data gaze, in which the monitored individual lacks equal access to their own data.

A contradictory case complicates any deterministic reading of platform "traps." P13 recognised in real time that the app was learning from her habits, and an informatics engineering student who is also a programmer (P19) observed that an app is not merely a tool but influences decisions through design and algorithms. These participants exercised a critical awareness that preceded the interview, suggesting the structural trap is powerful but not total, and that student agency and platform power coexist in tension rather than one overriding the other.

A Spectrum of Motivations from Aspirational Consumption to Academic Survival

Participant motivations span a wide spectrum, which moves the analysis beyond the narrative that portrays borrowers merely as victims of consumerism. At the consumptive end, participants bought Mobile Legends game skins, sneakers, aesthetic-café coffee for Instagram content, K-pop concert tickets, and skincare viral on TikTok. An informatics engineering student in the second semester (P16) described spending Rp250,000 on epic skins over two months, and later found it ridiculous that he had been proud of a digital image. A public-university student in the eighth semester (P20) recalled buying a concert ticket on paylater out of desire and fear of being left out. As a management student in the fifth semester (P17) put it, many friends whose lives look luxurious on social media are in fact using paylater or borrowing online. This is consistent with Aisjah's (2024) finding that social-media intensity strongly influences BNPL intention, and with Lia and Natswa's (2021) account of Generation Z's dilemma over impulsive buying.

More concerning, and less attended to in the literature, is that many participants used digital loans for academic survival that could not be postponed. An agribusiness student at a regency PTS in the sixth semester (P12) borrowed Rp400,000 for fieldwork transport and accommodation when his parents had not yet sent money, using Dana Rupiah because it disbursed in thirty minutes. A mechanical engineering student at an industrial-zone PTS in the eighth semester (P14) borrowed Rp1.2 million from Kredivo for thesis components because his salary was two weeks away. The most affecting account came from a PTKIN student in the fourth semester (P09), who studies in Java while her family lives in Lombok, West Nusa Tenggara, and whose mother had fallen ill:

> *“When my mother fell ill and needed money for medicine, I was desperate. A friend at my boarding house recommended Kredivo. I used it without thinking twice. It was quick, only fifteen minutes. I cried after the funds came through, because I knew this was wrong. But at least my mother could be treated.”*

Another extreme case came from a da’wah management student at a PTKIN in the tenth semester (P10), who was forced to stop studying because of debt. During the pandemic his parents lost their jobs and he borrowed from legal platforms to pay tuition. When his limit ran out he turned to illegal ones, which he called his biggest mistake.

This survival motivation carries theoretical weight, because a framework blaming only consumptive individuals cannot explain student debt entanglement. It supports Arthur's (2016) argument that financial literacy education emphasizing individual responsibility functions as a public pedagogy that consumerizes economic insecurity and delegitimizes collective solutions. Students borrowing for tuition, fieldwork, parents' medicine, or thesis components are not living hedonistically but responding to a financing system that offers no emergency funds, no interest-free installments, and little crisis-responsive scholarship. As P10 put it, his debt was purely for tuition and living costs, and he felt the system forced him to live beyond his means because tuition keeps rising. The finding is relevant to Setiawan et al.'s

(2022) work on digital financial literacy but goes further, showing that literacy alone will never suffice while education costs remain punishing for poor students. In their systematic review, Vasile, Panait, and Apostu (2024) emphasize a contextual approach attentive to regional socioeconomic characteristics, and these findings confirm that students at regency PTS and PTKIN from farming, fishing, or factory-working families face structural vulnerability that students at large-city public universities do not.

Spiritual Conflict over *Ribā* and the Absence of Islamic Financing Alternatives

One dimension proved acute for PTKIN students yet remains largely invisible in the secular literacy literature: the spiritual conflict generated when interest-bearing debt collides with a deeply held prohibition on *ribā*. For these participants the harm was not only financial and psychological but moral, experienced as a violation of religious commitment that ordinary debt counselling does not address. An Islamic family law student in the sixth semester (P07) framed the conflict through his father, an ustadz who teaches that interest-bearing debt is a grave sin and who has never used an online loan. He had not dared to tell him:

> *"I am the son of an ustadz, yet I do the very thing he forbids. At every night prayer I recite istighfar, but in the morning I still have to pay the interest. It feels as though I am betraying two parties at once, my father and Allah."*

The weight surfaced most vividly for P09, for whom obtaining her mother's medicine and transgressing a religious boundary fused in a single moment when she cried after the funds were disbursed because she knew it was wrong yet her mother could be treated. A further PTKIN student in the eighth semester (P08) located the resolution in repentance rather than any financial remedy, noting that his parents, small traders, had taught him not to borrow but never what to do when he had no choice, and now supported his process of repentance.

Read against Islamic-finance scholarship, these accounts point to a double absence. First, the objection to *ribā* is not a marginal scruple but the organising principle of an alternative financial order whose stated purpose is human welfare and justice, the maqāṣid al-sharīʿah, rather than maximised return (Akbar & Siti-Nabiha, 2022). Second, the instruments this order offers for exactly these situations, above all qarḍ al-ḥasan, the benevolent interest-free loan, have demonstrable capacity to relieve hardship: studying a waqf-funded *qarḍ al-ḥasan* programme, Muneer and Khan (2022) show measurable reductions in multidimensional poverty among low-income borrowers. What participants lacked was not the concept but access. None reported a realistic route to a campus-linked qarḍ al-ḥasan facility or a functioning BMT at the moment of crisis; the online loan was available in fifteen minutes, the Sharia-compliant alternative effectively was not. The spiritual conflict is therefore not merely a matter of conscience but a structural gap in provision, and it is at this gap that predatory platforms capture observant students who have nowhere compliant to turn.

The Pedagogical Gap and the Emergence of Algorithmic Awareness through Critical Reflection

A severe pedagogical gap separates the financial education students receive from the algorithmic reality they face, although critical awareness of platform manipulation can emerge through dialogic reflection. Almost all participants reported that formal financial education, in high school and at university, was limited to normative material about saving, avoiding debt, and investing, without touching the concrete mechanisms of digital lending, how to read terms and conditions, or the strategies platforms use to exploit cognitive bias. A law student in the eighth semester (P01) recalled a single financial-literacy session in an Introduction to Management course that never discussed paylater or BNPL and did not connect with everyday reality. A primary-teacher-education student at a regency PTS in the fourth semester (P15) named a sharper paradox: trainee teachers learn to teach mathematics and Indonesian to children but never personal finance, so she asked how she could teach financial literacy to pupils while buried in debt herself. An accounting student in the second semester (P06) added that online-loan material was untouched even though it belonged squarely in his field. This confirms Yanto et al.'s (2021) observation that although peers and social media build much of the millennial generation's financial literacy, the role of formal institutions is minimal and not adaptive to fintech developments.

The absence of relevant education is compounded by inadequate family financial socialization, because parents belong to a generation unfamiliar with lending platforms. LeBaron-Black et al. (2023) find that parental socialization influences young adults into early adulthood, but this study shows that influence becoming inadequate when the object of socialization shifts from conventional debt to algorithmic digital debt the parents' generation cannot predict. Pak, Fan, and Chatterjee (2024) add that financial capability mediates the link between socialization and well-being, yet here the capability parents teach, to save and not borrow, does not transfer into the ability to read manipulative notifications or resist a rising limit.

The most optimistic finding is that algorithmic awareness, our term for critical awareness of platforms' mechanisms, can emerge through dialogic reflection such as an in-depth interview. In the closing reflection block (Questions 16 to 18), many participants said they had become aware of certain aspects of digital lending only while recounting their stories and answering the researchers' questions. A law student (P01) arrived at this recognition during the interview itself, having until then attributed his spending entirely to his own lack of restraint.

> *"It only dawned on me as I told the whole story from beginning to end. Before the interview I thought paylater was simply a neutral means of payment, and that if I spent too much, the fault was mine for lacking self-control. Looking back, I can see a pattern. Every rise in my credit limit came at a time when I was browsing online shops constantly, when I was under stress. That was no coincidence. They employ psychologists and data scientists who nudge me from behind the scenes. I was being manipulated, not making a free choice."*

Even the most traumatized participant, the da'wah management student who dropped out because of an illegal loan (P10), came to see online lending as a problem of humanity and justice rather than only finance, and resolved not to stay silent once he recovered. This emergence is pedagogically significant, showing that the critical financial pedagogy Arthur

(2016) proposes is not only possible but effective when designed as reflective dialogue in which students question platform structures rather than being fed the dogma of "do not borrow." It also accords with Kass-Hanna, Lyons, and Liu's (2022) recommendation that building resilience through digital literacy requires a contextual approach empowering individuals to recognize and resist systemic exploitation rather than merely transferring technical knowledge.

DISCUSSION

Integrating these findings yields the central argument of the study. Digital lending among Indonesian university students cannot be understood merely as a problem of individual literacy or consumptive morality. It is a systemic failure involving predatory platform design, the structural vulnerability of poor students, an unmet demand for Sharia-compliant alternatives, and the absence of critical financial pedagogy. The first finding reinforces Zuboff's (2019) surveillance capitalism and van Dijck, Poell, and de Waal's (2018) platform society by showing that platforms in Indonesia shape behaviour through personalized notifications, illusory discounts, and the concealment of risk behind a complex interface. This is not coincidental but a structured business model in which behavioural data are extracted, analysed, and turned back on users to encourage the next round of debt. Hidajat (2020) and Suryono, Budi, and Purwandari (2021) document unethical practices, including aggressive collection and illegal access to contacts, but this study goes further by showing that such conduct is already embedded in the most basic layer of platform architecture, the onboarding and notification systems. At the same time, the contradictory case (P13, P19) tempers a fully deterministic reading: platform power is considerable, yet some students read the machinery accurately even while caught in it, which is itself the seed of the critical awareness this study seeks to cultivate.

The second finding corrects the narrative blaming students as victims of consumerism. Most participants used loans for academic survival, which suggests that an expensive and inflexible financing system is a substantial structural factor rather than the sole cause of debt entanglement. This aligns with Arthur's (2016) critique that conventional literacy education consumerizes economic insecurity by placing responsibility on the individual while the structures producing that vulnerability, rising costs and the absence of campus emergency funds and crisis scholarships, escape interrogation. Sehrawat, Vij, and Talan (2024) find that socioeconomic characteristics influence Gen Z's well-being more than parental socialization, and this study confirms that students from farming, factory-working, and honorary-teacher families at regency PTS and PTKIN face structural vulnerability that improved individual literacy alone cannot overcome.

The third finding situates the *ribā* conflict as more than a private scruple. When observant students describe tears, secrecy from a devout parent, and repentance as the frame for resolving a debt, they report a moral injury for which secular debt counselling has no vocabulary, aggravated by the practical unavailability of qarḍ al-ḥasan or a functioning BMT at the point of need. Read alongside evidence that Islamic microfinance is oriented to maqāṣid-based welfare rather than pure profit (Akbar & Siti-Nabiha, 2022) and that qarḍ al-ḥasan can measurably reduce hardship (Muneer & Khan, 2022), the theme becomes a gap in ethical financial infrastructure, not merely personal piety. The fourth finding opens the opportunity to reframe financial education for the algorithmic age. Participants reported education that was too normative and parental socialization made inadequate by the digital generation gap; yet the emergence of algorithmic awareness through dialogic reflection shows that critical financial pedagogy is effective when designed as a participatory space that treats students as critical subjects. Lone and Bhat (2024) find that financial self-efficacy mediates the link between literacy and well-being, and this study adds that such self-efficacy must be built on a critical understanding of how platforms exploit user psychology, not on mere budgeting confidence. Choung, Pak, and Chatterjee (2025) show that digital financial literacy correlates with life satisfaction in South Korea, but in Indonesia, where consumer protection is weak, digital literacy must include a critical component that moves beyond technical skill toward political awareness of power relations in the fintech ecosystem. The study therefore expands the digital financial literacy framework, long dominated by an individualistic approach, toward a structural and critical one integrating surveillance capitalism, social justice, and a pedagogy of liberation.

Research Implications and Limitations

The findings carry implications for theory, practice, and policy. Theoretically, the study extends the surveillance capitalism framework (Zuboff, 2019; Cohen, 2025) and the platform society (van Dijck, Poell, & de Waal, 2018) into financial education, inviting a shift away from a literacy framework that blames only consumptive individuals and toward a critical financial pedagogy built on power relations, algorithmic mechanisms, and structural justice, close to what Arthur (2016) has in mind in arguing that education should equip learners to question and resist the structures producing vulnerability. Practically, educational institutions could redesign the curriculum to cover platform algorithms, reading terms and conditions, simulations of effective interest against monthly installments, and data protection, while providing emergency funds, interest-free tuition installments, and debt counselling integrated with academic advising; OJK could pursue stronger regulation, including a possible interest cap for the student segment, restrictions on collection that contacts lecturers or parents, pictorial risk warnings at checkout analogous to cigarette packaging, and support for qarḍ al-ḥasan lending for PTKIN students; and fintech developers bear an ethical responsibility for the social impact of design, for removing dark patterns that conceal interest and penalties, and for non-manipulative reminders and restructuring options. These are theory-informed proposals rather than empirical findings, since a qualitative study of 20 participants can establish that the problems are real and specify their mechanisms but cannot prove that a particular cap, warning label, or financing scheme will work, so they are offered to inform policy debate and to be tested by subsequent evaluative research. Four limitations qualify the account: voluntary participation and snowball referral mean the findings best represent students with moderate to heavy involvement in online lending, since those with the most traumatic experiences may have declined out of shame and those without serious problems may have been less motivated to join; data collection at campuses on Java, predominantly in East Java, limits transfer to eastern Indonesia, Papua, East Nusa Tenggara, or Maluku, where internet access and financial inclusion differ fundamentally; the cross-sectional design does not track behavioural change over time, including whether participants who said they would stop escaped the debt cycle or became entangled again; and, despite member checking and strict anonymization, the sensitive topics of debt, shame, and religious transgression leave open the possibility that some participants withheld information. Future research should therefore adopt a longitudinal design across several semesters, broaden the geographic scope to eastern Indonesia, and integrate the analysis of digital traces such as notification and transaction histories to complement interview data.

CONCLUSION

Digital lending among Indonesian university students is a systemic problem, and improving individual financial literacy will not resolve it. What the evidence points to is a reframing of financial education for the algorithmic age, and that reframing has to begin with the conditions that send students to these platforms. Reform of higher-education financing is therefore the first requirement: emergency funding and interest-free tuition instalments, together with a qarḍ al-ḥasan or BMT facility that students for whom *ribā* is a live ethical concern can actually reach at the moment of crisis. Regulation of onboarding and collection practices is the second. A critical financial pedagogy that equips students to recognize, analyse, and resist algorithmic manipulation is the third, and it depends on the other two rather than substituting for them. Drawing on 20 students from public, State Islamic, and private institutions, the study found that extreme ease of registration and personalized notifications operate as a structural trap exploiting cognitive bias and social pressure, though not so totally that student agency disappears. It found that many participants borrowed not for a luxurious lifestyle but for academic survival, so that blaming the individual alone obscures the failures of the education-financing and consumer-protection systems. Finally, it showed that algorithmic awareness can emerge through dialogic reflection, indicating that a critical financial pedagogy treating students as critical subjects is not a utopia but an achievable and urgent task for campuses, regulators, and civil society acting together.

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