

Mental Internal Friction among College Students in the AI Era: Digital Stress, Inner Conflict, and Low Behavioral Energy

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Abstract: This article reconstructs mental internal friction as an integrative concept for understanding college students' distress in the AI era. Existing research on rumination, technostress, fear of missing out, burnout, and AI anxiety explains important aspects of student distress, but it remains fragmented and does not fully capture how digitally mediated pressures become inwardly self-consuming. This paper argues that mental internal friction refers to a process in which digitally intensified inner conflict and repetitive self-monitoring deplete psychological resources and gradually reduce behavioral energy. Drawing on self-discrepancy theory, rumination research, Conservation of Resources theory, and socio-digital perspectives, the article identifies four amplifying conditions: hyper-connectivity, algorithmic comparison, AI-related competence uncertainty, and information overload. It further considers the implications of this framework for future research and for higher education responses to student well-being in digital and AI-mediated environments.

1. Introduction

Higher education is increasingly shaped by digital platforms, algorithmically curated social media, and, more recently, generative artificial intelligence systems that now permeate student life. College students are positioned at the intersection of intensified academic expectations and a digital environment that demands constant connectivity, performative self-presentation, and continuous technological adaptation. In response to this lived reality, the term mental internal friction has gained considerable traction in Chinese public discourse. It describes a subjective state of being “stuck inside oneself” — repeatedly thinking, comparing, and worrying while becoming progressively less capable of decisive action. Although the term emerged outside academic scholarship, Liu et al. (2025)[1] show that it has recently begun to attract more systematic attention as researchers attempt to clarify its psychological basis.

Despite its descriptive force, mental internal friction remains conceptually unstable in international scholarship. It is not fully reducible to anxiety, depression, burnout, or procrastination.

More importantly, the existing Anglophone literature on student distress in digital environments remains fragmented in at least three ways. First, there is construct fragmentation. Fear of missing out, technostress, burnout, and AI anxiety are often studied as separate constructs, even though they may describe related aspects of a broader condition. Khetawat and Steele (2023)[2] note that digital stress is not a single burden. It includes several related pressures, but research often separates them and examines them one by one. A similar problem appears at the level of process. Many studies stay at the two ends of the chain. They discuss causes such as information overload and digital stress, or they move directly to consequences such as burnout and disengagement. What happens in between is less clearly described. Naga and Ebaro (2024)[3] show that digital platforms can become techno-social stress environments. Even so, the inward movement of that stress—how it is absorbed, repeated, and turned against the self—still needs fuller explanation. There is also a problem of lived experience. Students do not usually encounter these pressures as separate variables. They often describe something more cumulative: a felt condition of inward strain that existing models only partly explain.

This is where the idea of mental internal friction becomes useful. The point is not to invent a wholly new phenomenon. The point is to bring several familiar processes into the same picture. What begins as digitally intensified pressure does not remain external for long. It can turn into inner conflict, and that conflict can keep students watching, checking, and correcting themselves. Over time, that repeated inward effort uses up psychological resources and leaves less energy for sustained action.

The same issue becomes harder to ignore in the AI era. Generative AI affects not only how students study, but also how they think about competence, authorship, and future work. Shekhar and Saurombe (2026)[4] describe algorithmic anxiety as a response to environments in which trust, expertise, and personal value begin to feel unstable. Wang (2026)[5] makes a related point from the perspective of students' future careers, showing that anxiety about AI is tied to how they imagine their place in work and society. In other words, AI-era pressure is not only technical. It is also existential, because it touches students' sense of who they are becoming.

Against this backdrop, the present study does three things. It first treats mental internal friction as a middle-range concept connecting inner conflict, resource loss, and weakened behavioral drive. It then traces how digital and AI-related pressures can intensify that process. Finally, it turns to higher education and asks what this way of understanding student distress means for institutional response. This is a conceptual paper, not an empirical one. Its task is more modest, but also necessary: to clarify a pattern that is often noticed in practice yet still insufficiently theorized in research.

2. Why Existing Constructs Fall Short: The Fragmentation of Current Explanations

To place mental internal friction within international scholarship, it helps to begin with a negative clarification. The term does not refer to a momentary hesitation or an ordinary difficulty in making decisions. It points instead to a more lasting condition. In that condition, aspiration, fatigue, self-expectation, and self-doubt do not settle into balance. They remain in tension, and the person keeps turning back toward the same unresolved concerns. The mind is occupied less by constructive reflection than by repetitive monitoring, emotional self-correction, and unresolved strain. This condition is not identical to ordinary indecision. It involves a continuing drain on psychological resources that gradually reduces the capacity for sustained and intentional action. What makes conceptual reconstruction necessary is not the absence of relevant constructs, but the fact that existing explanations tend to isolate mechanisms, environments, and outcomes rather than explain how they become one inwardly self-consuming process.

2.1 Mechanism-Oriented Constructs: Rumination and Self-Discrepancy

The first group of explanations focuses on the cognitive mechanisms that sustain distress,

especially rumination and self-discrepancy. Watkins and Roberts (2020)[6] show that rumination keeps negative feeling active by holding attention on distress and on the reasons one might be distressed. In digital settings, that mechanism matters because evaluative experiences are easy to revisit and difficult to leave behind. Zhang et al. (2024)[7] add a more concrete example: among college students, rumination helps explain how mobile phone addiction is related to poor sleep quality. This is useful here because it shows one route by which digital strain is carried into everyday life rather than ending when the screen is turned off.

Self-discrepancy theory offers a related but different angle. Higgins (1987)[8] argues that discomfort arises when there is a gap between the actual self and the self one hopes, or feels obliged, to be. In digitally mediated life, those gaps can become sharper because students are repeatedly exposed to curated performances and idealized standards. Still, neither rumination nor self-discrepancy fully captures what is at stake here. They help explain how tension starts and why it lingers, but they do not fully account for the drawn-out, self-consuming quality of the process. Xiao et al. (2025)[9] move the discussion one step further by showing that low self-concept clarity predicts poorer self-control through rumination. Their findings matter because they suggest that looping thought becomes especially damaging when students lack a stable inner basis for judging themselves.

2.2 Resource-Oriented Constructs: Depletion and Self-Regulatory Fatigue

If the first set of studies helps explain how tension keeps circulating, the second helps explain why that circulation becomes costly. Hobfoll (1989)[10] argues that stress becomes more serious when valued resources are under threat, already depleted, or not adequately restored. In the present discussion, those resources include attention, recovery time, emotional regulation, and a basic sense of agency. This line of thought is useful because it shows why repeated digital pressure can wear students down even when no single demand looks overwhelming by itself.

More recent studies point in the same direction. Duan et al. (2025)[11] report that social media overload predicts ego depletion, which then relates to lower learning engagement. Qiang et al. (2024)[12] find that intolerance of uncertainty contributes to academic burnout through self-regulatory fatigue. These studies clarify an important point: the cost does not come only from the number of demands students face. It also comes from the effort required to keep regulating themselves under those demands. Even so, resource-oriented accounts do not entirely solve the problem. They explain why students become tired, but not why that tiredness so often takes the form of inward friction rather than ordinary exhaustion. What still needs explanation is how so much psychological effort becomes tied up in self-monitoring, self-correction, and anticipated judgment, instead of moving outward into action.

2.3 Outcome-Oriented Constructs: Burnout and Languishing

A third line of research turns to outcomes, especially academic burnout and languishing. Maslach and Leiter (2016)[13] describe burnout through exhaustion, cynicism, and reduced accomplishment. Keyes (2002)[14] uses languishing to refer to emptiness, stagnation, and low motivation. These concepts are valuable because they give a name to what prolonged strain may look like once it has already become visible in students' functioning.

At the same time, they are largely endpoint concepts. They describe where the process may lead, but not how it develops. Mental internal friction refers to an earlier and more conflict-driven phase in which students are still attempting to cope, yet coping itself has become increasingly self-consuming. Burnout captures later exhaustion more clearly than it captures the inwardly abrasive process that precedes it. Languishing names low vitality, but not the recursive digital and psychological pathway through which that low vitality emerges. In this sense, outcome-oriented constructs identify the

consequences of prolonged strain without fully accounting for the process that produces them.

2.4 Environment-Oriented Constructs: Digital Stress and Evaluative Exposure

A fourth group of explanations focuses on the digital environment itself. This literature is valuable because it shows that online environments are not neutral settings, but structured sources of pressure. Yet on its own, it still remains incomplete. What matters is not only that digital environments expose students to stress, but that they repeatedly make that stress self-relevant.

Feng et al. (2025)[15] show that fear of negative evaluation mediates the relationship between social comparison orientation and problematic social network use. This finding is especially useful because it explains why digital comparison is not simply an external stimulus. It becomes consequential when external comparison is internalized as a continuing question of personal worth. Environment-oriented constructs therefore help identify the structural conditions under which mental internal friction becomes more likely, but they do not by themselves explain the inward process through which external pressure is translated into recursive self-monitoring, resource depletion, and low behavioral energy.

These four lines of research are all relevant, but they do not do the same work. Studies of rumination and self-discrepancy are useful for showing how tension keeps returning. Resource-based accounts help explain why that repeated tension becomes draining. Burnout and languishing tell us what prolonged strain may look like once it becomes visible. Research on digital stress, by contrast, is stronger on the surrounding conditions than on the inward process itself. The point of retaining mental internal friction is precisely that it brings these elements into the same discussion. Without such a concept, the pieces remain scattered.

3. Reconceptualizing Mental Internal Friction: An Integrative Conceptual Framework

In this article, mental internal friction is used in a specific and limited sense. It refers to a process in which digitally intensified inner conflict does not fade away but keeps turning back upon the self. That process is sustained by repeated self-monitoring, and over time it consumes psychological resources and weakens behavioral energy. The purpose of the concept is not to introduce a new disorder. It is to give a clearer name to a pattern that existing research often addresses in separate parts rather than as one connected movement. Put simply, the process begins with inner conflict, continues through depletion, and is later expressed in weakened action.

3.1 Inner Conflict as the Starting Condition

The first dimension of mental internal friction lies in a divided relation to the self. Many students are pulled by several demands at once. They want to do well academically. They are expected to stay visible in digital spaces. They are asked to adapt to new tools and new norms. At the same time, they are afraid of losing pace with peers or institutional expectations. In this respect, the concept overlaps with self-discrepancy theory. Higgins (1987)[8] argues that tension emerges when the actual self is experienced as falling short of idealized or socially expected versions of the self. In digitally mediated settings, that tension becomes harder to settle because evaluative standards do not stay still. They are constantly refreshed through comparison, visibility, and anticipatory self-checking.

What matters here is not simple indecision. The problem is not merely that students must choose among competing options, but that they are often required to inhabit contradictory orientations at the same time: to remain available yet deeply focused, adaptive yet original, visible yet authentic. When such demands cannot be fully reconciled, conflict is carried forward rather than resolved. Xiao et al. (2025)[9] further suggest that lower self-concept clarity intensifies this vulnerability by weakening

the internal frame through which students regulate and interpret themselves. The result is a continuing background condition of self-contradiction rather than a temporary episode of discomfort.

3.2 Resource Depletion as the Central Mechanism

The second dimension concerns the mechanism through which inner conflict becomes psychologically costly. Mental internal friction does not refer to conflict alone, but to conflict that is sustained through repetitive self-monitoring, anticipatory comparison, emotional self-correction, and unresolved mental tension. In this sense, the core problem is not simply that students face pressure, but that increasing amounts of psychological effort are consumed by managing themselves under pressure.

This is the point at which resource-based explanations become especially helpful. Hobfoll (1989)[10] argues that stress becomes more serious when valued resources are threatened or not adequately restored. In the present discussion, those resources include attention, recovery time, emotional regulation, and a workable sense of agency. This matters because mental internal friction can be exhausting even when students still look functional from the outside. Their effort is not disappearing; it is being redirected inward, toward checking, adjusting, and holding the self together, instead of moving outward into sustained action.

The key difference from a simple overload account is that the loss is not one-off. It repeats itself. Students are not worn down only because there is too much to do. They are worn down because self-monitoring itself turns into a standing task. Once that happens, strain is felt less as a single stressful episode and more as ongoing wear.

3.3 Low Behavioral Energy as the Behavioral Outcome

The third dimension concerns what prolonged internal friction does to action. The endpoint is often not dramatic collapse. More often, it appears as a quieter drop in the ability to act. For that reason, mental internal friction should not be treated only as emotional distress. It also involves reduced behavioral drive: less initiative, weaker concentration, more difficulty turning intention into action, and a gradual movement toward passive disengagement.

This dimension overlaps with work on languishing and burnout, but it should not be collapsed into either. Keyes (2002)[14] describes languishing as a state marked by emptiness, stagnation, and low motivation. Maslach and Leiter (2016)[13] describe burnout through exhaustion, cynicism, and reduced accomplishment. These concepts are useful because they name what prolonged strain can look like once it becomes visible. Mental internal friction, however, draws attention to an earlier phase—the point at which students still care about what they are trying to do, yet increasingly find themselves unable to sustain the effort that action requires.

That distinction matters. Low behavioral energy does not mean that desire has disappeared. It means that the psychological conditions for sustained action have already been weakened by repeated self-monitoring and accumulated depletion. Chen et al. (2024)[16] support this broader reading by showing that self-esteem affects learning adaptation through self-efficacy and learning burnout.

Their findings suggest that reduced action is often not a primary deficit, but the endpoint of a longer chain of self-evaluative and regulatory strain.

3.4 Conceptual Boundaries

To be analytically useful, mental internal friction must be distinguished from neighboring constructs. First, it is broader than single mechanisms such as rumination, but narrower than general mental health categories. Rumination describes a particular cognitive loop; mental internal friction

refers to the wider process that links digitally mediated pressure to that loop and then to resource loss and reduced action capacity. Second, it occupies an earlier temporal position than burnout. Burnout describes a later state of exhaustion more clearly than the inwardly abrasive process that leads toward it. Third, it is neither a purely environmental stressor nor a stable personal trait. It is not reducible to technostress, fear of missing out, or AI anxiety, because those constructs identify pressures or triggers rather than the process through which such pressures become self-consuming.

This is the main reason the concept is worth retaining. It bridges digital ecology, cognitive-emotional processing, and behavioral outcome within a single framework. Rather than treating inner conflict, depletion, and disengagement as separate problems, it places them within one process: digitally intensified contradiction leads to persistent self-monitoring, persistent self-monitoring drains psychological resources, and depleted resources weaken the capacity for sustained action.

4. Theoretical Foundations

To make sense of mental internal friction, one theory is not enough. The problem is too layered for that. What is needed is a framework that can account both for what happens within the student and for the conditions that keep that process active. For this reason, the discussion moves on two levels. One is psychological. It helps explain how inner tension forms, persists, and becomes costly. The other is socio-digital. It helps explain why that same process is repeatedly triggered and intensified in contemporary higher education. Read together, these two levels make it easier to see mental internal friction as a structured process rather than as a loose description.

4.1 Psychological Foundations

No single psychological theory captures the full sequence discussed here. A more workable approach is to let different theories clarify different parts of the same problem. Self-discrepancy theory is useful at the starting point. Higgins (1987)[8] argues that discomfort emerges when the actual self is judged against idealized or socially expected standards and found wanting. That idea matters here because digitally mediated student life keeps such standards highly visible. Under algorithmic conditions, expectations about competence, visibility, and achievement do not simply exist in the background. They are constantly refreshed.

Rumination research helps explain why the tension generated in this way does not pass quickly. Watkins and Roberts (2020)[6] show that rumination prolongs negative affect by fixing attention on distress and on its possible causes. In digital settings, that matters because unresolved evaluative experiences can easily return. Zhang et al. (2024)[7] suggest that rumination is one of the pathways through which digitally mediated stress affects everyday functioning. Put differently, self-discrepancy helps explain why pressure arises, while rumination helps explain why that pressure stays active.

But this still does not explain why students begin to lose the capacity for sustained action. For that, a resource perspective is needed. Hobfoll (1989)[10] argues that stress becomes more damaging when valued resources are under threat or are not sufficiently restored. Here those resources include attention, recovery time, emotional regulation, and agency. This perspective is important because it shows why mental internal friction should be treated as more than distressing thought. It is also a condition of cumulative cost. Qiang et al. (2024)[12] show that self-regulatory fatigue mediates the relationship between intolerance of uncertainty and academic burnout, while Duan et al. (2025)[11] indicate that social media overload contributes to depletion and lower learning engagement. Together, these findings suggest that repeated self-monitoring is not simply unpleasant. It uses up resources that might otherwise support outward action.

From this angle, self-regulatory fatigue matters because it links inner strain to outward difficulty. A student may remain highly concerned about performance and still find it hard to begin, continue, or stay focused. That is the point here. Pressure does not always produce collapse. More often, it slowly redirects effort inward until less remains for learning, concentration, and purposeful engagement.

4.2 Socio-Digital Foundations

Psychological theories help explain what happens inside the student, but they cannot by themselves explain why the process remains so active in present-day student life. A second level of explanation is therefore needed, one that addresses digital interaction, evaluative exposure, and AI-mediated uncertainty.

One useful concept here is communicative alienation. Habermas (1984, 1987)[17][18] uses the distinction between communicative life and system imperatives to show how interaction can become distorted when mutual understanding gives way to instrumental pressures. In the present context, the relevance of this idea is straightforward. Digitally mediated student life often places a premium on visibility, responsiveness, and strategic self-presentation. The issue is not that digital communication is unreal by definition. The issue is that platformized environments make recognition more conditional, more performative, and more exposed to judgment. Under such conditions, communication no longer just connects students to others. It also becomes a channel through which uncertainty, comparison, and self-monitoring are intensified.

A related issue appears in the language of authenticity. Wood et al. (2008)[19] describe authenticity through self-alienation, external influence, and authentic living. These dimensions are highly relevant where students are repeatedly encouraged to regulate themselves through approval and visibility. The problem is not just impression management. It is the weakening of a stable relation to one's own motives, values, and limits. Wei et al. (2025)[20] and Zhou et al. (2025)[21] suggest that a more coherent inner orientation is associated with stronger self-control and better psychological functioning. This is relevant here because mental internal friction becomes more likely when self-relation grows unstable and increasingly depends on external cues.

Another layer of pressure appears in the form of algorithmic uncertainty. AI-mediated environments do not simply add efficient tools to student life. They also reshape expectations about competence, authorship, and value. Shekhar and Saurombe (2026)[4] identify algorithmic anxiety as a form of distress tied to disrupted trust and threatened expertise. Yang et al. (2025)[22] suggest that AI dependence may influence students' innovation capability through cognitive inertia. These findings matter because they show that the AI era does not merely add more technology. It changes what students must negotiate about themselves, especially when they are no longer sure what remains distinctly theirs under technologically mediated conditions.

Seen together, these socio-digital conditions help explain why the psychological mechanisms discussed earlier do not simply come and go. They remain active because the surrounding environment keeps feeding them. Self-discrepancy becomes harder to settle. Rumination becomes easier to sustain. Depletion becomes more likely to accumulate. For that reason, mental internal friction should not be understood only as an individual weakness. It is also tied to the way communication, evaluation, and uncertainty are now organized in higher education.

5. How the Digital and AI Era Intensifies Mental Internal Friction

The usefulness of mental internal friction becomes clearer once we ask why it appears so often in current student life. The answer is not only that students face more pressure than before. The pressure itself now has a different shape. It is easier to carry around, harder to leave behind, and more likely to be turned inward. Four mechanisms are especially relevant here: hyper-connectivity, algorithmic

comparison, AI-related competence uncertainty, and information overload.

5.1 Hyper-Connectivity and the Erosion of Psychological Disengagement

A defining feature of digitally mediated student life is the weakening of boundaries between engagement and withdrawal. Messaging platforms, learning management systems, social media, and AI assistants all contribute to an environment in which students are not only reachable but implicitly expected to remain responsive. What matters here is not only frequent use, but the difficulty of disengagement. Petkovski et al. (2025)[23] show that online vigilance is negatively associated with mental health and that this relationship is mediated by perceived stress. Their findings are relevant because they suggest that digital connectedness can remain psychologically active even when students are not visibly online.

This matters for mental internal friction because inner conflict is harder to settle when withdrawal itself becomes unstable. Students may attempt to rest while remaining mentally oriented toward possible messages, notifications, or requests. Under these conditions, readiness becomes a continuing demand. Pressure is not limited to what students are doing; it also comes from what they feel they must remain prepared to do. Hyper-connectivity therefore shortens the periods in which students might otherwise step back and let self-monitoring ease.

5.2 Algorithmic Comparison, FoMO, and Performed Inadequacy

If hyper-connectivity keeps students exposed, algorithmic curation affects what they are exposed to. In digital settings, what students see is rarely neutral. What appears before them is often optimized, carefully selected, and already validated by metrics. As a result, comparison is no longer occasional. It becomes part of the background of daily life. Servidio et al. (2024)[24] show that fear of missing out is linked to problematic social media use through social comparison and self-esteem. Their findings matter here because they show that digital comparison is not a passive act of looking. It is bound up with feeling, judgment, and self-evaluation.

What turns this mechanism into a more serious problem is the way inadequacy gets absorbed into the self. Feng et al. (2025)[15] show that fear of negative evaluation mediates the relationship between social comparison orientation and problematic social network use. This suggests that comparison becomes especially damaging when external visibility is no longer treated as external. It is taken in as a judgment about one's own worth. For students already working in competitive academic settings, this can mean that even ordinary effort is accompanied by checking, recalculating, and second-guessing. The result is not only more stress. Attention is pulled inward, and self-monitoring becomes harder to shut off.

5.3 AI Anxiety, Competence Uncertainty, and the Delegation Paradox

The AI era adds another layer of pressure because it touches more than attention and comparison. It also affects how students think about competence, authorship, and their future value. Shekhar and Saurombe (2026)[4] argue that algorithmic anxiety appears when AI-mediated systems unsettle trust, expertise, and expectations of personal worth. Wang (2026)[5] makes a related point in the context of university students, showing that AI anxiety is tied to how they picture their future work and professional relevance.

Within this broader condition, the delegation paradox deserves special notice. Generative AI may reduce the effort needed for many academic tasks, but lower effort does not automatically mean lower strain. Students may become unsure about what they can still do on their own, what should count as their own work, and which forms of competence will continue to matter in AI-mediated settings.

Yang et al. (2025)[22] further suggest that AI dependence may influence innovation capability through cognitive inertia. That matters because delegation is not only a practical convenience. It can also produce fresh uncertainty about agency and ownership. In this way, AI does not simply lighten study. It may also make students less certain of themselves.

5.4 Information Overload and Attentional Triage

The last mechanism concerns how students cope with excessive informational demand. In contemporary higher education, they are expected to process course material, platform alerts, group messages, social feeds, and, increasingly, AI-generated content. In contemporary higher education, students are expected to process course materials, platform notifications, group messages, social feeds, and increasingly AI-generated content. The issue is therefore not information alone, but the constant need to sort, filter, and reprioritize competing inputs.

Saleem et al. (2024)[25] show that technostress negatively affects the quality of online learning by impairing attention allocation and retention. This matters because digital overload is more than a nuisance. It changes the conditions under which concentration can be sustained. In the present discussion, this can be described as attentional triage: students must keep deciding what deserves attention now, what can be ignored, and what has to wait. That sorting work is not free. It uses executive resources that might otherwise be spent on reading, thinking, or sustained learning.

The problem, then, is not simple distraction. A split begins to form in attention itself. One part of the mind remains turned toward the digital environment, while another tries to stay with the task at hand. Once that divided state becomes routine, the same broader pattern appears again: inner tension lasts longer, recovery becomes less complete, and outward action requires more effort than it seems to from the outside.

Taken together, these four mechanisms help explain why mental internal friction has become especially salient in the digital and AI era. Hyper-connectivity weakens disengagement. Algorithmic comparison turns repeated exposure into self-relevant inadequacy. AI-related uncertainty destabilizes competence and authorship. Information overload fragments attention and increases the cost of sustained action. Their cumulative effect is to transform external digital pressure into a more enduring internal process of self-consuming effort.

6. Theoretical Propositions

As a conceptual article, this study does not present new empirical data. Its value depends instead on whether the proposed framework generates clear and testable directions for future research. Based on the preceding analysis, four propositions can be derived.

Proposition 1: Internalization of Digital Pressure

Digital pressures are most likely to become mental internal friction when they are internalized as recurring self-evaluative demands rather than experienced as external inconvenience alone. Put differently, the turning point comes when digitally mediated cues—visibility, comparison, feedback, interruption—are no longer treated as passing events. They begin to be read as signs of worth, competence, or possible future loss. That is when external pressure starts to matter psychologically in a deeper way, because it is no longer outside the self.

Proposition 2: Recursive Self-Monitoring as the Core Mechanism

The link between digital pressure and low behavioral energy is likely to run through recursive self-monitoring. That includes rumination, anticipatory comparison, and repeated self-correction. Watkins and Roberts (2020)[6] show that rumination prolongs negative affect and disrupts regulation, while Xiao et al. (2025)[9] suggest that weak self-concept clarity intensifies this process by weakening internal self-structure. Read together, these findings suggest that internal friction is

maintained not simply by exposure to stress, but by the continuing effort of managing oneself under evaluative conditions.

Proposition 3: AI-Era Intensification through Competence and Authorship Uncertainty

Generative AI may intensify mental internal friction when it blurs competence, authorship, and the future value of one's own intellectual work. The central issue is not technology use by itself. It is what happens when AI-mediated work makes agency less clear and adds another layer of self-evaluation to ordinary academic tasks. Yang et al. (2025)[22] suggest that AI dependence may affect innovation capability through cognitive inertia. Their findings support the view that AI can deepen internal friction when students become unsure about what remains distinctly theirs.

Proposition 4: Relational Buffering

Dialogic and less metricized forms of academic interaction may reduce mental internal friction because they lower the pressure for constant self-evaluation. When students receive recognition that is not primarily tied to visibility, ranking, or performative output, the self-monitoring loop may weaken. Wei et al. (2025)[20] and Zhou et al. (2025)[21] suggest that a more stable inner orientation is associated with stronger self-control and better psychological functioning. This matters because supportive environments do more than offer comfort. They may interrupt the inward turn through which digital pressure becomes self-consuming. Taken together, these propositions sketch a process model. Digital pressure is first taken inward. It is then sustained through self-monitoring, sharpened by AI-related uncertainty, and in some cases reduced by less performative and more dialogic settings. Their main value is that they point toward a more focused empirical agenda.

7. Implications for Higher Education

If mental internal friction is not only a personal difficulty but also a condition intensified by contemporary academic environments, then institutional responses cannot stop at general calls for well-being. The implications of this framework are pedagogical, relational, and organizational.

7.1 Restoring Conditions for Psychological Disengagement

One implication concerns time and recovery. When university life is organized around constant responsiveness, students are left with fewer chances to step back from self-monitoring. For that reason, digital well-being should not be treated only as a matter of individual discipline. It is also a matter of institutional design. Clearer expectations about communication timing, response norms, and nonessential interruption may help protect the periods of disengagement that recovery actually requires.

7.2 Rethinking AI Literacy

A second implication concerns AI literacy. If generative AI increases uncertainty about competence and authorship, then AI education cannot stop at technical use. Students need clearer ways of distinguishing assistance from substitution, efficiency from understanding, and output from authorship. The point is not to reject AI. The point is to reduce the uncertainty through which AI use turns into a source of self-friction.

7.3 Building Less Performative Academic Environments

A third implication concerns the communicative environment of higher education. Where academic life is dominated by visibility, comparison, and metricized evaluation, students are more likely to regulate themselves through recursive self-monitoring. Less performative settings—such as

dialogic seminars, mentoring relationships, and peer communities built around mutual understanding—may ease that pressure. They do not remove difficulty. But they may reduce the extent to which difficulty is turned inward and experienced as self-friction.

7.4 Rethinking Evaluation

A final implication concerns assessment culture. If students increasingly come to understand themselves through external markers of performance, then institutions need to ask what kind of self-relation their own evaluation systems are producing. More room for process, reflection, and sustained engagement may lessen the demand for constant self-optimization. The issue is not whether higher education should remain demanding. It is what kind of demand it chooses to normalize. These implications do not amount to a complete solution. They do suggest, however, that student distress in the digital and AI era cannot be addressed only through coping skills. It is also shaped by the way communication, evaluation, and technological expectation are organized within higher education.

8. Conclusion

This article has treated mental internal friction as a way of describing a particular pattern of student distress in the digital and AI era. Rather than treating it as a vague buzzword or folding it into neighboring constructs such as burnout, rumination, or technostress, the article has used it to describe a process linking digitally intensified inner conflict, recursive self-monitoring, resource depletion, and low behavioral energy.

Its main contribution lies in showing why existing constructs do not fully capture the coherence of that process. Self-discrepancy helps explain where the tension begins. Rumination helps explain why it continues. Resource-based approaches clarify why the process becomes draining. Socio-digital perspectives show why it is repeatedly reactivated in environments shaped by connectivity, comparison, and AI-related uncertainty. What mental internal friction adds is not a replacement for these perspectives, but a way of reading them together.

Several limitations remain. This article is conceptual rather than empirical, so the construct still needs clearer operationalization and empirical testing. The discussion is also grounded mainly in the contemporary Chinese higher education context, which means that its wider applicability across cultural and institutional settings remains open. In addition, the AI landscape is changing quickly, so some of the concrete pressures discussed here may change form even if the underlying dynamic remains relevant.

Future research should therefore focus on three issues: refining the construct, testing the proposed process model, and examining possible interventions. More broadly, the article suggests that student distress in the digital and AI era cannot be reduced to screen time, distraction, or weak resilience. It also involves the growing difficulty of maintaining a steady relation to oneself under conditions of constant evaluation, recursive comparison, and technological uncertainty. For that reason, any adequate response will need to address not only how students cope, but also the environments in which they are required to study, perform, and imagine their future.

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References

- [1] Liu A, Wang Y, Li R, Chen Z, Ni J. Academic involution and mental internal friction of college students: The mediating role of academic stress and the moderating role of rumination [J]. *The Asia-Pacific Education Researcher*, 2025, 34: 1001-1010.
- [2] Khetawat D, Steele R G. Examining the association between digital stress components and psychological wellbeing: A meta-analysis [J]. *Clinical Child and Family Psychology Review*, 2023, 26: 957-974.
- [3] Naga J, Ebarido R. Social network sites (SNS) an archetype of techno-social stress: A systematic review [J]. *Heliyon*, 2024, 10(24): e41119.
- [4] Shekhar A, Saurombe M D. Algorithmic anxiety: AI, work, and the evolving psychological contract in digital discourse [J]. *Frontiers in Psychology*, 2026, 17: 1745164.
- [5] Wang X. The impact of career adapt-abilities on AI anxiety among English majors: A dual perspective analysis based on core self-evaluations at the person- and variable-centered levels [J]. *Frontiers in Psychology*, 2026, 17: 1767791.
- [6] Watkins E, Roberts H. Reflecting on rumination: Consequences, causes, mechanisms and treatment of rumination [J]. *Behaviour Research and Therapy*, 2020, 127: 103573.
- [7] Zhang J, Deng Y, Zheng S, Wan C. The mediating effect of rumination and fear of missing out between mobile phone addiction and sleep quality among college students [J]. *Scientific Reports*, 2024, 14: 79235.
- [8] Higgins E T. Self-discrepancy: A theory relating self and affect [J]. *Psychological Review*, 1987, 94(3): 319-340.
- [9] Xiao M, Xu M, Zhao F, Zhao M, Zhang X, Han L. How does self-concept clarity affect self-control? The mediating effect of rumination [J]. *Current Psychology*, 2025.
- [10] Hobfoll S E. Conservation of resources: A new attempt at conceptualizing stress [J]. *American Psychologist*, 1989, 44(3): 513-524.
- [11] Duan N, Li L, Kanchanapoom K, Qi Z, Xu T. The impact of social media overload on learning engagement: A moderated mediation model [J]. *BMC Psychology*, 2025, 13: 1322.
- [12] Qiang J, He X, Xia Z, Huang J, Xu C C. The association between intolerance of uncertainty and academic burnout among university students: The role of self-regulatory fatigue and self-compassion [J]. *Frontiers in Public Health*, 2024, 12: 1441465.
- [13] Maslach C, Leiter M P. Understanding the burnout experience: Recent research and its implications for psychiatry [J]. *World Psychiatry*, 2016, 15(2): 103-111.
- [14] Keyes C L M. The mental health continuum: From languishing to flourishing in life [J]. *Journal of Health and Social Behavior*, 2002, 43(2): 207-222.
- [15] Feng W, Zhang M Y, Bu Y B, Wang C L. Fear of negative evaluation mediates and core self-evaluation moderates the relationship between social comparison orientation and social network addiction [J]. *Scientific Reports*, 2025, 15: 41417.
- [16] Chen C, Xie Y, Liu X, Zhang Y, Li H, Yu M. The effect of self-esteem on college students’ learning adaptation: A chain mediation analysis of self-efficacy and learning burnout [J]. *The Asia-Pacific Education Researcher*, 2024.
- [17] Habermas J. *The theory of communicative action, Volume 1: Reason and the rationalization of society* [M]. Boston: Beacon Press; 1984.
- [18] Habermas J. *The theory of communicative action, Volume 2: Lifeworld and system: A critique of functionalist reason* [M]. Boston: Beacon Press; 1987.
- [19] Wood A M, Linley P A, Maltby J, Baliouis M, Joseph S. The authentic personality: A theoretical and empirical conceptualization and the development of the authenticity scale [J]. *Journal of Counseling Psychology*, 2008, 55(3): 385-399.
- [20] Wei J, Zhou X, Chan S L. The cross-lagged associations between authentic inner compass and self-control among Chinese college students [J]. *Applied Research in Quality of Life*, 2025, 20: 897-915.
- [21] Zhou X, Yi C, Chan S L, Wei J. Trajectories of authentic inner compass in the college years: Implications for psychological functioning among Chinese students [J]. *Journal of Happiness Studies*, 2025, 26: 48.
- [22] Yang Z, Deng H, Jiang N. The impact mechanism of artificial intelligence dependence on college students’ innovation capability: An empirical study from China [J]. *Frontiers in Psychology*, 2025, 16: 1732837.
- [23] Petkovski M, Rosen C, Lehmann N, Baune L, Steinrücke J, Dominguez-Rodriguez A. The relationships between online vigilance, mental health, stress, and fear of missing out: A cross-sectional study [J]. *Acta Psychologica*, 2025, 254: 105577.
- [24] Servidio R, Soraci P, Griffiths M D, Boca S, Demetrovics Z. Fear of missing out and problematic social media use: A

serial mediation model of social comparison and self-esteem [J]. Addictive Behaviors Reports, 2024, 19: 100536.
[25] Saleem F, Chikhaoui E, Malik M I. *Technostress in students and quality of online learning: Role of instructor and university support [J]. Frontiers in Education, 2024, 9: 1309642.*