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Preparing to Participate? Self-Regulated Learning across Flipped Classrooms in Bangladeshi Higher Education

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Abstract

Flipped classrooms depend on students undertaking consequential learning before class, yet the regulatory work that makes such preparation usable in the classroom is often treated as an individual responsibility rather than a pedagogical problem. This comparative qualitative multiple-case study examined how undergraduates regulated pre-class learning, how preparation became readiness for participation, and how course design shaped that process across two universities in Bangladesh. Data were generated through semi-structured interviews with 20 students, contextual interviews with two instructors, six classroom observations, and matched sets of pre-class and in-class course artefacts. Reflexive thematic analysis generated four interconnected themes: preparation as selective regulation under competing demands; readiness as a functional threshold rather than task completion; participation as both a consequence and a diagnostic test of preparation; and regulation as individually enacted but pedagogically organised. The analysis shows that access to materials did not automatically produce preparation, and preparation did not automatically produce participation. Students judged how much effort to invest partly from the signals embedded in task design and from what previous classroom experiences had taught them about the consequences of arriving prepared. The study argues that flipped learning redistributes regulatory responsibility but that this responsibility remains pedagogically conditioned. Effective flipping therefore requires more than transferring responsibility to students; it requires designing for responsibility.

Keywords: *flipped classroom; self-regulated learning; readiness; classroom participation; higher education; Bangladesh*

1. Introduction

The flipped classroom is commonly described as a reversal of the conventional sequence of teaching: students first

engage with foundational content before class, while scheduled class time is used for discussion, problem solving, feedback, collaboration, and application. This arrangement is now well established across higher education, and several reviews and meta-analyses report positive average effects when flipped designs are appropriately structured (Abeysekera & Dawson, 2015; Bredow et al., 2021; Jang & Kim, 2020; Milon, 2016; Al Nahar et al., 2024; Strelan et al., 2020). Yet the same literature also reports substantial heterogeneity. Some flipped courses produce stronger achievement and engagement, whereas others generate dissatisfaction, uneven preparation, or little advantage over conventional teaching (Akçayır & Akçayır, 2018; Milon et al., 2023; van Alten et al., 2019). The central problem is therefore not simply whether flipping works. It is what students must do for the pedagogical sequence to work, and how that work is organised across the boundary between learning before class and participating during class.

That problem becomes visible when flipping is understood as a redistribution of regulatory responsibility. In a teacher-led lesson, pacing, sequencing, explanation, and immediate monitoring are partly organised by the instructor. When initial content engagement moves outside class, students must decide when to begin, how carefully to engage, which resources to prioritise, how to recognise confusion, when to seek help, and whether they have reached a sufficient level of understanding to participate. These are core concerns of self-regulated learning (SRL), which treats learning as an active process involving planning, monitoring, strategic action, persistence, help-seeking, and reflection (Milon et al., 2018a, 2018b; Panadero, 2017; Pintrich, 2000; Zimmerman, 2002). The flipped classroom does not create these regulatory demands, but it makes them unusually consequential because the quality of pre-class regulation shapes what students are able, and willing, to do once classroom activity begins.

However, the literature frequently operationalises preparation through completion indicators such as viewing a video, opening a reading, or submitting a quiz. Completion is not equivalent to readiness. A student may finish a resource without being able to explain its main idea, recognise what remains unclear, or contribute to a subsequent discussion. Conversely, a student may engage selectively rather than comprehensively yet still arrive sufficiently oriented to participate. Recent research on preparatory activity shows that students follow different temporal patterns and that sustained preparation is related to time management, motivation, and performance (Alam et al., 2018; Milon & Ali, 2023; Omarchevska et al., 2025). Research on SRL supports likewise indicates that guidance, monitoring, and reflection can improve engagement, although effects depend on design (Milon et al., 2024; Lai & Hwang, 2016; Liu et al., 2024; Yoon et al., 2021). What remains less visible is the process connecting preparation to participation: how students judge that they are ready, how classroom activity confirms or disrupts that judgement, and how pedagogical cues shape the effort they invest beforehand.

This process gap is especially relevant in Bangladeshi higher education, where flipped learning is receiving growing attention but the available evidence has largely focused on feasibility, attitudes, engagement, and implementation challenges. Studies have reported generally positive student perceptions alongside concerns relating to workload, technological capability, connectivity, and instructional clarity (Alam et al., 2025; Al Mamun & Dippro, 2025; Hasan et al., 2022; Sultana & Jamal, 2025), while action research suggests that structured flipped designs can increase engagement (Alam et al., 2018, 2021; Awal, 2026; Milon et al., 2026). These contributions establish that flipped learning is viable in the context, but they reveal less about how students actually regulate learning that has been relocated outside the classroom. Treating Bangladesh only as an implementation setting also risks reproducing a deficit account in which incomplete preparation is attributed to students rather than examined in relation to workload, task signalling, classroom consequences, and teacher support.

The present study addresses this problem by examining the regulatory interface between pre-class preparation and classroom participation across two flipped undergraduate courses in Bangladeshi higher education. Its central argument is that effective flipping requires more than transferring responsibility from teacher to student; it requires

designing for responsibility. This argument does not deny learner agency. Rather, it treats self-regulation as situated practice: students make decisions about time, effort, strategy, and help within pedagogical environments that make some choices more consequential than others. Empirically, the study provides a process-sensitive account of how students prepare, judge readiness, participate, and recalibrate later preparation. Conceptually, it identifies readiness as an analytical bridge between preparation and participation and examines how regulatory work is shaped by the relationship among materials, teacher expectations, classroom tasks, peers, and students' competing demands.

The study addresses three research questions:

RQ1. How do undergraduate students self-regulate their pre-class learning across flipped classroom contexts?

RQ2. How do students' pre-class regulatory practices shape their readiness for and participation in classroom activities?

RQ3. What pedagogical and contextual conditions support or constrain students' regulation across the pre-class and in-class phases of flipped learning?

2. Literature Review

2.1 *Flipped learning and the regulatory problem*

Flipped learning is often justified through the opportunity it creates for active use of classroom time. Early syntheses highlighted its potential to move direct exposition outside class while making face-to-face sessions more interactive (Alam et al., 2022a, 2022b; Bishop & Verleger, 2013; O'Flaherty & Phillips, 2015; Zainuddin & Halili, 2016). Later meta-analyses generally found positive effects on achievement and other learning outcomes but also substantial heterogeneity across disciplines and implementations (Bredow et al., 2021; Hew & Lo, 2018; Strelan et al., 2020; van Alten et al., 2019). This pattern suggests that the flipped label alone explains relatively little. Courses described as flipped can differ markedly in resource length, guidance, accountability, in-class task design, teacher feedback, and the extent to which students must use pre-class learning during class (Mohd Pauzi & Shahadat Hossen, 2025). The important analytical question is therefore not only where content is encountered but how the two phases are connected and what kinds of learner work that connection requires.

Design-focused research reinforces this point. Chen et al. (2014) argued that merely exchanging the locations of lecture and homework is insufficient without a coherent model of engagement and evaluation. Reviews identify recurring advantages such as flexibility and increased interaction, but they also document recurring challenges: students postpone preparation, experience pre-class work as excessive, encounter unclear expectations, or arrive unable to participate in active tasks (Akçayır & Akçayır, 2018; Baig & Yadegaridehkordi, 2023; Divjak et al., 2022). van Alten et al. (2019) further found that quizzes and preservation of face-to-face time were associated with stronger learning outcomes. These findings point toward design features that make pre-class work consequential. They also imply that inadequate preparation cannot be interpreted solely as weak motivation; the perceived purpose, cost, and classroom consequence of preparation are partly produced by the course.

2.2 *Self-regulated learning in flipped environments*

SRL provides a conceptual language for analysing this preparatory work. Major SRL traditions differ in emphasis but converge on cyclical processes involving forethought, strategic action, monitoring, and reflection (Panadero, 2017; Pintrich, 2000; Zimmerman, 2002). Classic research links effective regulation to goal setting, planning, environmental structuring, self-monitoring, information seeking, effort regulation, and adaptive help-seeking (Pintrich & De Groot, 1990; Zimmerman & Martinez-Pons, 1986). Winne and Hadwin (1998) similarly emphasise monitoring and adaptation as learners compare their current state with task conditions and standards. These perspectives are useful for flipped learning because pre-class study requires students to make decisions that teachers would otherwise structure more visibly: when to start, how long to persist, whether a resource has been understood, <https://doi.org/10.53272/icrrd.v7i2.7>

and what to do when it has not.

These processes become especially visible when learning moves between online or independent preparation and face-to-face participation. Studies have linked online SRL with students' perceptions and intentions in flipped environments (Alam et al., 2024; Shih et al., 2019), while course-based research shows associations among preparation, SRL, and achievement (Sletten, 2017). Interventions that explicitly support planning, monitoring, or reflection can improve engagement and performance, although effects are not uniform (Lai & Hwang, 2016; Shyr & Chen, 2018; Yoon et al., 2021). Rasheed et al. (2020) and Liu et al. (2024) consequently argue that flipped classrooms require deliberate support for regulation rather than assuming students already possess the necessary strategies. Evidence from online and blended learning more broadly also shows that SRL practices vary across learning environments (Broadbent, 2017; Broadbent & Poon, 2015; Kizilcec et al., 2017). The implication is that SRL should not be treated as a fixed learner trait or a prerequisite that students either possess or lack.

2.3 From preparation to readiness and participation

The relationship between pre-class preparation and classroom participation is the hinge of the flipped sequence. Preparatory completion is commonly represented by video views, quiz submissions, or self-reported study, but these indicators say little about whether students have developed usable understanding. Omarchevska et al. (2025) demonstrated that students follow distinct preparatory activity patterns over time and that consistent engagement is related to performance and time-management regulation. Dianati et al. (2022) likewise found that flipped learning can create flexible opportunities for SRL while workload and limited guidance may constrain students' ability to use that flexibility productively. Together, these studies complicate a binary distinction between prepared and unprepared students. Preparation can be partial, selective, strategically timed, or sufficient for one classroom demand but inadequate for another.

The present study uses readiness to name this intermediate condition without treating it as a psychometric trait. Readiness refers to students' situated judgement that they possess enough understanding, orientation, and confidence to enter the activity that follows. This distinction matters because participation is not synonymous with attendance or visible talk. A student may be present yet unable to follow discussion, or may understand the material but remain reluctant to speak because of language, confidence, or group dynamics. Preparation therefore creates conditions for participation without determining it. Equally important, classroom activity can test students' prior judgement of readiness. Questions, explanation to peers, application tasks, and feedback may reveal that material recognised at home cannot yet be used. Participation is thus both an outcome of earlier regulation and a source of information for later regulation, making the relationship recursive rather than linear.

2.4 Bangladeshi higher education and the process gap

Bangladesh provides an analytically useful setting for examining this process without presuming a culturally fixed style of learning. Existing studies report both enthusiasm for flipped approaches and practical concerns involving technology, workload, teacher preparation, and instructional support (Al Mamun & Dippro, 2025; Hasan et al., 2022; Sultana & Jamal, 2025). Awal (2026) similarly shows that structured pre-class preparation and active in-class work can enhance engagement in a Bangladeshi tertiary setting. These studies establish a growing local evidence base, but their dominant questions concern feasibility, perceptions, implementation, or short-term engagement. Less attention has been given to the micro-processes through which students interpret pre-class demands, decide how much effort to invest, monitor understanding, and use classroom experience to recalibrate later preparation. Addressing that gap allows the context to do analytical work: not as a label explaining behaviour, but as a configuration of course workload, digital access, teacher expectations, institutional routines, and

participation norms within which regulation is enacted.

3. Methodology

3.1 Design and cases

The study adopted an interpretivist comparative qualitative multiple-case design (Alam et al., 2022b, 2025; Milon et al., 2024; Merriam & Tisdell, 2016; Stake, 1995). Two undergraduate English courses at two private universities in Bangladesh formed the bounded cases. Both courses had used flipped learning across a sustained sequence of lessons rather than as a single intervention, and students were familiar with receiving videos, readings, slides, or guiding tasks before class and using classroom time for discussion, problem solving, explanation, or group activity. The cases were selected because they offered a common pedagogical phenomenon within different course-level arrangements. Comparison was used to identify processes that appeared stable across the two settings and those that varied with how preparation was signalled, supported, and followed up. The analysis did not treat institutional identity as an explanatory category and was not designed to rank the universities.

3.2 Participants and data generation

Criterion-based purposive sampling was used to recruit 20 undergraduate students, 10 from each course. Participants were at least 18 years old and had experienced a minimum of four complete flipped-learning cycles in the focal course so that their accounts drew on repeated rather than one-off experience. Variation was sought in preparation habits and prior experience to avoid constructing the dataset only from highly engaged students. One instructor from each course also participated in a contextual interview. Student interviews lasted approximately 30–40 minutes and were conducted in Bangla or English according to participant preference. The interviews were episode-centred: students reconstructed a lesson for which they had prepared well, a lesson for which preparation was weaker, how they judged whether they were ready, what happened once classroom activity began, and whether that experience changed later preparation. Instructor interviews focused on intended pre-class work, expected readiness, links between pre-class and in-class phases, and responses to uneven preparation.

The interview dataset was supplemented by six non-participant classroom observations, three in each case. Observation focused on how prior preparation was activated, how students entered discussion or group work, what happened when students could not proceed, how peers contributed to recovery, and how instructors responded to uneven readiness. Observation was not used to infer unobservable pre-class cognition; it documented visible participation and the pedagogical conditions in which participation occurred. For every observed lesson, matched course artefacts were collected from the pre-class and in-class phases. Depending on the lesson, these included video links, slides, assigned readings, guiding questions, low-stakes quizzes, announcements, worksheets, discussion prompts, and activity sheets. Matching artefacts to observed lessons made it possible to examine whether the purpose and expected depth of preparation were visible and whether subsequent classroom activity materially depended on prior engagement.

3.3 Data preparation and analysis

Interviews were transcribed verbatim. Bangla interviews were analysed in Bangla where feasible to preserve participants' phrasing, and extracts selected for reporting were translated into English and checked against the original wording. Data were analysed using reflexive thematic analysis (Braun & Clarke, 2006, 2019, 2021, 2022). SRL concepts functioned as sensitising ideas rather than a predetermined codebook. Analysis began with repeated reading and case-based coding of planning, timing, strategy use, monitoring, help-seeking, perceived readiness, participation, and pedagogical conditions. Codes were then compared for relationships and developed into meaning-centred themes. A within-case analysis preceded cross-case comparison so that differences in course

design were not erased too early. Instructor accounts, observations, and artefacts were treated as contextual evidence that illuminated different parts of the process rather than as a mechanical validity check on students' accounts.

Reflexive memos recorded interpretive decisions, alternative explanations, and instances that complicated emerging claims. Particular attention was given to students who reported careful preparation but limited visible participation, and to students who recovered from incomplete preparation through peer or teacher support. A data-source matrix was used to map candidate themes against student accounts, instructor explanations, observed classroom episodes, and matched artefacts. The purpose of the matrix was not to count agreement but to examine convergence, tension, and the distinct contribution of each source. Consistent with reflexive thematic analysis, no intercoder reliability coefficient was calculated; analytic discussions among the researchers were used to interrogate assumptions and refine interpretations. Sample adequacy was considered through information power rather than a mechanical claim of saturation (Malterud et al., 2016), given the focused aim, bounded cases, repeated flipped experience, and multiple sources of contextual evidence.

3.4 Reflexivity and ethics

Ethical approval was obtained before data collection, and all participants received study information and provided informed consent. Participation was voluntary, students could decline any question or withdraw, and participation had no bearing on course grades. To reduce the influence of teacher–student power relations, instructors did not recruit or interview their own assessed students, and individual participation decisions were not disclosed to instructors during assessment. Universities, instructors, and students were anonymised, and participant codes are used in reporting. The research team maintained reflexive records of their assumptions about flipped learning and SRL, particularly the risk of interpreting incomplete preparation as a learner deficit. Reflexivity therefore accompanied both coding and cross-case comparison, with attention to how researchers' prior commitments could overstate either student autonomy or teacher control.

4. Findings

Four themes captured how regulatory work moved across the pre-class and in-class phases. The two cases showed substantial convergence, but the visibility and consequence of preparation differed. In Case A, brief guiding questions and occasional opening checks made the purpose of pre-class work relatively explicit. In Case B, students had greater flexibility but encountered more variable signalling, including lessons in which key material was substantially recapped before activity began. These differences did not produce two distinct types of learner. Rather, they altered the information students used when judging whether preparation was worth immediate effort and what counted as sufficient readiness. Across both cases, the relationship among preparation, readiness, and participation was conditional rather than automatic.

4.1 Preparation was selective regulation under competing demands

Students did not describe preparation as comprehensive completion of everything assigned. Instead, they regulated effort selectively, concentrating on material they perceived as difficult, important, or likely to matter in class. Typical strategies included watching or reading once for orientation, taking brief notes, replaying difficult sections, rereading, searching for another explanation, and postponing less urgent material. Competing assignments and limited time were recurrent reasons for compressed preparation. This pattern is analytically different from simple non-compliance: students were allocating finite time and attention across multiple academic demands, and their preparation reflected judgements about difficulty, urgency, and anticipated classroom consequence.

“Sometimes I do not have enough time because of other assignments, so I quickly look through the materials. Then

I find it harder to participate in class” (S04, Case B).

The classroom consequences anticipated by students shaped these decisions. When a quiz, discussion, explanation, or group task clearly depended on pre-class material, students reported preparing more carefully. Instructor accounts similarly indicated that preparation was stronger when students knew they would have to use the material rather than merely recognise it. Matched artefacts helped explain this pattern. In Case A, preparatory prompts more often named the subsequent task or supplied guiding questions, whereas some Case B materials functioned as general preparation without specifying how they would be used. The cross-source pattern therefore shifts interpretation away from a simple motivation deficit. Students’ effort was responsive to the pedagogical signals through which preparation became, or failed to become, consequential.

4.2 Readiness was a functional threshold, not task completion

Students rarely defined readiness as having finished every item. Instead, they described a functional threshold: understanding the main ideas, being able to explain a concept in their own words, answering basic questions, or knowing enough to enter a discussion. Self-explanation was especially important because it converted familiarity into a test of usable understanding. Replay, rereading, note review, and external searching were common responses when that test failed. Completion and readiness were therefore analytically distinct. A student could reach the end of a video or reading without judging the material usable, while another could engage selectively but still develop enough conceptual orientation to participate productively in the task ahead.

“If I can explain the topic in my own words, I know I have understood it. If I cannot, I read or watch the material again” (S02, Case A).

This threshold was provisional rather than fixed. Students described occasions when they felt prepared at home but discovered during class that their understanding was shallow once they had to answer a question, explain an idea, or apply it. Classroom observations showed the same tension at the behavioural level: some students reopened pre-class materials during group activity, waited for a peer to clarify the task, or sought teacher confirmation before contributing. Such behaviour could not reveal what regulatory process had occurred at home, but it showed that nominal completion did not produce uniform readiness. Readiness was therefore best understood as a task-sensitive judgement that could be confirmed, revised, or disrupted when students encountered the actual demands of participation.

4.3 Participation was both a consequence and a diagnostic test of preparation

Preparation affected participation most visibly through confidence, comprehension, and speed of entry into classroom activity. Students who felt ready described answering questions, joining discussion, explaining ideas to peers, and contributing earlier in group work. Underprepared students more often reported staying quiet, listening first, or depending on better-prepared peers to establish the direction of the task. Across the observations, uneven preparation did not necessarily stop activity because peers and instructors often enabled recovery, but it influenced who initiated discussion and who followed. Participation could therefore conceal as well as reveal differences in readiness: a group might complete a task collectively even when individual members had entered it with very different levels of preparation.

“When I prepare well, I feel more confident and can answer questions or participate in group work. Without preparation, I usually stay quiet” (S13, Case B).

Not all accounts followed a simple preparation–confidence–participation sequence. Some students reported preparing carefully yet speaking little because they remained uncertain about expressing ideas publicly, while others entered discussion after partial preparation by listening first and contributing once they had reconstructed

the task. These instances prevent readiness from being treated as a deterministic cause of visible participation. Preparation expands the resources available for participation, but contribution is also mediated by confidence, language, group dynamics, task format, and the opportunities created by the instructor. The relationship is enabling rather than automatic. This distinction also explains the value of observation alongside interview accounts: similar levels of reported preparation could become different forms of participation under different interactional conditions.

Classroom experience also fed back into later regulation. Students reported beginning earlier, taking better notes, or giving greater attention to difficult material after struggling in a previous lesson. Conversely, successful participation could validate a strategy such as targeted note-taking or self-explanation. In this sense, participation was not the endpoint of the regulatory cycle. It operated as feedback that recalibrated subsequent preparation. A difficult classroom episode could reveal that completion had been superficial, while a successful explanation to peers could confirm that the student had reached a workable level of readiness. The pre-class and in-class phases were thus connected recursively rather than as a one-way sequence from preparation to performance.

4.4 Regulation was individually enacted but pedagogically organised

Across both cases, students located responsibility in both themselves and the teacher. They accepted that they needed to prepare, but repeatedly emphasised short and manageable materials, clear instructions, examples, guiding questions, and visible links to classroom activities. These features were not simply preferences for convenience. They reduced uncertainty about what mattered and offered cues for monitoring preparation. Observations further showed that brief retrieval questions or immediate use of pre-class concepts created a visible consequence for preparation, whereas extended re-teaching could weaken that consequence by making it possible to defer serious engagement until class. Teacher support therefore shaped regulation not by replacing student responsibility but by organising the conditions under which responsibility could be exercised.

“Students should prepare, and teachers should provide clear, organised and useful materials and give enough opportunities to participate” (S09, Case A).

The artefact and observation comparison also showed why clarity alone was insufficient. Students could understand what material had been assigned yet remain uncertain about the expected depth of engagement. Instructions that merely told students to “watch” or “read” left the endpoint of preparation undefined. By contrast, prompts asking students to identify an argument, prepare an example, or answer a small set of guiding questions made the expected level of engagement more visible. The same distinction appeared in class. When instructors moved from a brief retrieval prompt directly into application, students received immediate information about whether their preparation was adequate. When substantial explanation preceded the activity, readiness could be postponed until the lesson itself. Regulatory support therefore concerned not only access and clarity but also the specification of what preparation was for and what would count as enough.

The cross-case comparison sharpened this point. Case A’s stronger alignment between preparatory prompts and opening activities made the consequence of preparation more visible and reduced uncertainty about what students were preparing for. Case B’s greater flexibility offered room for self-direction but also made postponement easier when classroom consequences were less predictable. Neither arrangement was inherently superior: highly structured preparation could become compliance-driven, while loosely structured preparation could advantage students who were already confident self-regulators. Across the two cases, regulation remained individually enacted but pedagogically organised. Course design did not determine student behaviour, yet it shaped the cues, costs, and consequences through which students decided when, how, and how deeply to prepare.

5. Discussion

The findings recast flipped learning as a problem of regulatory organisation rather than content relocation. The central process was not whether students accessed materials, but how they converted access into usable readiness. This helps explain why meta-analyses report positive average effects alongside substantial heterogeneity (Bredow et al., 2021; Strelan et al., 2020; van Alten et al., 2019). A flipped design creates an opportunity for active learning, but that opportunity is conditional on preparatory work that is cognitively and strategically adequate for what follows. The study therefore extends SRL research by placing the preparation–participation interface at the centre of analysis rather than treating self-regulation mainly as a predictor of achievement or as a general learner characteristic.

The distinction between completion and readiness is especially important. Existing research shows that students follow different pre-class activity patterns and that SRL supports can strengthen engagement and performance (Liu et al., 2024; Milon et al., 2026; Omarchevska et al., 2025; Yoon et al., 2021). The findings show why those patterns matter pedagogically. Readiness is a functional and task-sensitive threshold combining sufficient understanding, awareness of uncertainty, and perceived ability to enter the next activity. It is not proposed here as a validated individual trait. The same preparation may be sufficient for a discussion requiring basic explanation but insufficient for a task demanding application or critique. Readiness therefore cannot be inferred reliably from clicks, completion, or time-on-task alone. Low-stakes checks are most useful when they help students diagnose preparedness, not when they operate simply as surveillance of compliance.

The recursive role of participation also refines the conventional pre-class/in-class division. Zimmerman (2002) and Winne and Hadwin (1998) conceptualise regulation as cyclical, and the present findings show how classroom activity provides the feedback that closes and reopens that cycle. Students encounter gaps when questions expose shallow understanding, observe strategies used by peers, and revise later preparation after difficulty. Participation is therefore simultaneously an outcome of earlier regulation and an input into subsequent regulation (Hossen et al., 2026). This matters for pedagogy because a classroom that treats underprepared students only as a disruption loses a potentially important regulatory moment. Recovery opportunities can make gaps visible and support recalibration, provided they do not remove every consequence of arriving unprepared. The design challenge is to combine accountability for preparation with recoverability once students are in the room.

We use the phrase pedagogically distributed regulation cautiously to describe the broader pattern. The term does not imply that regulation is socially shared in the technical sense, nor does it replace SRL as the account of students' own planning, monitoring, and strategy use. Rather, it foregrounds the way individual regulatory activity is cued, enabled, constrained, and recalibrated through materials, instructions, deadlines, quizzes, anticipated classroom tasks, peer interaction, and teacher responses. This interpretation is consistent with research showing that SRL differs across learning environments (Broadbent, 2017; Broadbent & Poon, 2015) and that explicit supports can alter engagement (Lai & Hwang, 2016; Shyr & Chen, 2018; Yasmin et al., 2024). It also guards against attributing weak preparation to a generic lack of motivation. Selective preparation can be a response to pedagogical signals about whether advance engagement will actually matter.

The comparison also shows why institutional labels should not be used as explanatory shortcuts. Both sites were private universities, yet the courses differed in how visibly pre-class preparation was connected to immediate classroom demands. What mattered analytically was not an institutional label but the organisation of the learning sequence. This extends Bangladesh-based research beyond feasibility and perception toward a process-sensitive account of how teaching arrangements shape learner action (Al Mamun & Dippro, 2025; Hasan et al., 2022; Sultana

& Jamal, 2025). It also cautions against importing a universal image of the “self-regulated student”. Regulatory responsibility is negotiated within course workloads, technologies, assessment practices, teacher expectations, available support, and histories of classroom participation. Context therefore enters the explanation through these concrete conditions rather than through broad cultural assumptions.

The analysis has implications for how universities conceptualise student independence. Institutional discourse often treats independent learning as a capacity students should already possess, particularly in higher education. A flipped design can then impose substantial regulatory demand without making that demand visible. The present account suggests a different position: regulatory competence can be developed through design. Teachers can model how to approach a pre-class resource, make the purpose and expected depth of preparation explicit, use small diagnostic activities to support monitoring, and reduce scaffolding progressively as students become better able to judge readiness. At programme level, institutions should also consider the cumulative burden of independent preparation across courses. If several subjects simultaneously relocate substantial learning outside class, overload may undermine the very planning and persistence that flipped learning presupposes. Effective flipping therefore depends on coherent design at both course and programme levels.

6. Conclusion

This study has argued that the pedagogical significance of flipping lies in a redistribution of regulatory responsibility. Students did not simply complete or fail to complete pre-class work; they made strategic decisions about time, difficulty, importance, monitoring, and help-seeking. Those decisions shaped a provisional state of readiness that influenced how confidently and effectively they entered classroom activity. Classroom participation then tested that readiness and fed information back into later preparation. The resulting process is recursive: pedagogical design shapes regulatory work; regulatory work shapes readiness; readiness conditions participation; and participation supplies feedback for subsequent regulation. This sequence explains why access to a resource is an insufficient indicator of whether the “flip” has actually prepared students for active learning.

The practical and policy implication is that effective flipped learning requires designing for responsibility rather than merely transferring it. Pre-class materials should be purposeful, proportionate, accessible, and visibly connected to classroom tasks. Students need opportunities to monitor whether they are ready, while teachers need strategies that preserve the value of preparation without treating partial readiness as grounds for exclusion. Guiding questions, low-stakes diagnostic checks, focused resources, examples of expected engagement, and structured peer support can function as regulatory scaffolds. Institutions supporting flipped pedagogy should therefore invest not only in video production or digital platforms but also in staff development around task sequencing, workload calibration, formative feedback, and the cumulative burden of independent preparation across courses.

The study is necessarily bounded. Two qualitative cases provide analytical depth rather than statistical generalisation, and interview accounts depend partly on participants’ retrospective reconstruction of preparation. Classroom observation can show how students enter and navigate activity but cannot reveal the internal cognitive work that occurred before class. The proposed phrase pedagogically distributed regulation should also be treated as an interpretive proposition rather than a settled construct. Future research could follow students longitudinally across a semester, combine interviews with learning-management-system traces and stimulated recall, examine how readiness changes across different task types, and investigate when individual regulation becomes co-regulation or socially shared regulation during group work. Comparative work across public and private institutions, disciplines, and regional settings could test which mechanisms remain stable under different curricular and resource conditions.

The question in the title therefore remains deliberately open. Access does not automatically become preparation, preparation does not automatically become readiness, and readiness does not automatically become visible participation. Between these stages lies regulatory work. Making that work visible offers a more precise account of why some flipped classrooms create productive active learning while others merely relocate content and responsibility. If students are expected to assume greater responsibility for learning before class, pedagogical design must help them understand, exercise, and recalibrate that responsibility.

AI Use Declaration

Generative AI-assisted tools were used during manuscript preparation solely to support language editing, structural refinement, and stylistic improvement. All AI-assisted suggestions were critically reviewed and revised by the authors. The authors retain full responsibility for the accuracy, integrity, and final content of the manuscript.

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