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TEACHER AGENCY AND TEACHING PRACTICES IN BLENDED ENGLISH INSTRUCTION: A SOCIOCULTURAL STUDY IN THE CONTEXT OF SCIENTIFIC CULTURE

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ABSTRACT

This study explores teaching practices and teacher agency in blended English instruction through the combined lens of sociocultural theory and scientific culture. Drawing on Vygotsky's sociocultural framework and the ecological model of agency, teacher agency is conceptualized as a context-dependent and dynamic process shaped by historical experiences, institutional environments, and the cultural discourse of technology, particularly within the broader paradigm of scientific culture, which mediates technological adoption and pedagogical innovation. Through two case studies of Chinese English teachers in university and high school settings, the research investigates how educators navigate the challenges of integrating online and offline instruction under the influence of scientific culture. Findings reveal that teacher agency is enacted not only through pedagogical judgment and technological adaptation but also through cultural negotiation with the dominant norms embedded in digital tools and platforms. The study emphasizes that supporting teachers in blended learning requires more than technical training—it calls for critical awareness, ethical reflection, and identity development within the techno-cultural landscape of education.

KEYWORDS: Blended English Instruction; Teacher Agency; Sociocultural Theory; Scientific Culture; Ecological Model; Technology Integration; Techno-Cultural Discourse; Digital Pedagogy.

1. INTRODUCTION

In recent years, digital technologies have reshaped English language teaching. Among the emerging models, blended learning stands out as both prominent and sustainable. Blended English instruction, which combines face-to-face teaching with online learning components, offers increased flexibility and personalized learning opportunities, while simultaneously introducing new pedagogical challenges and professional demands on teachers. Within this evolving educational landscape, the role of the teacher is undergoing a significant transformation from being a transmitter of knowledge to becoming a designer of learning environments, facilitator of interaction, and adaptive decision-maker [1]. This transformation is further complicated by the pervasive influence of scientific culture, which frames technology as both a tool and a cultural artifact, embedding normative assumptions about efficiency, progress, and standardization in educational practices.

Against this backdrop, teacher agency has gained increasing attention as a key construct in understanding how teachers navigate complex instructional settings and exercise professional judgment. Teacher agency refers to the capacity of teachers to act purposefully and constructively to direct their professional growth and influence pedagogical decisions [2][3]. While research has highlighted the affordances and constraints of blended learning environments, less attention has been paid to how teachers exercise agency within such contexts, particularly from a sociocultural perspective that foregrounds the interplay between individual agency and the surrounding social, cultural, and institutional structures.

Drawing on sociocultural theory (SCT), most notably the work of Vygotsky and subsequent scholars, this paper aims to examine the teaching practices and teacher agency enacted in blended English instruction. SCT emphasizes that human learning and action are mediated by cultural tools, social interaction, and contextual conditions, offering a powerful lens through which to understand how teacher agency is shaped and enacted in technology-enhanced settings [4].

This paper seeks to address the following questions: How do English language teachers negotiate their teaching practices in blended learning environments? In what ways do sociocultural conditions enable or constrain the exercise of teacher agency?

The rapid advancement of educational technologies has given rise to a pervasive 'scientific

culture' that extends beyond mere technical adoption. Within this cultural paradigm, teachers are positioned not just as users of digital tools but as subjects navigating implicit normative expectations around innovation, efficiency, and measurable outcomes embedded in technological systems. This study particularly examines how teacher agency is exercised within these techno-cultural structures, where educators must negotiate between pedagogical values and the dominant discourses shaping educational technology use. By exploring these questions, the study contributes to a deeper understanding of the dynamic and situated nature of teacher work in blended contexts, and offers implications for teacher development, policy support, and instructional design in the digital age.

2. METHODS

This study employed a comparative case study design focusing on two English teachers in China: Ms. Liu, a university writing instructor, and Mr. Zhang, a high school reading teacher. Participants were selected based on their active involvement in blended teaching and institutional support for research access.

Data collection included semi-structured interviews (five sessions per teacher, 60–90 minutes each), classroom observations (eight sessions in total), and analysis of instructional artifacts (e.g., syllabi, assignments). Interview protocols covered pedagogical choices, technology use, and perceptions of scientific culture.

Data analysis followed a thematic coding approach, combining deductive codes from the sociocultural-ecological framework with inductive themes from participants' narratives. Triangulation across sources enhanced validity.

All participants were fully informed of the purpose of the study and gave their voluntary consent. Pseudonyms are used throughout to ensure confidentiality and anonymity.

3. THEORETICAL FRAMEWORK: A SOCIOCULTURAL PERSPECTIVE

To examine teaching practices and teacher agency within blended English instruction, this study adopts a sociocultural perspective, grounded in the theoretical work of Lev Vygotsky and further developed by scholars such as Wertsch (1991), Lantolf and Thorne (2006), and Rogoff (1995). Sociocultural theory (SCT) posits that human cognition and action are fundamentally shaped by social interaction, cultural artifacts, and historical context. Rather than viewing learning and behavior

as purely individual or internal processes, SCT emphasizes the mediated nature of human activity, that is, individuals act through tools, symbols, language, and social relationships that are embedded in cultural-historical settings [5][6]. Scientific culture, as an extension of this framework, amplifies the role of technologically mediated norms, where tools like digital platforms are not neutral but carry implicit values of rationality, measurability, and control, reshaping teacher agency within institutional hierarchies.

Three core concepts from SCT are particularly relevant to understanding teaching and teacher agency in blended learning environments:

Mediation: Central to SCT is the idea that all human action is mediated by cultural tools, including both material (e.g., digital platforms, textbooks) and symbolic (e.g., language, norms, professional discourse) means. In the context of blended English instruction, mediation occurs through the use of digital technologies, online communication tools,

and pedagogical strategies that shape how teachers interact with learners and the curriculum.

Zone of Proximal Development (ZPD): Originally applied to learners, ZPD also illuminates teacher growth. Teachers extend their professional capacity through socially mediated activities slightly beyond their current ability, supported by colleagues, communities, or institutional mentorship.

Internalization and Identity: SCT holds that through repeated social interaction, external activities and discourse become internalized and contribute to the development of individual identity. For teachers, the repeated negotiation of roles, expectations, and pedagogical norms within blended environments gradually shapes their professional identity and sense of agency [7].

To further elaborate the notion of teacher agency within this framework, this study draws on the ecological model of agency proposed by Priestley, Biesta, and Robinson (2015), which conceptualizes agency as situated, dynamic, and context-dependent.

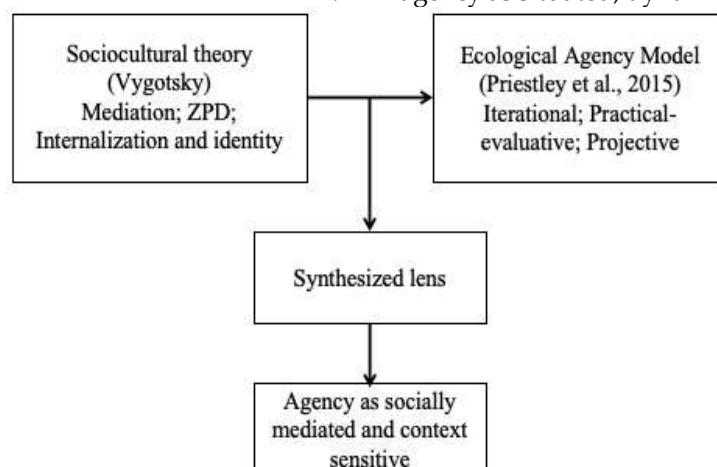


Figure 1: A Sociocultural-Ecological Model of Teacher Agency in Blended English Instruction.

Figure 1 illustrates the conceptual framework adopted in this study, which integrates key tenets of sociocultural theory with the ecological model of teacher agency. At the foundational level, Vygotskian constructs, such as mediation, the zone of proximal development, and internalization, highlight the social and cultural conditions under which learning and agency emerge. Overlaying this, the ecological perspective frames teacher agency as a temporally and contextually situated phenomenon, shaped by teachers past experiences (iterational), present material and relational conditions (practical-evaluative), and future-oriented intentions (projective). The combined framework positions teacher agency in blended English instruction as a product of both individual professional judgment and structural affordances, mediated through

cultural tools and institutional norms [8].

This model identifies three interrelated dimensions that influence teacher agency: Teachers' personal histories, experiences, and professional beliefs; Practical-evaluative: The present cultural, material, and relational contexts in which decisions are made; Teachers' visions for the future, aspirations, and goals. In blended learning contexts, these dimensions interact with the affordances and constraints of digital tools, institutional policies, and pedagogical cultures [9]. A sociocultural lens thus enables a more nuanced understanding of how teacher agency is not simply a trait or capacity, but a practice enacted through continuous negotiation within socially and culturally mediated environments.

This theoretical foundation offers the analytical

tools necessary to investigate how English language teachers navigate, mediate, and reshape their pedagogical practices in response to the affordances of blended learning, while also constructing and expressing agency within evolving educational ecosystems [10].

4. SCIENTIFIC CULTURE AND TEACHER AGENCY

In this study, scientific culture is conceptualized as a pervasive force that prioritizes quantification, efficiency, and standardization through technology. Rather than a neutral backdrop, it actively shapes teacher agency by normalizing decision-making, constraining pedagogy through platform logics, and reconfiguring professional identities. Technological determinism often presents a utopian view of technology as progress, emphasizing the benefits of technology for humanity as, for example, when politicians claim predictive algorithms will reduce crime [11].

First, scientific culture mediates teaching decisions by valorizing measurable outcomes and procedural predictability. When selecting digital tools or designing blended activities, teachers increasingly encounter algorithmic recommendations privileging standardized formats (e.g., automated quizzes over open-ended discussions) and institutional assessments prioritizing quantifiable engagement metrics (e.g., login frequency over qualitative participation). In recent years, there are a large number of recommendation algorithms proposed in the literature, from traditional collaborative filtering to deep learning algorithms [12]. Such normalization pressures create tacit hierarchies of "legitimate" pedagogy, where agency becomes the capacity to negotiate between evidence-based practices and context-responsive improvisation.

Second, platform ecosystems materially constrain agency through embedded cultural scripts. Mainstream learning management systems often impose interaction templates that assume linear progression, discrete skill segmentation, and individual over collaborative learning trajectories. Teachers must either appropriate these structures creatively or expend additional effort to circumvent their limitations. As observed in Ms. Liu's case, the Moodle platform's default assessment tools initially led her to emphasize discrete-point grammar quizzes until she deliberately designed workarounds for process writing evaluation. This adaptation not only demonstrated her responsiveness to institutional expectations of platform utilization but also subtly

challenged the system's predefined assessment parameters by incorporating holistic writing rubrics that transcended algorithmic scoring metrics. Her practice revealed a dual engagement with both compliance and subversion within the school's techno-cultural framework.

Third, scientific culture reconfigures teacher identities by positioning educators simultaneously as technical operators and cultural intermediaries. The discourse of "digital competence frameworks" frequently reduces teacher development to skill acquisition checklists, overshadowing the critical dimension of tool appropriation. A recommendation from the European Parliament and Council of the European Union lists eight key competences for lifelong learning, one being digital competence [13]. Meanwhile, institutional narratives celebrating "early adopters" create new professional stratifications, where teachers exercising agency through resistance or selective adoption risk being labeled as technophobic.

Crucially, these dynamics operate within the ecological model's iterative dimension (as teachers reconcile past pedagogies with new cultural expectations), practical-evaluative dimension (as real-time decisions confront platform constraints), and projective dimension (as career trajectories align with institutional techno-policy agendas). The interplay manifests vividly in blended English instruction, where language learning's inherently dialogic nature clashes with scientific culture's transactional efficiencies. Teachers like Ms. Liu navigate this by hybridizing tools creating Padlet boards for collaborative brainstorming while complying with mandated quiz modules demonstrating how agency emerges through *культурную гибридизацию* (cultural hybridization) rather than pure resistance or compliance.

This perspective reveals that supporting teacher agency requires moving beyond technical upskilling to foster critical platform literacy the ability to interrogate how digital tools encode cultural values and to cultivate institutional spaces for ethical deliberation about educational technologies. Only by recognizing scientific culture as both resource and constraint can teacher development initiatives genuinely empower educators as agents of pedagogically meaningful blending.

5. BLENDED ENGLISH INSTRUCTION: CONTEXT AND CHARACTERISTICS

Blended English instruction has become an increasingly prevalent pedagogical model in recent

years, particularly in response to the growing availability of educational technologies and the evolving demands of twenty-first-century language learners. Broadly defined, blended learning refers to the systematic integration of face-to-face instruction with online or digital learning components, wherein neither mode is subordinate to the other but rather function in a complementary and pedagogically intentional relationship [14]. In the context of English language education, this approach allows for the

combination of communicative, real-time classroom interaction with the affordances of asynchronous digital platforms, such as video lectures, interactive grammar tasks, learning management systems (e.g., Moodle, Google Classroom), and virtual discussion forums. Through this hybrid modality, learners can benefit from increased flexibility, extended access to authentic language input, and opportunities for self-paced learning, while still engaging in meaningful interaction with teachers and peers [15].

Table 1: Core Components of Blended English Instruction in Language Classrooms.

Component	Mode	Examples
Face-to-face Instruction	Synchronous (Offline)	In-class group tasks, debates, real-time Q&A
Online Instruction	Asynchronous	Video lectures, reading quizzes, forum discussions
Technology-mediated Interaction	Hybrid	Google Docs collaboration, Zoom breakout rooms, Padlet discussions

Table 1 outlines the key components of blended English instruction, distinguishing among synchronous, asynchronous, and hybrid forms of engagement. This tripartite structure allows educators to diversify their pedagogical strategies across time and space, creating opportunities for both real-time interaction and self-directed learning.

However, the implementation of blended English instruction brings with it a redefinition of pedagogical structures and teacher roles. In traditional classroom settings, teachers often occupy a central position as knowledge transmitters and classroom managers. In blended environments, by contrast, teachers must assume expanded

responsibilities as curriculum designers, digital content curators, facilitators of learner autonomy, and mediators of both physical and virtual learning spaces. These roles require not only pedagogical expertise but also a high degree of technological proficiency and adaptive decision-making. Teachers must continuously negotiate how to sequence content across modalities, how to scaffold student engagement in both online and offline contexts, and how to sustain learner motivation and community in the absence of constant physical presence. Such complexity significantly alters the nature of teaching and demands a reconsideration of what constitutes effective instructional practice [16].

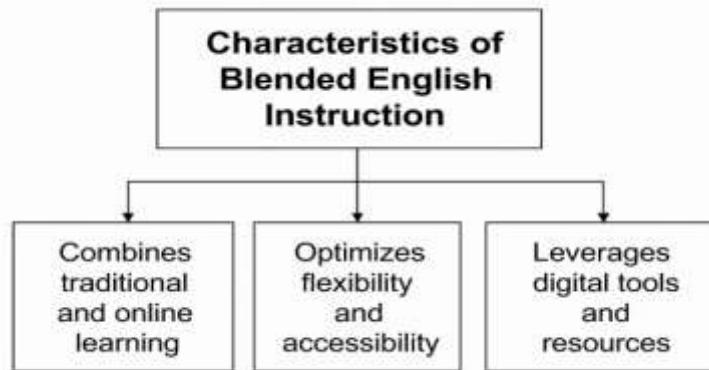


Figure 2: Changing Roles of English Teachers in Blended Instruction.

Figure 2 contrasts the traditional and emerging roles of English teachers in blended settings. As shown, blended instruction demands expanded competencies not only in teaching but also in instructional design, digital mediation, and inter-professional collaboration.

Moreover, the affordances and challenges of

blended English instruction are deeply shaped by the sociocultural contexts in which they are embedded. While the use of digital tools can enhance interaction, access, and personalization, they also introduce new sources of inequity and constraint. Variations in technological infrastructure, institutional support [17], policy directives, and student digital literacy all

influence the extent to which blended models can be implemented effectively. These variations are compounded by the hegemony of scientific culture, which often privileges technical solutions over pedagogical nuance, positioning teachers as implementers rather than co-designers of blended systems. For instance, in under-resourced educational contexts, teachers may face limited access to training, unreliable internet connectivity, or rigid curricular structures that hinder innovation. Even in well-resourced institutions, the expectation to "blend" may be driven more by administrative agendas or cost-efficiency concerns than by pedagogical considerations, thereby reducing teacher autonomy and professional satisfaction. These external conditions shape not only the design and delivery of instruction but also the space in which teachers can exercise agency.

Therefore, rather than treating blended English instruction as a neutral or purely technological shift, it is crucial to understand it as a socially situated practice, one that is negotiated by teachers within complex institutional, cultural, and policy environments. This perspective invites deeper inquiry into how teachers make sense of and navigate blended teaching, and how their professional identities and agency are shaped by the evolving demands of digital pedagogy. By focusing on these sociocultural dimensions, we can better appreciate the lived realities of English teachers in

blended classrooms and the conditions under which meaningful instructional transformation can occur.

6. TEACHING PRACTICES IN BLENDED ENGLISH CLASSROOMS

Teaching practices in blended English classrooms are inherently complex, shaped by the interplay between pedagogical goals, technological tools, and learner needs. Within this hybrid instructional environment, teachers are required not only to deliver content but also to design coherent learning experiences that span both physical and digital modalities. This involves a range of decisions, from selecting appropriate digital platforms, sequencing synchronous and asynchronous tasks, to managing learner participation and feedback across modes. As such, teaching in blended contexts becomes an act of continuous mediation: of knowledge, tools, relationships, and institutional expectations. This mediation is inherently politicized, as scientific culture imposes evaluative criteria, such as data-driven accountability or platform analytics, that tacitly constrain teachers' autonomy while legitimizing certain forms of digital pedagogy (see Figure 3). Central to this mediation is the teacher's ability to adapt and make pedagogical choices that are responsive to the demands of the blended environment while staying aligned with language learning objectives [18].



Figure 3: The Blended English Teaching Cycle.

To illustrate how these dynamics unfold in practice, this section presents a case study of Ms. Liu, an experienced English teacher at a Chinese university who transitioned to a blended teaching model during the post-pandemic period. Ms. Liu designed a blended curriculum for a second-year academic English writing course, combining weekly in-person seminars with asynchronous online

modules delivered via a Moodle-based learning management system. Each week, students attended a 90-minute face-to-face session focused on collaborative writing tasks and peer review, while the online component featured recorded lectures, grammar quizzes, reflective journals, and forum discussions. The rationale behind this structure, according to Ms. Liu, was to use the online space for

input delivery and individual practice, reserving in-person sessions for interaction and co-construction of

knowledge (see Table 2).

Table 2: Weekly Blended Instruction Plan: Ms. Liu's Writing Class.

Week Component	Mode	Content/Activity
Monday-Wednesday	Asynchronous	Video lecture + grammar quiz on Moodle
Thursday	Synchronous F2F	Peer review + group writing workshop
Friday (Optional)	Video wrap-up	Online feedback + Q&A forum post

In designing and implementing this curriculum, Ms. Liu encountered several pedagogical tensions that required careful negotiation. First, she had to adapt her teaching materials to suit different modes of delivery. For instance, she noted that video lectures needed to be shorter, more segmented, and accompanied by guiding questions to sustain learner attention. Second, she had to develop strategies to monitor and support student engagement in the online space, where participation was often invisible. To address this, she embedded formative assessment

elements, such as reflective prompts and low-stakes quizzes, that not only encouraged accountability but also allowed her to track learning progress. Third, she struggled with integrating feedback loops between the online and offline components. Students often treated the two modes as separate and disconnected. To bridge this gap, Ms. Liu started each in-person class with a synthesis activity based on online discussion highlights and ended each week with a video wrap-up summarizing key points raised during class (see Table 3).

Table 3: Key Challenges and Adaptive Strategies in Blended English Teaching.

Challenge	Adaptive Strategy
Fragmentation of content across modes	Weekly integration activities + cross-modal prompts
Uneven student participation online	Low-stakes quizzes + targeted forum feedback
Tech limitations/platform rigidity	Use of flexible tools (Padlet, WeChat) with admin approval
Disconnection between tasks and feedback	Synchronous review of online discussions; video wrap-ups

This case highlights several key dimensions of teaching practice in blended English instruction. First, effective blended pedagogy requires intentional orchestration across modalities; the success of the model depends not only on the availability of tools but on the teacher's ability to align them with instructional purposes. Second, the teacher's pedagogical reasoning plays a crucial role in making in-the-moment decisions about how to adapt content, motivate learners, and create coherence across learning spaces. Finally, the case demonstrates that blended teaching is not a fixed technique but a situated practice, shaped by contextual constraints (e.g., time, platform limitations), institutional policies (e.g., standardized syllabus requirements), and teacher beliefs about language learning and learner autonomy.

Through this case, we see how teachers must engage in constant decision-making and reflection to mediate the affordances and constraints of the blended environment. Teaching in such contexts is therefore less about implementing pre-designed solutions and more about exercising professional judgment, design thinking, and pedagogical adaptability, all of which are intimately tied to teacher agency, which will be further explored in the following section.

7. TEACHER AGENCY IN ACTION

Teacher agency in blended English instruction is not merely a matter of individual capacity or intention, but a socially situated and contextually mediated process. In line with the ecological model of agency, agency is understood as emerging from the interaction of three temporal dimensions: the teacher's iterative resources (past experiences and beliefs), practical-evaluative considerations (present contexts and constraints), and projective aspirations (future-oriented goals). In blended learning environments, these dimensions become particularly salient as teachers navigate the complexities of designing hybrid pedagogies, adapting to institutional demands, and responding to diverse learner needs. Agency is thus not a static trait but a dynamic practice, enacted through decision-making, reflection, and resistance within a web of material, discursive, and relational structures [19]. In blended contexts, scientific culture exacerbates tensions between agency and structure, as teachers negotiate the dual imperatives of technological compliance and pedagogical integrity, often reframing institutional mandates through subversive or creative adaptations (see Figure 4).

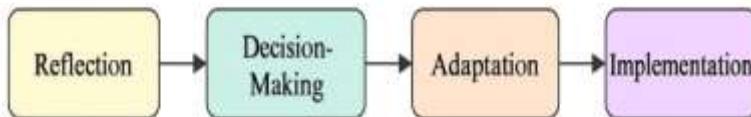


Figure 4: Dimensions Of Teacher Agency in Blended Learning Contexts.

To explore how teacher agency operates in practice, this section presents a case study of Mr. Zhang, a high school English teacher in a semi-urban area of China, who adopted a blended model for his senior-year English reading course. The shift was initially mandated by his school's post-pandemic digital transition policy, which required teachers to incorporate at least 30% online content into their curriculum. While many colleagues responded with minimal compliance, simply uploading reading materials or video links, Mr. Zhang viewed the change as an opportunity to redesign his instruction in a more learner-centered way. Drawing on his prior experience with project-based learning and a personal interest in educational technology, he developed a blended unit titled "Media and Critical Thinking," which integrated online news analysis, student video responses, peer review forums, and in-class debate. While adopting mandatory platforms like Moodle for administrative transparency, he simultaneously cultivated alternative digital spaces on collaborative tools such as Padlet to preserve pedagogical autonomy. His selective integration of institutional technologies manifested a critical negotiation between innovation mandates and his professional judgment, particularly when resisting standardized interaction templates that conflicted with his dialogic approach to language teaching.

Mr. Zhang's enactment of agency can be observed in several aspects of his practice. First, he drew upon his prior teaching philosophy, which emphasized learner autonomy and critical thinking, to frame his approach to blended learning. Rather than seeing technology as an end in itself, he treated it as a mediational means to achieve deeper learner engagement. Second, he actively reconfigured institutional resources to support his pedagogical goals. Although the school's learning management

system (LMS) was limited in functionality, he negotiated with administrators to allow the use of external platforms such as Padlet and WeChat video groups. He also invited a colleague from the ICT department to co-design rubrics for evaluating students' digital presentations, thereby building a cross-disciplinary support system that reinforced his instructional vision.

Importantly, Mr. Zhang also navigated tensions and exercised judgment in response to practical constraints. Some students lacked consistent internet access at home, while others were reluctant to engage in asynchronous tasks. Rather than abandoning the model, he implemented differentiated requirements and offered optional offline alternatives, such as printed media packs and in-person consultation hours. These adaptations reflected his awareness of the sociocultural realities of his students and his commitment to equitable participation, an expression of agency not as resistance but as situated responsiveness.

This case illustrates how teacher agency in blended English instruction is both enabled and constrained by multiple layers of context. On one hand, Mr. Zhang's professional identity, pedagogical vision, and technological fluency allowed him to reimagine the instructional possibilities of blended learning. On the other hand, his agency was continuously negotiated within a framework of institutional policy, infrastructural limitations, and learner diversity. Rather than viewing agency as heroic autonomy, this case highlights its collective, context-sensitive, and incremental nature. It is exercised not only in grand innovations but in everyday choices, about content design, tool selection, student feedback, and classroom culture (see Table 4).

Table 4: Comparative Enactment of Teacher Agency in Blended Instruction.

Agency Element	Ms. Liu	Mr. Zhang
Teaching context	University English writing course	High school English reading course
Key constraint	Disconnect between online/offline components	Policy-imposed LMS; student tech access
Response strategy	Weekly synthesis tasks; video wrap-ups	Alternative platform use (Padlet/WeChat); differentiated material delivery
Expression of agency	Pedagogical coherence and content integration	Context-sensitive innovation and equity-based adaptation

Table 4 highlights key contrasts between Ms. Liu and Mr. Zhang. Ms. Liu's agency centered on achieving coherence between online and offline components, while Mr. Zhang emphasized context-sensitive innovation and equity in response to policy and infrastructural constraints. Both demonstrated adaptability, yet their strategies diverged: Liu pursued pedagogical integration, Zhang leveraged selective innovation. These insights underscore how institutional conditions and personal histories jointly shape the enactment of teacher agency.

In sum, teacher agency in blended English classrooms emerges through the teacher's reflective and strategic engagement with their environment. It is shaped by past pedagogical values, evaluated against current material and social conditions, and projected toward imagined futures. Understanding this dynamic is crucial for supporting teachers in developing not just technical competence in blended instruction, but also the professional agency to navigate, resist, and transform their teaching contexts in meaningful ways [20].

8. CONCLUSION

This study demonstrates that teaching practices and teacher agency in blended English instruction are complex and context-dependent. Drawing on a sociocultural-ecological framework, the cases of Ms. Liu and Mr. Zhang exemplify how agency is not a fixed attribute of individual teachers but a dynamic process mediated by tools, contexts, and relationships. In both cases, teachers exercised agency through reflective decision-making and strategic adaptations to their respective instructional environments. These practices were grounded in personal teaching beliefs, shaped by institutional conditions, and projected toward long-term professional goals, thus affirming the multi-dimensional and temporal nature of agency as theorized by Priestley et al.[21].

This study underscores that teacher agency is fundamentally generated within techno-cultural structures rather than operating in absolute freedom. The findings reveal how teacher identities and pedagogical practices are profoundly shaped by datafication processes and platform logics embedded in educational technologies. Future research should further investigate teacher professional development within these cultural structures, particularly examining how educators can cultivate critical digital literacies to navigate the tensions between pedagogical values and technological determinism while maintaining ethical autonomy in blended learning ecosystems.

One of the key insights that emerged from this study is the central role of mediation, both technological and relational, in enabling and constraining agency. While digital platforms such as Moodle, Padlet, and WeChat served as mediational means for instructional design and interaction, they also introduced new constraints that teachers had to navigate. These findings echo Vygotsky's notion that human action is always mediated by cultural tools, and that the nature of mediation significantly influences the scope and form of agency [22]. In Ms. Liu's case, the platform was used to integrate asynchronous and synchronous components in a coherent pedagogical rhythm; in contrast, Mr. Zhang's experience demonstrated how limited platform flexibility required institutional negotiation and creative adaptation to alternative tools.

Another important theme emerging from the analysis is the relational and context-sensitive nature of teacher agency. Agency was not merely about individual autonomy or innovation, but about responsiveness to learner needs, institutional expectations, and sociocultural constraints. For example, Mr. Zhang's efforts to provide differentiated access for students with limited internet connectivity reflected not only technological awareness but also ethical judgment and a commitment to equity. This supports Biesta and Tedder's argument that agency is exercised in contexts "for particular purposes" and is therefore shaped by value-laden choices [23].

Moreover, the study illustrates that blended environments uniquely amplify the demands on teacher agency. Compared to traditional settings, teachers in blended contexts must negotiate multiple layers of complexity, including modality coordination, technological proficiency, and asynchronous learner engagement. Yet, these challenges also create expanded spaces for agency. Teachers are afforded more flexibility in pacing, task design, and learner scaffolding, provided that institutional and infrastructural supports are in place. This duality reinforces the idea that agency is ecological, emerging from the interaction between teachers and their environments, rather than residing solely within the individual.

The discussion also suggests that professional identity and agency are mutually constitutive. As teachers navigate new pedagogical roles in blended instruction, such as digital content curators, interaction designers, or learning facilitators, they simultaneously reconfigure their professional self-concepts. For example, Ms. Liu's identity as a reflective practitioner was reinforced by her

deliberate integration of peer feedback mechanisms and post-task synthesis. In this way, agency is not only a product of past experiences and current decisions, but also a practice that shapes identity over time.

Taken together, these findings underscore the need to reconceptualize teacher agency in blended

learning as a relational, mediated, and evolving practice, rather than a static individual capacity. This perspective has important implications for both policy and teacher development: fostering agency requires not only technical training but also institutional trust, collegial collaboration, and pedagogical autonomy.

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