

Atmosphere in Postdigital University Education

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Abstract

Universities are not only sites of knowledge production and transmission but also atmospheric environments that shape how education is perceived, felt, and experienced. As digital technologies become increasingly embedded within higher education, these atmospheric conditions can no longer be understood through a simple distinction between physical and digital environments. This conceptual paper develops the concept of postdigital educational atmosphere to examine how educational experience emerges through entanglements among material spaces, digital technologies, social relationships, and institutional practices. Drawing on theories of atmosphere, everyday aesthetics, and postdigital education, the paper identifies space, attention, social presence, and time as interconnected dimensions through which atmospheric reconfiguration can be analyzed. It examines video lectures, digital interfaces, artificial intelligence, and algorithmic systems as mechanisms that reorganize these dimensions. Rather than treating digitalization as either reproducing or diminishing the atmosphere of campus-based education, the paper argues that technological mediation produces different atmospheric configurations, including altered forms of presence, layered physical and informational spaces, computational visibility, and increasingly flexible yet persistent educational temporalities. The concept of postdigital educational atmosphere offers a framework for examining the experiential and aesthetic consequences of technological change in higher education and for understanding educational technologies as participants in the broader conditions through which university life is organized and experienced.

1. Introduction

Universities are commonly understood as institutions for the production and transmission of knowledge. Yet education occurs within environments that shape how knowledge is experienced, interpreted, and valued. Beyond curriculum and classroom instruction, university life is structured by atmospheres that influence attention, emotion, and social engagement. The architecture of campus buildings, the rhythms of academic schedules, the presence of peers, and the performance of teaching all contribute to the distinctive mood of higher education. Learning therefore takes place not only through the communication of information but also through the aesthetic conditions that surround educational activity (Böhme, 2017; Tyrrell & Shalavin, 2023).

The increasing integration of digital technologies into higher education has transformed these aesthetic conditions. Digital technologies have altered how students encounter educational content, interact with instructors and peers, navigate university spaces, and organize educational activity. However, these transformations cannot be understood through a simple distinction between physical and digital education. Contemporary university education is increasingly postdigital, characterized by the entanglement of digital technologies with physical spaces, social relationships, institutional practices, and everyday educational routines (Fawns, 2019; Lamb et al., 2022). Learning management systems organize courses that may still meet in physical classrooms; students move between lecture halls and digital platforms; recorded lectures extend classroom experiences beyond scheduled meetings; and artificial intelligence increasingly mediates how students encounter information and academic support. The digital is therefore not a separate educational environment but increasingly part of the conditions through which university education itself is experienced.

These developments are sometimes described primarily in terms of loss, with online and digitally mediated learning understood as lacking the immediacy, community, and spatial richness of the physical campus (Affoo et al., 2022). From this perspective, digital platforms appear to diminish atmospheric qualities that have traditionally characterized university education. However, to view digitalization solely as a reduction of educational experience overlooks both the atmospheric possibilities of digital environments and the entanglement of digital and physical conditions within contemporary university life (Lamb et al., 2022; Tyrrell & Shalavin, 2023). Digital technologies can weaken or transform certain forms of spatial immersion and collective presence, but they also generate new aesthetic conditions through interfaces, audiovisual media, algorithmic systems, and new patterns of interaction. Rather than simply replacing physical educational environments, digital technologies reorganize how attention, social presence, space, and time are experienced across increasingly interconnected educational settings.

This paper argues that universities function as atmospheric environments and that digitalization reconfigures, rather than eliminates, the atmospheric structures of education. From a postdigital perspective, educational atmosphere is neither exclusively physical nor digital but emerges through the interaction of material spaces, technologies, social relationships, institutional practices, and forms of mediation.

Building upon existing work on educational atmosphere and postdigital learning environments, this paper develops the concept of postdigital educational atmosphere to examine how the experiential and aesthetic conditions of university education emerge through entanglements among material spaces, digital technologies, social relationships, and institutional practices. It proposes space, attention, social presence, and time as interconnected dimensions through which atmospheric reconfiguration can be analyzed and examines audiovisual media, interfaces, artificial intelligence, and algorithmic systems as mechanisms through which these dimensions are reorganized. In doing so, the paper shifts the analysis from whether digital environments reproduce or diminish the atmosphere of physical education toward how different postdigital configurations produce different conditions of educational experience.

2. The University as Atmospheric Space

Universities function not only as institutions for the transmission of knowledge but also as atmospheric environments that shape intellectual and emotional experience. For this paper, atmosphere refers to the aesthetic qualities of an environment that emerge through space, social presence, and activity, shaping how educational experiences are perceived and understood. Atmospheres are not reducible to any single object or architectural

feature. Rather, they arise through the overall character of an environment, producing a distinctive mood that influences how people experience a situation before any actual content is communicated (Böhme, 2017; Tyrrell & Shalavin, 2023).

A particularly influential account is provided by Gernot Böhme, who argues that atmospheres are neither purely objective features of environments nor merely subjective feelings, but aesthetic phenomena that emerge between individuals and their surroundings (Böhme, 2017). Everyday aesthetic theories similarly draw attention to ambient qualities that can be experienced as inviting or alienating, energetic or subdued, contemplative or distracting (Saito, 2017). Atmosphere is therefore relational: it emerges through encounters among individuals, environments, objects, activities, and other people.

Viewed through this lens, the university campus is an atmospheric environment. In Böhme, Irvin, and Saito's terms, universities can be understood as environments that produce particular atmospheres through the arrangement of spaces, persons, and material conditions (Böhme, 2017; Irvin, 2008; Saito, 2007). Atmospheres emerge from the constellation of architectural forms, social interactions, and everyday practices that shape how individuals perceive and inhabit educational space. Campus spaces are intentionally designed to cultivate particular forms of attention and behavior (Kayongo & Rollings, 2022). Libraries foster concentration and contemplation through spatial organization, lighting, and norms of conduct. Lecture halls can establish authority and collective focus through their architectural arrangement, positioning instructors as focal points of attention. Classrooms encourage discussion and interaction, while hallways, courtyards, cafeterias, and common spaces generate social energy and informal intellectual exchange (Kayongo & Rollings, 2022). These environments do more than provide settings for educational activities; they contribute to the overall character of the educational experience itself. Learning is therefore shaped not only by course content but also by the aesthetic atmosphere within which that content is encountered.

The atmospheric character of university life also extends beyond formal instructional spaces. Everyday aesthetics emphasizes that ordinary activities and routines possess aesthetic significance because they structure lived experience (Saito, 2017). University rituals such as walking to class, waiting for a lecture to begin, encountering peers between classes, or continuing discussions after class contribute to the atmosphere of education. These practices establish rhythms that organize attention and create a sense of participation within an intellectual community. From the perspective of everyday aesthetics, such routines are not merely functional activities but recurring aesthetic practices that contribute to the overall mood and character of educational life.

The educational experience is therefore not confined to moments of formal instruction. Instead, it emerges through a broader network of spaces, interactions, movements, technologies, and shared routines that collectively generate the atmosphere of university life. Although many of these atmospheric conditions have traditionally been associated with physical co-presence and shared spatial environments, contemporary university experience increasingly extends across physical and digitally mediated settings (Fawns, 2019; Lamb et al., 2022). Establishing the university as an atmospheric environment therefore provides a foundation for examining how these conditions are reorganized within the postdigital university.

2.1 Lecture as Atmospheric Performance

Lectures provide a particularly useful example of the atmospheric character of university education. They are especially significant because lecturing remains one of the central practices of higher education while also extending across physical classrooms, livestreams, recorded videos, and digital course platforms.

A lecture is an atmospheric event because it organizes attention within a particular educational situation. In a traditional lecture setting, students gather at a specific time and place, directing their attention toward a common subject and speaker. The instructor's manner of presentation contributes to the mood of the classroom. Some lectures generate excitement and intellectual energy, while others cultivate reflection, curiosity, or contemplation. These qualities emerge not simply from the information being communicated but from the way the educational experience is structured (Böhme, 2017; Fenner, 2020).

David Fenner offers a useful analogy through the example of attending a physics lecture. The lecture functions as an event whose value depends upon more than its core content. A listener may hear sounds and observe gestures, yet deeper appreciation develops through participation in the intellectual and social context within which the lecture occurs (Fenner, 2020). Educational experience therefore emerges not solely from what is communicated but from the situated conditions of its presentation. Rather than viewing lectures as isolated acts of information delivery, they may be understood as situated aesthetic events. Their educational significance emerges from the interaction of physical space, social presence, institutional practices, and disciplinary conventions, all of which contribute to how the lecture is experienced.

The lecture also possesses a social aesthetic dimension. Learning in a lecture hall is not an isolated activity but a collective experience shaped by the presence of others. Students respond to moments of humor, confusion, discussion, and insight together, creating a shared atmosphere that influences individual engagement (Tyrrell & Shalavin, 2023). The aesthetic character of the lecture therefore arises not only from the instructor's performance but from the interaction among speaker, audience, and environment.

Understanding lectures in this way highlights an important aspect of university education. A lecture does more than transmit knowledge; it organizes attention, coordinates social participation, and contributes to the broader atmosphere of academic life. Its educational experience is shaped not only by what is taught but also by the spatial, social, temporal, and aesthetic conditions through which teaching occurs.

This becomes particularly significant when lectures are mediated through digital technologies. If educational experience is partly constituted by atmospheric conditions, then recording, livestreaming, or otherwise digitally mediating a lecture changes more than its mode of delivery (Fawns, 2019). It can reorganize spatial relations, forms of social presence, patterns of attention, and the temporal conditions through which the lecture is experienced. The question is therefore not simply whether the atmosphere of the physical lecture is preserved or lost, but how its atmospheric conditions are reconfigured through technological mediation.

Viewing universities as atmospheric environments thus highlights the aesthetic dimension of education. The university is not merely a site for delivering information but an aesthetic ecology composed of spaces, practices, technologies, and social relations that shape how learning is felt, experienced, and understood. Atmosphere forms the conditions of attention, engagement, and intellectual openness, making it a significant component of educational experience rather than merely a backdrop to it. This atmospheric account provides the foundation for considering the contemporary university as a postdigital environment, in which physical, digital, material, and social conditions increasingly intersect.

3. The Postdigital University and Educational Atmosphere

Understanding the atmospheric character of contemporary university education requires moving beyond a strict distinction between physical and digital learning environments. Although terms such as “online learning,” “digital education,” and “face-to-face education” remain useful for describing particular educational arrangements, they can also imply that digital and non-digital education constitute separate domains (Fawns, 2019). A postdigital perspective challenges this distinction by emphasizing how digital technologies, physical environments, social relationships, and material practices are entangled within educational activity. Fawns (2019) argues that digital education becomes conceptually limiting when essential properties are attributed to technologies or when digital and non-digital activity are treated as fundamentally separate. A postdigital perspective instead considers how technological, material, social, and pedagogical elements interact within situated educational practices.

This perspective is particularly relevant to higher education because digital technologies are no longer confined to explicitly “online” courses. Learning management systems organize courses that meet in physical classrooms; students use laptops and smartphones during face-to-face lectures; recorded lectures extend learning beyond scheduled class meetings; artificial intelligence systems provide assistance alongside human instructors; and learning analytics operate across both online and campus-based education (Lamb et al., 2022). The contemporary university therefore consists of overlapping physical, digital, social, and institutional environments rather than clearly separable educational domains. As Fawns (2022) argues, educational activity cannot be adequately understood by examining technology or pedagogy in isolation because technologies, teaching practices, purposes, values, and contexts mutually shape one another.

A postdigital perspective consequently changes how educational atmosphere can be understood. If atmosphere emerges relationally through interactions among environments, perception, activity, and social presence, then digital technologies do not simply replace one educational atmosphere with another. Instead, they participate in reorganizing the conditions through which atmosphere is produced. A classroom continues to shape attention and social interaction through its physical arrangement while simultaneously being mediated by presentation software, learning management systems, personal devices, digital displays, and increasingly artificial intelligence. Likewise, a student participating in an online course remains situated within a material environment - a bedroom, library, workplace, cafe, or campus study space (Tyrrell & Shalavin, 2023). The atmosphere of postdigital education therefore emerges through interactions among physical and digital environments rather than belonging exclusively to either.

This perspective also avoids treating technological change as inherently beneficial or harmful. A postdigital approach does not assume that digital technologies necessarily improve education, nor that they inevitably diminish the qualities associated with campus-based university life. Instead, it asks how particular configurations of people, technologies, spaces, practices, and institutional structures shape educational experience. Fawns (2019; 2022) describes this as an entangled approach in which educational activity emerges through complex relationships rather than from either pedagogy or technology alone.

Atmosphere provides a useful conceptual lens for examining this entanglement because it directs attention toward the experiential qualities produced through these relationships (Tyrrell & Shalavin, 2023). The relevant question is therefore not simply whether digital education possesses atmosphere, or whether digital technologies make education better or worse, but how the postdigital university reconfigures educational atmosphere. This requires considering how interfaces reorganize attention, how mediated interaction alters social presence, how digital environments intersect with physical educational spaces, and how continuous access to platforms and resources changes the temporal rhythms through which university life is experienced.

These transformations can be understood through several overlapping atmospheric dimensions. Space concerns how physical architecture and digital interfaces organize movement, navigation, and educational activity. Attention concerns how environments and technologies direct, sustain, or fragment perception and focus. Social presence concerns how relationships among students, instructors, peers, and increasingly computational systems are experienced through different forms of mediation. Time concerns the rhythms and boundaries of educational activity, including the shift from scheduled and collectively synchronized experiences toward increasingly continuous and asynchronous forms of participation. These dimensions are not independent; they interact within particular configurations of technologies, spaces, people, and institutional practices.

Interfaces, audiovisual technologies, and artificial intelligence can therefore be understood as mechanisms through which these atmospheric dimensions are reorganized. A recorded lecture, for example, changes not only the medium through which information is communicated but also the spatial, attentional, social, and temporal conditions of the lecture. Similarly, artificial intelligence can alter social presence through conversational interaction, attention through personalized responses, and educational time through continuous availability. Algorithmic systems may simultaneously operate in the background, influencing visibility, participation, and institutional expectations.

The atmosphere of contemporary higher education is therefore neither exclusively physical nor exclusively digital. It emerges through the interaction of material spaces, technologies, social relationships, institutional practices, and forms of mediation. The postdigital university can consequently be understood as an atmospheric environment in which technological and non-technological conditions are entangled in shaping how education is perceived, felt, and experienced.

3.1 Reconfiguring Educational Atmosphere in the Postdigital University

If the contemporary university is understood as postdigital, changes in educational atmosphere cannot be adequately described as a movement from physical environments into digital ones. Educational experience instead emerges through increasingly entangled configurations of physical spaces, digital technologies, social relationships, institutional practices, and material conditions. Digital mediation therefore does not simply remove or replace the atmospheric structures traditionally associated with university education. It reconfigures the conditions through which those atmospheres are produced and experienced.

This reconfiguration can be examined through the atmospheric dimensions identified in the previous section: space, attention, social presence, and time. Each has traditionally been organized through the material and institutional structures of university life, but each is increasingly shaped through interactions between physical and digital environments. These transformations can involve genuine losses. Spatial immersion may be weakened, attention may become fragmented, and opportunities for spontaneous social interaction may diminish (Lamb et al., 2022). Yet these changes occur alongside new forms of spatial organization, attentional practice, mediated presence, and temporal flexibility. The relevant question is therefore not whether digital education preserves or eliminates the atmosphere of the physical university, but how postdigital conditions reorganize the ways educational atmosphere is produced.

4. Atmospheric Reconfiguration in the Postdigital University

The postdigital perspective developed in the previous section changes the question of educational atmosphere. If physical and digital conditions are entangled within contemporary university life, digital technologies should not be understood as producing a separate “digital atmosphere” that replaces the atmosphere of physical education. Rather, technologies participate alongside spaces, institutional practices, social relationships, and material conditions in producing educational experience. The question is therefore not whether digital environments possess atmosphere, but how technological mediation reconfigures the atmospheric conditions of education.

This reconfiguration occurs across the spatial, attentional, social, and temporal dimensions of educational atmosphere. Technologies mediate what students see and hear, organize how they navigate educational environments, alter the forms through which instructors and students become present to one another, and restructure the rhythms through which educational activity occurs. These dimensions also overlap. A recorded lecture, for example, simultaneously reorganizes attention, social presence, space, and time. An interface structures navigation while also directing attention and establishing temporal expectations through notifications and deadlines. Artificial intelligence introduces new forms of interaction while also changing expectations surrounding availability, responsiveness, personalization, and institutional visibility. The following examples therefore should not be understood as discrete forms of digital atmosphere, but as mechanisms through which educational atmosphere is produced and reorganized within the postdigital university.

4.1 Video Lectures as Atmospheric Media

The video lecture provides a particularly clear example of atmospheric reconfiguration through technological mediation. Although recorded lectures may communicate content similar to that of classroom instruction, they do not simply reproduce the experience of attending a lecture in another format. Recording transforms the lecture from a spatially and temporally bounded event into an audiovisual object that can circulate across spaces and times. Its atmosphere emerges through the interaction of instructional performance, recording technologies, audiovisual design, the interface through which it is accessed, and the material environment in which the student encounters it.

In a physical lecture, the organization of attention is partly produced through architecture and co-presence. The instructor occupies a focal position, students orient themselves toward a shared event, and the lecture unfolds according to a collectively experienced rhythm. Video reorganizes these conditions through audiovisual mediation. Framing determines what becomes visible; microphones determine what becomes audible; editing can remove interruptions and restructure pacing; slides and graphics direct visual attention; and production choices can produce different degrees of formality, intimacy, or immediacy. The atmosphere of the lecture is therefore no longer produced solely through the relationship among instructor, audience, and classroom but through a broader configuration that includes cameras, microphones, screens, software, interfaces, and audiovisual conventions.

The screen also changes the perceived relationship between instructor and student. A lecturer who appears physically distant from students in a large lecture hall may appear visually close when framed in a head-and-shoulders shot on a laptop screen. Conversely, technological mediation removes many embodied and ambient cues through which presence is experienced. Students see what the camera frames and hear what the microphone transmits rather than experiencing the full sensory environment of the classroom. Technological mediation therefore does not simply decrease or increase presence; it reconstructs how presence is produced.

Recorded lectures similarly transform educational time. Whereas a live lecture ordinarily unfolds according to a shared temporal sequence, a recording allows students to pause, replay, accelerate, skip, and revisit the event (Gorissen et al., 2012). The student acquires partial control over the rhythm of the lecture. Educational time consequently becomes individualized and manipulable rather than exclusively determined by the instructor or institutional timetable. Yet the experience remains materially situated: a student may watch the same lecture from a bedroom, library, campus lounge, or workplace, and those surroundings become part of the conditions through which the lecture is experienced.

The video lecture is therefore best understood not as a diminished copy of classroom instruction but as an atmospheric medium. Like other audiovisual forms, it organizes perception through framing, sound, pacing, visual composition, and temporal control. What distinguishes it educationally is that these mediated aesthetic conditions participate directly in how students encounter knowledge. The lecture persists, but the atmospheric relations among instructor, student, environment, and educational time are reconfigured.

4.2 The Interface as Educational Architecture

If physical architecture organizes movement through university campuses, interfaces increasingly organize movement through the informational environments of university education. Learning management systems, videoconferencing platforms, university portals, course websites, and other digital systems determine how students locate information, move between activities, communicate with instructors, submit work, and understand the structure of their courses (Blair-Early & Zender, 2008). Interface design should therefore be understood not merely as a functional layer through which educational content is accessed but as an atmospheric condition of educational experience.

The analogy between interface and architecture is useful, but it should not imply that interfaces simply replace buildings. In the postdigital university, students frequently inhabit both simultaneously. A student may sit within a physical classroom while navigating a learning management system, view presentation slides while listening to an instructor, receive notifications during a discussion, or consult digital resources while moving through campus (Lamb et al., 2022). Physical architecture and information architecture therefore operate together in organizing educational activity.

Interfaces nevertheless perform architectural functions. Module sequences establish pathways through course content; menus determine what can be accessed and from where; dashboards establish visual hierarchies; notifications signal urgency; calendars organize future activity; and submission portals create boundaries around educational tasks. Interface design consequently establishes possibilities and constraints for educational movement much as architecture organizes movement through physical space.

These structures also possess aesthetic consequences. From the perspective of everyday aesthetics, apparently mundane features such as typography, spacing, visual hierarchy, navigation, notifications, and screen density contribute to how an educational environment is felt. A coherent interface may produce experiences of clarity, orientation, and manageability, while a fragmented or cluttered interface may produce disorientation, urgency, or cognitive overload (Suryani et al., 2024). These qualities are not merely decorative. They influence how students perceive the organization of educational activity and where they direct their attention.

The interface therefore does more than contain educational information: it stages the encounter with that information. It determines what appears first, what remains hidden behind menus, what demands immediate attention, and how students understand their progress through a course. In this sense, interface design participates in the production of educational atmosphere by organizing visibility, movement, attention, and expectation.

Digital education should therefore not be described as placeless. Nor should educational atmosphere be understood as having simply relocated from physical architecture to digital interfaces. Rather, the postdigital university involves layered spatialities in which physical and informational architectures coexist. Students inhabit classrooms, bedrooms, libraries, and other material spaces while simultaneously navigating digital environments. Educational atmosphere emerges through the interaction of these spaces rather than belonging exclusively to either one.

4.3 Artificial Intelligence and Algorithmic Atmospheres

The increasing integration of artificial intelligence into higher education introduces another layer of atmospheric mediation by altering how students encounter knowledge, guidance, and institutional systems. AI tutoring systems, automated feedback tools, conversational language models, recommendation systems, and intelligent learning assistants do more than introduce new tools into an existing educational environment (Holmes et al., 2019). They participate in organizing the conditions through which that environment is experienced.

Artificial intelligence is particularly significant because some AI systems occupy a different position from earlier educational media. A textbook, presentation, or recorded lecture primarily mediates educational content. Conversational AI can instead occupy a position resembling interaction: students ask questions, request explanations, receive feedback, revise ideas, and continue exchanges in response to generated answers (Yildiz et al., 2026). The resulting atmosphere is therefore produced not solely through the presentation of information but through an ongoing relationship between student and computational system. Educational interaction can become immediate, responsive, individualized, and continuously available.

This introduces a distinctive form of mediated social presence. Traditional university teaching distributes educational authority and interaction among instructors, peers, texts, and institutions. Conversational AI introduces a computational presence into this arrangement: a system that can appear responsive and conversational without possessing social presence in the same sense as a teacher or peer. AI therefore occupies an ambiguous atmospheric position. It is simultaneously an interface, informational resource, and simulated interlocutor. Students can experience forms of responsiveness and individualized attention without the reciprocal human presence traditionally associated with educational dialogue.

AI also changes the temporal expectations surrounding educational support. Human educational relationships are constrained by institutional rhythms: office hours, class meetings, appointment schedules, grading periods, and the availability of instructors and peers. Conversational AI operates according to a different temporality. Assistance can become immediate and continuously accessible. This may increase autonomy and access, but it can also contribute to an atmosphere in which immediacy becomes expected and waiting is increasingly treated as a problem to be eliminated.

Beyond these visible interactions, algorithmic systems participate in educational atmosphere in less perceptible ways. Learning management systems and educational platforms may collect behavioral data, prioritize information, track engagement, generate recommendations, and classify patterns of student activity. Unlike a lecturer whose presence is perceptible within the classroom, these computational processes frequently operate in the background (Gourlay, 2022). Yet their relative invisibility does not make them atmospherically insignificant. They help determine what becomes visible or urgent, which behaviors are recorded, and how participation becomes institutionally legible.

It is therefore useful to distinguish between AI as interlocutor and algorithmic atmosphere as infrastructure. In the first case, students knowingly interact with a computational system. In the second, computational systems structure aspects of the educational environment whether or not students actively engage with, or even perceive, them. Algorithmic atmosphere describes the diffuse experiential conditions produced when educational activity is increasingly organized through computational classification, personalization, prediction, and measurement.

The concept of atmosphere is especially useful here because these forms of influence need not appear as discrete objects of attention. Just as an atmosphere is experienced through the overall organization of an environment rather than through any single feature, algorithmic systems can shape educational experience indirectly by establishing conditions of visibility, urgency, personalization, and evaluation. Students may experience an educational platform as efficient, supportive, demanding, intrusive, or surveillant without encountering “the algorithm” as an identifiable object.

Learning analytics and engagement tracking make this atmospheric dimension particularly significant. When logins, participation, completion rates, submission patterns, and other behaviors become measurable, students occupy an environment in which educational activity continually produces data (Gourlay, 2022). The resulting atmosphere is not simply one of conventional surveillance but of computational visibility: educational behavior becomes increasingly legible to institutional systems through data. These systems may support intervention and personalized assistance while simultaneously encouraging expectations of productivity, optimization, efficiency, and measurable engagement.

Artificial intelligence and algorithmic systems therefore complicate the distinction between supporting and regulating educational experience. The same system that provides personalized guidance may collect data about student behavior; the same technology that makes assistance more responsive may establish expectations of continuous availability; and the same analytics used to identify students who require support may contribute to an environment in which participation becomes increasingly quantified. From a postdigital perspective, these effects demonstrate how technological, pedagogical, institutional, and social conditions become entangled within educational experience.

AI therefore does not simply add another educational tool to the university. It participates in constructing the conditions through which students experience knowledge, authority, attention, social presence, and institutional life. The postdigital university increasingly contains an atmosphere that is partially computational: intimate when students interact directly with conversational systems, yet infrastructural when algorithms operate in the background of educational platforms and institutional practices.

4.4 The Transformation of Educational Time

Atmosphere is not only spatial and social but temporal. University life has traditionally been organized through recurring institutional rhythms: class meetings, office hours, semesters, examination periods, deadlines, transitions between buildings, and distinctions between periods of study and non-study. These rhythms contribute to educational atmosphere by establishing expectations about when educational activity begins, ends, accelerates, pauses, and repeats.

Digital technologies reorganize these temporal structures. Recorded lectures remain available after class; course materials can be accessed at almost any time; discussion boards extend interaction beyond scheduled meetings; notifications bring academic activity into other parts of the day; and artificial intelligence can provide educational assistance without requiring the simultaneous availability of an instructor (Gorissen et al., 2012). Educational time consequently becomes less dependent upon a single shared schedule.

This does not mean that institutional time disappears. Deadlines, semesters, synchronous meetings, examination periods, and scheduled classes continue to organize university life. Rather, postdigital education produces overlapping temporalities. The scheduled rhythm of institutional education coexists with the continuous availability of digital resources, individualized patterns of study, asynchronous communication, and on-demand technological assistance.

This temporal entanglement can increase student autonomy. Recorded materials can be revisited, students can organize some educational activities around employment or domestic responsibilities, and asynchronous participation can loosen the requirement that learning occur simultaneously for everyone (Wood et al., 2021). Students acquire greater control over when and sometimes how quickly educational experiences unfold.

At the same time, digitally mediated education can blur the boundaries that once separated educational activity from other dimensions of everyday life (Lamb et al., 2022). When the classroom is partially accessible through the same device used for employment, entertainment, communication, and domestic coordination, university activity can become dispersed throughout the day. A notification can make an academic obligation suddenly present during leisure; an assignment can be completed late at night; a recorded lecture can be watched during a commute; and an AI system can be consulted whenever a question arises. Flexibility and continuity therefore exist in tension.

The atmospheric significance of this change lies not simply in convenience but in the altered felt rhythm of university life. Educational activity can become simultaneously more autonomous and more persistent. Students may gain freedom from fixed schedules while experiencing fewer clear transitions between being “at university” and being elsewhere. Postdigital temporality is therefore characterized by the coexistence of scheduled and asynchronous, bounded and continuous, collective and individualized forms of educational time.

4.5 Atmosphere as Postdigital Configuration

Taken together, these examples demonstrate that the digitalization of higher education should not be understood as the replacement of one educational atmosphere with another. Video lectures, interfaces, artificial intelligence, algorithms, and digitally mediated temporalities do not operate independently of physical spaces, human relationships, or institutional practices. They become entangled with them, producing configurations through which educational atmosphere emerges.

This also means that technologies do not possess fixed atmospheric effects. A recorded lecture is not inherently isolating or engaging; an interface is not inherently calming or distracting; artificial intelligence is not inherently supportive or alienating. Their atmospheric effects depend upon how technologies are configured with particular students, pedagogical practices, material environments, institutional expectations, and forms of social interaction. Atmosphere emerges relationally from these configurations rather than residing within the technology itself.

The concept of postdigital educational atmosphere therefore provides a way of describing the experiential consequences of these entanglements. It directs attention not only toward what educational technologies enable functionally, but toward how their integration reorganizes perception, attention, social presence, spatial experience, and time. The digitalization of higher education is, in this sense, not merely a technological transformation. It is an aesthetic reconfiguration of the conditions through which university education is experienced.

5. Counterarguments

The argument that university education should be understood atmospherically, particularly within the postdigital university, raises two important objections. The first concerns whether technologically mediated educational experiences can genuinely possess atmosphere when they lack forms of embodied co-presence associated with campus life. The second concerns whether atmosphere, even if present, is sufficiently significant to educational practice to warrant attention alongside more conventional concerns such as pedagogy, knowledge, assessment, and learning outcomes. Addressing these objections helps clarify both the limits and the significance of an atmospheric approach to postdigital education.

5.1 Objection 1: Atmosphere Requires Embodied and Material Presence

A significant objection to the argument developed in this paper is that atmosphere fundamentally depends upon embodied presence within material environments. On this view, the atmospheric qualities of university education emerge from architectural space, sensory experience, shared occupancy, and direct interpersonal interaction. Libraries, lecture halls, classrooms, courtyards, and campus pathways possess material and sensory qualities that cannot be reproduced through screens or digital interfaces. The experience of entering a lecture hall with other students, hearing conversations before class, observing the movements and reactions of others, and occupying a common environment appears fundamentally different from accessing educational material through a computer.

This objection is important because technological mediation does alter the sensory and social conditions through which atmosphere is experienced. A video conference does not reproduce every aspect of occupying a classroom with other students. Cameras selectively frame what becomes visible, microphones determine what becomes audible, and screens limit many of the peripheral and embodied cues available through physical co-presence. Similarly, a recorded lecture cannot fully reproduce the collective temporality of an event in which an instructor and students occupy the same space at the same time. Any account of postdigital educational atmosphere should therefore avoid suggesting that technological mediation simply reproduces the atmospheric qualities of campus life.

However, this objection becomes less decisive when atmosphere is understood relationally and education is approached from a postdigital perspective. The argument advanced in this paper does not require digital technologies to reproduce physical co-presence or to generate atmosphere independently from material environments. A student participating in an online lecture remains embodied and materially situated (Tyrrell & Shalavin, 2023). The student may be sitting in a bedroom, library, workplace, cafe, or campus study space; interacting with a physical device; hearing sound through speakers or headphones; and participating within broader social and institutional contexts. Similarly, students occupying physical classrooms

increasingly interact with learning management systems, presentation software, personal devices, digital resources, and artificial intelligence. The material and the digital are therefore not mutually exclusive atmospheric domains.

From this perspective, educational atmosphere emerges through configurations of bodies, spaces, technologies, social relationships, and institutional practices. Different configurations make different atmospheric experiences possible. Physical co-presence may support forms of spontaneous interaction, collective attention, and sensory richness that are difficult to reproduce through technological mediation. At the same time, mediated environments can generate other atmospheric conditions through audiovisual presentation, interface design, asynchronous participation, personalized interaction, and altered temporal rhythms. The difference between these conditions should not be reduced either to equivalence or to deficiency.

The objection therefore identifies an important limit of technological mediation without demonstrating that atmosphere disappears when technologies become involved. Instead, it reinforces the need to examine how atmosphere is reconfigured through different arrangements of material and technological conditions. The relevant question is not whether a disembodied digital atmosphere can replace the atmosphere of physical university life, but how embodied, material, technological, and social conditions become entangled in producing different educational experiences. Physical co-presence remains atmospherically significant without being the sole condition through which educational atmosphere can emerge.

5.2 Objection 2: Atmosphere Is Secondary to the Educational Aims of the University

A second objection concerns the educational significance of atmosphere itself. Universities exist primarily to support knowledge, understanding, inquiry, and intellectual development. From this perspective, the quality of education should be evaluated primarily through the accuracy and rigor of course content, the effectiveness of teaching, the quality of assessment, and students' development of knowledge and skills. Atmospheric qualities may contribute to whether a university feels welcoming, stimulating, stressful, or engaging, but these experiences could be regarded as secondary to the actual purposes of education.

This objection also raises a concern about placing too much emphasis on aesthetics. Describing lectures as atmospheric performances or interfaces as aesthetic environments could appear to prioritize presentation over intellectual substance. A visually appealing interface does not necessarily provide effective instruction, just as an impressive lecture hall does not guarantee meaningful learning. Likewise, a pleasant educational atmosphere cannot compensate for weak curriculum, inaccurate information, ineffective pedagogy, or inadequate academic support. Atmosphere alone therefore cannot serve as a measure of educational quality.

This limitation should be accepted. The argument of this paper is not that atmosphere replaces pedagogy or that educational success can be reduced to aesthetic experience. Rather, the claim is that education is always encountered through particular experiential conditions. Knowledge is not received independently of the environments, practices, technologies, and social relationships through which students encounter it. A lecture has content, but that content is encountered through a particular voice, pace, space, social setting, and organization of attention. Likewise, digital course content is encountered through interfaces, screens, notifications, audiovisual forms, institutional platforms, and increasingly algorithmic systems. These conditions do not determine whether the content is intellectually valuable, but they form part of the experience through which students engage with it.

Atmosphere is therefore better understood as a condition of educational experience rather than a substitute for educational content. Its significance lies in drawing attention to dimensions of education that can become invisible when educational environments are treated merely as neutral containers for instruction. The arrangement of a classroom, the pacing of a lecture, the organization of an interface, the presence of peers, the frequency of notifications, or the responsiveness of an AI system all participate in structuring how students encounter educational activity. Whether these conditions are beneficial or detrimental cannot be determined through atmosphere alone, but neither are they educationally neutral.

The importance of this distinction becomes especially apparent within the postdigital university. Decisions about educational technologies are frequently framed in terms of functionality: whether a platform provides access to course materials, whether an AI system can generate feedback, whether a video platform enables synchronous communication, or whether a learning management system efficiently organizes assignments. Yet the same technologies also establish experiential conditions. Interfaces can produce clarity or disorientation; notifications can create urgency; recorded lectures can alter students' control over educational time; conversational AI can create expectations of immediate responsiveness; and learning analytics can make educational participation increasingly visible and measurable. These effects form part of how contemporary university education is experienced even when they are not the explicit purpose of the technology.

Recognizing atmosphere as educationally significant therefore does not require claiming that atmosphere directly determines learning outcomes. Nor does it require universities to prioritize aesthetic experience over intellectual rigor. Instead, it recognizes that the conditions through which education is experienced are themselves part of educational practice. An atmospheric perspective complements rather than replaces pedagogical analysis by asking how environments organize perception, attention, interaction, and participation.

The objection therefore establishes an important boundary for the argument: atmosphere should not be treated as an independent measure of educational quality. Nevertheless, excluding atmosphere from educational analysis would overlook the experiential conditions within which teaching and learning necessarily occur. This is particularly important in the postdigital university, where decisions about platforms, interfaces, artificial intelligence, physical spaces, and modes of participation increasingly interact in shaping those conditions.

5.3 What the Objections Clarify

Taken together, these objections establish two important limits to the concept of postdigital educational atmosphere. First, technological mediation should not be understood as equivalent to embodied co-presence. Different configurations of physical, social, and technological conditions produce different atmospheric possibilities, and some qualities of campus life may be diminished or difficult to reproduce through technological mediation. Second, atmosphere should not be treated as a replacement for pedagogy, educational content, or measures of educational quality.

Neither limitation, however, makes atmosphere irrelevant. Instead, they clarify the scope of the argument. Educational atmosphere describes the experiential conditions that emerge through relations among spaces, technologies, bodies, social interactions, institutional practices, and forms of mediation. These conditions do not determine the value of education by themselves, but they shape the environments through which educational activity is encountered and experienced. Within the postdigital university, attending to atmosphere therefore provides a way of examining dimensions of educational experience that might otherwise remain unnoticed when technological and pedagogical questions are considered separately.

6. Conclusion

This paper has argued that universities should be understood not only as institutions for the production and transmission of knowledge but also as atmospheric environments that shape how education is perceived, felt, and experienced. Drawing upon theories of atmosphere and everyday aesthetics, it has shown that university education occurs within aesthetic conditions produced through spaces, social relationships, institutional practices, technologies, and everyday routines. Atmosphere is therefore not merely a background to educational activity but part of the experiential conditions through which students encounter knowledge, instructors, peers, and the university itself.

Within the contemporary university, however, these atmospheric conditions can no longer be understood through a strict distinction between physical and digital environments. A postdigital perspective reveals that educational experience increasingly emerges through entanglements among material spaces, digital technologies, social relationships, pedagogical practices, and institutional systems. Students move between classrooms and learning management systems, experience lectures through combinations of physical and audiovisual presence, interact with both human instructors and artificial intelligence, and participate in educational activities that extend across physical locations and institutional schedules. The atmosphere of contemporary university education is therefore neither exclusively physical nor digital.

This paper has proposed postdigital educational atmosphere as a way of conceptualizing the experiential conditions produced through these entanglements. Such atmosphere can be examined through interconnected dimensions of space, attention, social presence, and time. Digital technologies do not operate outside these dimensions but participate in reorganizing them. Video lectures restructure perception, presence, and temporal control through audiovisual mediation; interfaces operate alongside physical architecture in organizing educational movement and attention; artificial intelligence introduces new forms of responsiveness and computational interaction; algorithmic systems contribute to conditions of personalization, measurement, and visibility; and continuous digital access alters the temporal rhythms through which university life is experienced. These transformations demonstrate that technological change in higher education is also an aesthetic reconfiguration of educational experience.

Importantly, this argument does not suggest that technologically mediated environments reproduce all of the atmospheric qualities of embodied campus life, nor that atmosphere should replace pedagogy, educational content, or learning outcomes as a measure of educational quality. Different configurations of bodies, technologies, spaces, and practices make different atmospheric experiences possible. Physical co-presence may support forms of collective attention, spontaneous interaction, and sensory experience that technological mediation cannot fully reproduce. At the same time, technologically mediated environments create other possibilities for interaction, flexibility, personalization, and participation. An atmospheric perspective makes these differences available for analysis without requiring them to be understood simply in terms of technological progress or educational decline.

Recognizing the atmospheric dimension of the postdigital university also has implications for educational design and institutional decision-making. Decisions about classrooms, learning platforms, interface design, recorded lectures, artificial intelligence, learning analytics, and hybrid modes of participation are not merely technical or logistical decisions. They participate in constructing the conditions through which university education is experienced. An interface may organize attention differently from a lecture hall; an AI system may establish different expectations of responsiveness than an instructor; and continuous access to educational platforms may create different rhythms of academic life than scheduled classroom participation. Universities therefore shape educational atmosphere whether or not atmosphere is explicitly considered in the design or adoption of these systems.

As technologies become increasingly embedded within the ordinary practices of higher education, the question is no longer simply what digital technologies add to or remove from the traditional university. The more significant question is what kinds of educational environments emerge when technologies, spaces, people, and institutional practices become entangled, and how those environments shape the experience of education. Attending to postdigital educational atmosphere offers one way of addressing this question. It shifts attention from technologies as isolated tools toward the broader configurations through which university life is organized and experienced. The future of the university will therefore be shaped not only by what educational technologies allow institutions and students to do, but also by the atmospheres those technologies participate in creating.

Declarations

Author Contribution

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References

1. Affoo, R., Bruner, J., & Dietsch, A. (2022). *Active learning and Student achievement: A matter of space, experiences, or pedagogy?* <https://www.digitalgreensboro.org/record/601463?ln=en&v=pdf>
2. Bayne, S. (2015). Teacherbot: Interventions in automated teaching. *Teaching in Higher Education*, 20(4), 455–467. <https://doi.org/10.1080/13562517.2015.1020783>
3. Blair-Early, A., & Zender, M. (2008). User interface design principles for interaction design. *Design Issues*, 24(3), 85–107. <https://www.jstor.org/stable/25224185>
4. Böhme, G. (1993). Atmosphere as the fundamental concept of a new aesthetics. *Thesis Eleven*, 36(1), 113–126. <https://doi.org/10.1177/072551369303600107>
5. Fawns, T. (2019). Postdigital Education in Design and Practice. *Postdigital Science and Education*, 1(1), 132–145. <https://doi.org/10.1007/s42438-018-0021-8>
6. Fawns, T. (2022). An entangled pedagogy: Looking beyond the pedagogy—Technology dichotomy. *Postdigital Science and Education*, 4(3), 711–728 <https://doi.org/10.1007/s42438-022-00302-7>
7. Fenner, D. (2020). Developing aesthetic taste. *Journal of Aesthetic Education*, 54(2), 113–122. <https://doi.org/10.5406/jaesteduc.54.2.0113>
8. Gourlay, L. (2022). Surveillance and datafication in higher education: Documentation of the human. *Postdigital Science and Education*, 6(4), 1039–1048. <https://doi.org/10.1007/s42438-022-00352-x>
9. Holmes, W., Bialik, M., & Fadel, C. (2019, March). *Artificial intelligence in education. Promise and implications for teaching and learning*. Center for Curriculum Redesign. ResearchGate. https://www.researchgate.net/publication/332180327_Artificial_Intelligence_in_Education_Promise_and_Implications_for_Teaching_and_Learning
10. Irvin, S. (2008). The pervasiveness of the aesthetic in ordinary experience. *The British Journal of Aesthetics*, 48(1), 29–44. <https://doi.org/10.1093/aesthj/aym039>
11. Kayongo, J., & Rollings, K. (2022). *Assessing the use of spaces renovated to support group work in an academic library*. <https://www.digitalgreensboro.org/record/601474?ln=en&v=pdf>
12. Lamb, J., Carvalho, L., Gallagher, M., & Knox, J. (2022). The postdigital learning spaces of higher education. *Postdigital Science and Education*, 4(1), 1–12. PubMed Central. <https://doi.org/10.1007/s42438-021-00279-9>
13. Pierre Gorissen, P., van Bruggen, J., & Jochems, W. (2012, August 24). *Students and recorded lectures: Survey on current use and demands for higher education*. <https://journal.alt.ac.uk/index.php/rlt/article/download/1276/html?inline=1>
14. Saito, Y. (2007). *Everyday aesthetics*. Oxford University Press.
15. Saito, Y. (2017). *Aesthetics of the familiar: Everyday life and world-making*. Oxford University Press. <https://academic.oup.com/book/11785>
16. Suryani, M., Sensuse, D. I., Santoso, H. B., Aji, R. F., Hadi, S., Suryono, R. R., & Kautsarina. (2024). An initial user model design for adaptive interface development in learning management system based on cognitive load. *Cognition, Technology & Work*, 26(4), 653–672. <https://doi.org/10.1007/s10111-024-00772-8>
17. Tyrrell, J., & Shalavin, C. (2023). Learning foams: Towards an atmospheric ethics of education. *Postdigital Science and Education*, 6(1), 279–299. <https://doi.org/10.1007/s42438-023-00418-4>
18. Wood, A. K., Bailey, T. N., Galloway, R. K., Hardy, J. A., Sangwin, C. J., & Docherty, P. J. (2021). Lecture capture as an element of the digital resource landscape - a qualitative study of flipped and non-flipped classrooms. *Technology, Pedagogy and Education*, 30(3), 443–458. <https://doi.org/10.1080/1475939x.2021.1917449>
19. Yildiz, U., Gauthier, A., & Mutlu, C. (2026, April). *What students ask, how a generative AI assistant responds: Exploring higher education students' dialogues on learning analytics feedback - UCL discovery*. Ucl.Ac.Uk. <https://discovery.ucl.ac.uk/id/eprint/10224728>