# A LACANIAN ETHICAL RECONSTRUCTION OF SUSTAINABLE AI EDUCATION

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## Abstract

*Within the global agenda of "Sustainable AI and Education," mainstream AI educational systems are predominantly built upon cognitive and behaviorist paradigms. These systems emphasize efficiency, predictability, and immediate feedback, presupposing the learner as a quantifiable and optimizable cognitive subject. However, this technological imagination of a "transparent subject" obscures the fundamental condition of subjective existence revealed by psychoanalysis as early as the beginning of the 20th century—namely, split subjectivity, the insatiability of desire, and the continuous illusion of unconscious processes from structures of meaning. Adopting a Lacanian critical perspective, this paper argues that current AI educational systems, in their attempt to algorithmically satisfy learners' "demands," systematically repress "desire," which constitutes the core dynamism of subjectivity. Lacan emphasizes that the essence of human desire is an eternal pursuit of "lack," rather than a "need" waiting to be fulfilled. When existing AI educational systems operate on learners merely through a cyclical "satisfaction-feedback" pathway, they effectively induce a narcissistic loop*

*akin to the "Imaginary order." This process deprives learners of the opportunity to confront the traumas, unknowns, or gaps of meaning associated with the "Real," thereby obstructing the potential for "symptoms" manifest in the learning process—such as frustration, dissonance, and confusion—to be transformed into creative forces. Based on this analysis, this paper introduces the Lacanian concept of "desire" as a critical entry point for examining the numerous ethical controversies in sustainable AI education. It proposes an ethics of desire for educational practice, positing that AI should not be viewed merely as a technical tool for addressing learners' demands. Instead, it should precisely function as an "Otherness" ethical medium that reveals the structural lack within the subject and guides learners into a dialogue with their own desire. Thus, as an "irreducible heterogeneity" for the learner—that is, an ethical other in the Lacanian sense—AI education can persistently evoke the learner's awareness of the fundamental (lack) inherent in knowledge and the self. This transforms education from an object of technical optimization into a sustainable ethical practice of desire. Within this practice, AI ceases to be a technological tool for narcissistic collusion with the learner and becomes an ethical partner that facilitates the learning subject's continuous transcendence of established cognitive boundaries towards unknown possibilities through the endless dialectic of desire.*

**Keywords:**

# 1. Introduction

Driven by the global agenda of "Sustainable AI and Education", artificial intelligence is reshaping the contemporary educational landscape with unprecedented depth. However, most mainstream AI educational systems are rooted in the epistemological paradigms of cognitivism and behaviorism. Their core logic lies in using algorithms to predict, model, and optimize learner behavior (Baker, 2016). This paradigm effectively presupposes the learner as an autonomous, unified "transparent subject"—whose learning process is seen as an observable, quantifiable, computable logical circuit that can be efficiently intervened upon and regulated externally. Thus, educational systems skillfully construct precise instructional plans aimed at accurately identifying and efficiently satisfying the various learning "demands" of learners.

The construction of such instructional plans aligns with the operational logic of functional differentiation in modern society, as revealed by sociologist Niklas Luhmann. Education, as a social system, tends towards self-referential closure and reproduction through the binary operation of codes (e.g., "understand/not understand," "pass/fail") (Luhmann, 1995/2012). The intervention of AI greatly reinforces this systemic closure and operational efficiency. However, Luhmann also pointed out that in pursuing internal stability, systems inevitably perform reductive operations on the individual's "psychic system" and its rich inner world. In the context of AI education, this means the complexity of the learner's subjective world is reduced to data points that can be uniformly processed by technology, while their vivid, contradictory, and tension-filled experiences are systematically excluded from the technical circuit's consideration.

This systematic simplification and compression of subjective complexity touches upon a fundamental ethical issue. Psychoanalyst Jacques Lacan revealed as early as the mid-20th century that the core of the human subject is not a Cartesian transparent "cogito," but a split existence structured by language and the unconscious. The generation of the subject's life force (drive) does not stem from the satisfaction of demands, but from the continuous response to a core "lack"—that is, the reproduction of desire. Lacan emphasized that the essence of subjective desire is "the desire for the desire of the other," a signifying chain that perpetually points towards the next object, never reaching ultimate satisfaction (Lacan, 1973/1998). From this perspective, the "satisfaction-feedback" technical circuit that mainstream AI education attempts to construct precisely fixes the learner within a narcissistic mirror of the "Imaginary" order. The fantasy of systemic "perfect adaptation" to learner demands it provides represses

the reproduction of desire, which is the core dynamism of subjectivity, and blocks the learner's creative opening towards their own "Real"—that which resists symbolization: trauma, rupture, and the real.

The philosopher of technology Bernard Stiegler further historicizes and politicizes the issue of the systematic repression of desire. Drawing on Freudian and Lacanian theory, he proposes that human desire never belonged to a "pre-technical" natural state but is constituted and organized through the "technical organ" (including today's digital technologies) as a "third retention" (Stiegler, 2010/2022). In modern capitalism, particularly in the hyper-industrial context of control societies, social functioning, through media technologies and algorithms, systematically channels, standardizes, and consumerizes individual desire, leading to a poverty of desire. In the field of AI education, this means that the instructional technical circuit not only represses the learner's desire but, more dangerously, is reshaping and orchestrating the learner's desire according to its own logic (e.g., engagement metrics), making it serve the system's performance indicators rather than the subject's true needs. Consequently, the journey of learning is alienated from an adventurous exploration akin to an "economy of desire" into a pre-scripted "management of demands."

Thus, this paper argues that the ethical reconstruction of sustainable AI education should target a critique of this closed technical circuit and reposition Lacanian desire ethics at the center of design. We can no longer view AI merely as a technical tool for solving learner "demands," but must reconceive it as an "ethical Other" capable of receiving, stimulating, and engaging in a dialectical dialogue with the learner's desire.

To this end, this paper will use the "Urban Playwriting" project studied by Maisha T. Winn (2012) as a model of ethical practice. This research vividly demonstrates how an educational activity can become a channel for the expression of participants' desires rather than a machine of repression. This paper will use this practice as an "ethical compass" to systematically explore how AI technology can be designed to simulate the core functions of this workshop, thereby transforming from an efficient need-satisfier into an ethical partner that facilitates subject formation.

The argument of this paper will unfold according to the following structure: Part II will elaborate on Lacan's theory of desire, establishing the ethical foundation of the entire paper; Part III will analyze the "Playwriting Workshop" case study, extracting operational principles of "desire ethics" that can guide AI design; Part IV will translate the aforementioned theory and model into concrete technical implementation pathways, proposing a design

framework and prototype conception for AI as an "ethical Other." Ultimately, this paper aims to demonstrate that an AI education centered on the affirmation and guidance of desire can truly move towards a "sustainable" future that stimulates infinite creativity and possibility.

## 2. Lacan's Theory of Desire and the Ethics of Education

To explore the ethical dilemmas of the mainstream AI education paradigm and find a solid theoretical foundation for its reconstruction, we must return to Lacanian psychoanalytic theory, particularly its revolutionary insights into the constitution of the subject and the dynamics of desire. Lacan's doctrine provides us with a "map of the subject" different from cognitivism and behaviorism, a map in which "desire," rather than "reason," constitutes the core dimension of human existence, and education is precisely an ethical practice that should deeply interact with the structure of subjective desire.

### 2.1 The Split Subject and the Constitutive Lack

The primary contribution of Lacan's theory lies in its thorough subversion of the Cartesian transparent subject of the "cogito." He argued that the subject is not a unified, self-consistent rational entity but is split by the intervention of language (i.e., the Symbolic order). When the individual enters the language system, thereby acquiring social identity and cognitive ability, a permanent rupture also occurs from the original, undifferentiated real experience with the (m) Other. The loss of this original real leaves within the subject an unfillable void. This void, the "lack," is not an accidental loss but the structural condition enabling the subject's constitution (Lacan, 1973/1998). It is this fundamental lack that becomes the eternal driving force behind all human seeking, creation, and speech. In the context of education, this means the learner is never an empty vessel waiting to be "filled" with knowledge, but rather a being who always carries an internal lack and therefore constantly seeks meaning.

### 2.2 The Dialectical Triad: Need, Demand, and Desire

To elaborate the complexity of subjective dynamism, Lacan strictly distinguished three key concepts: need, demand, and desire. Need refers to biological privation, such as hunger or thirst, which can, in principle, be satisfied by specific objects. However, when need is expressed through language to the other (initially the mother), it transforms into demand. Demand not only requests a concrete object but also, on a deeper level, appeals for the Other's love and recognition. Thus, in the fissure between demand and need, desire is born.

Desire is neither the satisfaction of concrete biological needs nor can it be reduced to the demand for the Other's love. Desire is the desire for the lack itself. It always points towards "the desire of the other"—that is, the enigmatic question "What do you want from me?" Therefore, the essence of desire is like a signifying chain; it constantly moves from one object to another, never ceasing, and never achieving ultimate satisfaction (Lacan, 1958/2006). In the educational context, a student seeking knowledge (demand) may have a deeper desire pointing towards the teacher's recognition, parental pride, or the imagined identity of being "an educated person." If an AI educational system focuses solely on accurately identifying and satisfying the superficial "knowledge demand" (e.g., providing answers, optimizing paths), it effectively ignores the flow of desire that drives learning behavior. It may even systematically short-circuit the dialectical process through which desire arises by providing immediate satisfaction of demand.

## 2.3 Education as the Practice of Traversing the Imaginary and Encountering the Real

Lacan used the three orders of the Imaginary, the Symbolic, and the Real to describe the structure of human experience, which has profound implications for understanding the educational process.

The Imaginary: This is the realm where the ego is constructed through identification with its own mirror image, characterized by narcissism, identity, and closure. Current mainstream AI educational systems that pursue "personalization" and "adaptation" can easily trap learners in a technologically reinforced version of the Imaginary. Through algorithmic mirroring, the system continuously feeds back to the learner an illusion of a seemingly coherent and unified "learning profile," causing them to revolve in a self-referential, smooth "demand-satisfaction" cycle, which is essentially a form of educational narcissism.

The Symbolic: This is the realm of language, law, rules, and social structures—the order of the "big Other." The educational field itself is a powerful Symbolic institution. Lacan emphasized that the growth of the subject occurs in dialogue and confrontation with the "big Other." A healthy Symbolic order should not be a repressive cage but a space that allows desire to be expressed, to circulate, and to structure itself through signifiers.

The Real: This is the traumatic core that absolutely resists symbolization, the point of rupture in the system of meaning, the trauma, failure, and impossibility that cannot be integrated by the coherence of the Imaginary. In the learner's process, the Real manifests as concepts that cannot be immediately understood, the frustration in problem-solving, the

collapse of ingrained cognitive frameworks—in short, all educational experiences that cannot be smoothly integrated into the "satisfaction-feedback" circuit.

Based on this, the core task of a Lacanian educational ethics is no longer to provide mirroring self-confirmation (Imaginary) or merely transmit symbolic knowledge (Symbolic), but to guide the subject to have the capacity to encounter and traverse the trauma of the Real. True learning and creation occur precisely when established cognitive frameworks rupture, forcing the subject to confront their own ignorance and lack.

**2.4 Towards an Educational Ethics of "Not Ceding on One's Desire"**

Lacan's famous ethical injunction—"do not give up on your desire"—does not encourage the unbridled pursuit of desire's object, but rather requires the subject to hold fast to the truth of their desire, that is, to acknowledge and assume the fundamental lack of their existence (Lacan, 1959-1960/1992). Translating this maxim into the language of education means: the highest ethic of education lies not in making students feel comfortable and satisfied, but in creating conditions that enable them to identify, receive, and coexist with their own inexhaustible desire for knowledge, and even to view the "symptoms" in the learning process—such as confusion, frustration, and dissonance—as valuable gateways to creativity.

In summary, Lacan's theory of desire provides us with a sharp theoretical weapon for criticizing the mainstream AI education paradigm: it reveals the technological fantasy of pursuing a "transparent subject" and "perfect adaptation" as a fundamental misunderstanding and repression of subjectivity. Simultaneously, it points the way towards reconstruction: an ethically sound AI education must transcend the technical circuit of "demand management" and instead consider how to become a "big Other" in the Lacanian sense—an ethical partner that does not provide certain satisfaction but continuously marks the subject's lack and invites them into the eternal dialectic of desire. This lays a solid philosophical foundation for introducing the specific model of the "Playwriting Workshop" below and ultimately exploring its technical implementation.

# 3. A Lacanian Model of Desire Ethics in Education: The "Playwriting Workshop"

Following the theoretical critique above, there is an urgent need for an alternative educational design. Maisha T. Winn's (2012) research on the "Girl Time" playwriting project provides us with an exemplary model of education that successfully applies Lacanian "desire ethics" in an extremely repressive environment. This project is not merely an artistic workshop;

through its unique pedagogical structure and process design, it constructs an educational practice field imbued with Lacanian desire ethics. Therefore, we can use this case to distill an ideal educational model and extract operationally valuable principles for guiding the Lacanian ethical reconstruction of AI educational systems. This section will thus delve into this model, revealing how its educational field successfully functions as an "ethical Other" that receives, guides, and sublimates the learner's desire.

## 3.1 Model Overview: Constructing Channels for Learner Desire Expression in a Systemically Repressive Environment

The "Girl Time" project was conducted at a juvenile detention center in the southeastern United States, with participants being incarcerated African American girls aged 14 to 17. These girls were situated in the "cracks" intertwined by multiple systems such as justice, education, and social welfare, a typical systematically disciplined and repressed group (Winn, 2012). Their voices were often "forgotten, marginalized, and silenced" in mainstream narratives. Yet, precisely within this closed system that sought to define them as "problems" or "criminals," the arrival of the "Playwriting Workshop" successfully opened a heterogeneous gap for them. The workshop did not attempt to "correct" or "supplement" these girls but provided them with a platform to explore and express their unique longings for "change," "hope," "new beginnings," and "unconditional love" (Winn, 2012). These themes themselves are direct responses to the fundamental lack in their lives, declarations of their desire.

## 3.2 Practical Mechanisms: The Workshop as "Ethical Other"

The key to the workshop's success lay in its role as an "ethical other" in the Lacanian sense within these girls' world. We can distill four operational mechanisms that constitute an educational environment capable of guiding the dialectical movement of learner desire.

Constructing a Safe "Fictional" Space to Accept the Presentation of Traumatic Content: The essence of drama is an "as-if" mode, creating a safe distance between reality and fiction. Within this space, the girls could project their experienced traumas—such as abuse, betrayal, judicial injustice, and other fragments of the Real that cannot be easily spoken of in everyday language—onto characters and plots. For instance, in the play Unconditional Love, the mother Cindy's drug addiction and estrangement from her daughter, and the sexual coercion pressure faced by Kiki in Journey of Life, are eruptions of the traumatic Real from real life. Through the fictional framework of the play, these traumas could be symbolized and rehearsed without the subject bearing their full psychological impact. This creatively practices the

Lacanian ethical requirement of "guiding the subject to encounter the Real." The implication for AI design is: it must be able to create a "sandbox" or narrative environment where learners can relatively safely explore and express the conflicts, contradictions, and failures in their life experiences.

Facilitating the "Symbolic Reconstruction" of Learner Desire: The workshop required the girls not merely to confide but to transform their experiences and desires into complete theatrical works, including character development, plot progression, scene setting, and dialogue writing. This process is a quintessential symbolic reconstruction. It forces the subject to reorganize chaotic internal experiences (demands and desires) through the order of the Symbolic (the structure and language of drama). For example, a girl desiring freedom but trapped in confinement could achieve the concretization of her desire by having a character gain admission to "Juilliard" or "Harvard University" (Winn, 2012). Thus, they were no longer passive victims of tragedy but active creators of their own life scripts. This breaks the "Imaginary" closure of mainstream educational systems that view learners as passive recipients of knowledge. The implication for AI design is: AI should not provide answers directly but should guide learners to engage in symbolic re-creation based on their own issues, such as constructing concept maps, writing research reports, or designing solutions, thereby transforming internal cognitive conflicts into an externalized, reflective symbolic structure.

Introducing "Heterogeneous" Interlocutors to Break the Learner's Narcissistic Imagination: The teaching artists and the rules of drama themselves constituted crucial heterogeneous elements in the workshop. They were not "servers" indiscriminately satisfying the girls' demands but intervening "Others" bringing professional skills, external perspectives, and the binding force of a specific art form. The dramatic techniques introduced by these teachers, requirements for plot plausibility, and encouragement of multi-perspective narratives interrupted the girls' potentially fixed, singular, narcissistic narrative imaginations. Simultaneously, when the girls acted out roles in each other's plays, they had to step outside their own perspectives to understand and portray desires and situations based on the field of the Other. This process forced the participating subjects to continuously engage in dialogue with "alien" forces, thereby moving beyond the self-mirror of the "Imaginary." The implication for AI design is: AI must be designed with the characteristic of "irreducible heterogeneity." It can intervene and break the learner's closed imaginary loop by introducing counterexamples, playing the "devil's advocate," providing cross-disciplinary perspectives, or setting creative constraint rules.

Protecting and Transforming the "Symptom," Treating Cognitive Frustration as Creative Drive: In mainstream education, confusion, frustration, and dissonance are often seen as "system errors" to be eliminated as quickly as possible. However, in the playwriting workshop case, these phenomena were endowed with new value as Lacanian "symptoms." The narrative dilemmas, character contradictions, and difficulties in emotional expression encountered by the girls during creation became precisely the opportunities for deepening the creative work. The workshop did not provide "standard endings" to quickly resolve these symptoms but protected this exploratory process, allowing the "symptom" itself to become a channel for the emergence of truth. Ultimately, seemingly unsolvable dilemmas in reality found imaginative resolution and sublimation in the plays through creative plot twists (e.g., Kiki's successful escape and mother-daughter reconciliation in Journey of Life). This embodies the Lacanian ethic of "not ceding on one's desire": it does not eliminate the symptom by satisfying demands but transforms the symptom into a creative drive by holding fast to desire (the yearning for a good life). The implication for AI design is: AI should be able to identify the learner's cognitive "symptoms" (e.g., repeatedly queried concepts, sticking points in problem-solving), but instead of immediately correcting them, it should transform these phenomena into opportunities for deep learning through questioning, providing relevant resources, or guiding reflection.

In summary, the "Girl Time" Playwriting Workshop, as an exemplary model of desire ethics, succeeded not by chance. Through its four core mechanisms—constructing a safe fictional space, facilitating symbolic reconstruction, introducing heterogeneous interlocutors, and protecting creative symptoms—it effectively played the role of a Lacanian "ethical Other." It demonstrates to us that an educationally ethical environment depends not on its technical sophistication but on its ability to receive the subject's lack and provide an inclusive, stimulating, and challenging container for the dialectical flow of desire.

This model of educational practice provides an "ethical compass" and a set of operational guidelines for reconstructing AI educational systems. It points the way forward: AI should not be an increasingly efficient "mirror" that imprisons learners in an "Imaginary" circuit, but should strive to become a digital "ethical Other" capable of simulating the aforementioned core mechanisms. In the following Part IV, we will translate the principles extracted from this case study into possible technical implementation pathways.

### 3.3 A Path for Reconstruction: AI as an "Otherness" Medium for Desire Ethics

Based on the preceding elaboration of Lacanian desire theory and the distillation of the "Playwriting Workshop" ethical model, we propose a possible technical pathway to transform AI from a "demand-satisfaction tool" into an "Otherness" medium carrying desire ethics. The core of this proposition is to enable the AI system to consciously maintain a constructive opacity and heterogeneity, thereby preventing the learner from falling into the closed loop of the "Imaginary" and instead guiding them into the eternal dialectic with their own desire. Its practical path can be concretized into the following three interrelated technical dimensions.

First, constructing generative symbolic interfaces to guide the symbolic expression of desire. AI should transcend the transmission of determinate knowledge and instead use generative models (e.g., large language models) to construct open, multi-threaded "symbolic situations" (Zheng et al., 2023). For instance, in history or ethics learning, AI can generate complex moral dilemma simulations, inviting learners to participate in narrative construction rather than providing standard answers. This design aims to simulate the function of the Lacanian Symbolic, providing learners with a field where their internal desires, conflicts, and lacks (traces of the Real) can be expressed and reconstructed through an external symbolic order. The technical key lies not in the fidelity of the situation but in the openness of its structure and the incomplete predictability of its responses, thereby compelling the learner to continuously engage in active meaning construction.

Second, designing Socratic dialogue algorithms to implant constructive heterogeneity. To realize the "Otherness" of AI, its interaction logic must abandon indiscriminately catering "personalized" recommendations and instead embed a Socratic mode of questioning and provocation. This can be achieved through specific prompt engineering and dialogue management algorithms, enabling AI to play the role of a "gentle opponent" or an "ignorant questioner" (Finn, 2023). For example, when a learner proposes a conclusion, AI could respond: "I understand your point, but could you envision a potential counterexample that might overturn this conclusion?" The "unfriendliness" of this algorithmic design has the ethical intent of interrupting the learner's narcissistic cognitive closure and introducing the interrogating gaze of the Lacanian big Other, thereby shifting learning from knowledge consumption to the dialectic of desire.

Third, developing symptom-based dynamic assessment models to transform frustration into creation. Sustainable AI education must redefine the value of "error" and "confusion." We need to abandon assessment systems centered on efficiency and correctness

rates and instead develop dynamic assessment models capable of identifying and valuing learning symptoms. This model should be able to analyze patterns of learner hesitation, abandonment, repetitive errors, etc., and interpret them as signs of approaching cognitive breakthrough (the impact of the Real) (Winn, 2012). Subsequently, instead of providing problem-solving steps, AI would offer "catalytic" feedback that stimulates further exploration, such as: "You've been stuck here three times; this seems to point towards a deeper issue. Would you be willing to set aside the calculation for a moment and first consider what essential reality this formula itself attempts to describe?" This action aims to transform the symptom from an obstacle to be removed into a lever for creative thinking.

## 4. Conclusion

This paper has completed an exploration of sustainable AI education ethics, moving from critique to construction. We first revealed how the mainstream AI education paradigm, within the cognitivist-behaviorist framework, fixates learners in the narcissistic mirror of the Imaginary through the construction of a "satisfaction-feedback" technical circuit, systematically repressing desire as the core dynamism of subjectivity. Drawing on Luhmann's systems theory and Stiegler's philosophy of technology, we further deepened this critique, pointing out that it not only obscures the fundamental condition of the subject but also leads to an impoverishment of desire at the technical level.

To break through this impasse, we introduced Lacan's theory of desire, establishing that the core ethic of education lies in "not ceding on one's desire"—that is, guiding the subject to confront its fundamental lack and creatively coexist with the trauma of the Real. Subsequently, by analyzing the "Playwriting Workshop" described by Maisha T. Winn, we extracted a successful model of desire ethics practice, demonstrating that a true educational "ethical Other" should be able to provide a safe fictional space, facilitate the symbolic reconstruction of desire, and realize the creative transformation of symptoms.

Finally, based on this theoretical blueprint and practical model, we proposed a technical pathway for reconstructing AI as an "Otherness" medium for desire ethics: guiding desire expression through generative symbolic interfaces, implanting constructive questioning via Socratic dialogue algorithms, and sublimating cognitive frustration using symptom-based dynamic assessment models. The ultimate goal of this reconstruction is not the pursuit of infinite technical adaptation but is dedicated to an invitation to ethical practice—allowing AI

to become that "heterogeneous partner" which continuously awakens the subject from the illusion of certainty and invites them into the unknown and the possible.

The discussion on the sustainability of AI education lies in revealing its essence: it does not refer to the enduring persistence of educational technology but points towards education itself as an ethical exploration, infinitely continuing precisely because desire never ends. When AI can relinquish the fantasy of being an all-knowing "big Other" and instead humbly assume the responsibility of an "ethical medium" that marks the lack and maintains the dialectic, it transforms from an efficiently operating cognitive cage into a door of possibility, forever open to the unknown, belonging to all seekers of knowledge.

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