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The Interaction Order of AI-Mediated Education: Micro-Sociology and the Limits of Principle-Based Regulation

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ABSTRACT

Regulation of artificial intelligence in education is currently formulated as principles and institutional obligations. UNESCO's guidance on generative AI calls for a human-centered approach; the EU AI Act classifies several educational uses of AI as high-risk, and Russian policy frames the digitalization of schooling through national strategies and state information systems. These instruments share a blind spot: they say little about the level at which AI and digital platforms actually enter education, namely the encounters, face-to-face and screen-mediated, between students, teachers, and machines. This review argues that this level, which Goffman called the interaction order, has its own regularities and that these regularities systematically refract policy. Drawing on Goffman's dramaturgy and frame analysis, on ethnomethodology and conversation analysis, and, in a supporting role, on symbolic interactionism and phenomenology, the paper identifies three mechanisms through which the interaction order reshapes regulatory intentions: the situated completion of rules, the redistribution of exposure and face-work, and the reconfiguration of participation frameworks when AI systems become participants in classroom talk. Each mechanism is illustrated with empirical research on video-mediated teaching, camera policies, AI-detection tools, and generative AI tutors, and the three mechanisms are traced in recent developments in Russian education. From these mechanisms, it derives three propositions for research and policy evaluation, including the claim that visibility rules convert unequal backstage resources into unequal classroom standing. It concludes that principle-based regulation needs to be complemented by interaction-level assessment if it is to achieve its own stated aims.

KEYWORDS

interaction order; Goffman; ethnomethodology; artificial intelligence in education; AI regulation; video-mediated teaching; participation framework; micro-sociology

1. Introduction

Artificial intelligence has entered education faster than the institutions that govern it. Within a few years of the public release of large language models, students began to use chatbots for homework, universities introduced detection software, and ministries started to write guidance on acceptable use. Scholars have described the broader transformation in terms of datafication, platformization, and new forms of behavioral

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governance [1, 2, 3]. Research in the postdigital tradition has added that digital technologies can no longer be treated as a separate sphere because they are now woven into ordinary educational practice [4, 5].

Regulatory responses have taken a characteristic form. UNESCO's guidance on generative AI calls for a human-centered approach and for validated, age-appropriate use of AI tools [6]. The European Union's AI Act classifies AI systems used to determine access to education, to evaluate learning outcomes, or to monitor students during tests as high-risk (Annex III, point 3), and it requires that people be informed when they interact with an AI system (Article 50(1)) [7]. Its obligations apply in phases: the transparency obligations have applied since 2 August 2026, whereas the Digital Omnibus on AI postponed the high-risk requirements for AI systems used in education to 2 December 2027 [8]. In Russia, the digitalization of schooling has been framed by the national strategy for the development of artificial intelligence [9] and by state infrastructure such as the federal information system "My School" [10]. These instruments differ in legal status and political context, yet they operate at the same level. They define principles, risk categories, obligations of providers, and technical infrastructures, and they say much less about what happens when a rule, a platform, or an AI tutor arrives in a particular lesson.

Sociology has resources for addressing this level, although they have rarely been connected to educational policy. Knorr Cetina extended interactionism to *synthetic situations*, in which screen projections become part of the situation itself [11]. Rettie adapted Goffman's concepts to mobile phone communication [12], and Licoppe and Morel showed how video calls are organized as multimodal interaction [13]. Conversation-analytic studies of online teaching describe how participation is achieved through microphones, cameras, and chat [14, 15]. Critical studies of educational technology, by contrast, have focused mainly on data infrastructures, commercial platforms, and governance at the level of institutions and states [2, 3, 16]. Because the two bodies of work have developed largely in parallel, debates on AI in education lack a vocabulary for describing how regulation is transformed in the course of everyday interaction.

This paper addresses that gap. Its central argument is that the encounters in which students, teachers, and AI systems meet constitute what Goffman called *the interaction order*, a domain with its own regularities that cannot be derived from institutional rules [17, 18]. Principle-based regulation reaches this domain only indirectly, and the interaction order refracts it in patterned ways. The review makes two contributions. First, it specifies three mechanisms of refraction: the situated completion of rules, the redistribution of exposure and face-work, and the reconfiguration of participation frameworks when AI systems take part in classroom talk (Table 1). Second, it derives from these mechanisms three propositions that can guide empirical research and the evaluation of policy. Section 2 describes the approach. Section 3 sets out the theoretical resources, with Goffman and ethnomethodology at the center and interactionism and phenomenology in a supporting role. Section 4 synthesizes the empirical literature around the three mechanisms and illustrates them with a case from Russian education. Section 5 discusses the implications for regulation and the limitations of the argument, and Section 6 concludes.

2. Approach and Scope

This is a critical narrative review. It synthesizes micro-sociological theory and empirical research on digital and AI-mediated teaching to identify a gap in current debates on educational regulation, to organize the relevant findings around a small number of mechanisms, and to

point toward questions for future research. It does not report new data. Because its purpose is critical and integrative rather than exhaustive, it does not follow a systematic review protocol.

The theoretical corpus was selected for its bearing on the interaction order. It comprises Goffman's work on self-presentation, interaction ritual, framing, and participation [17,19,20,21,22]; ethnomethodology and conversation analysis [23, 24, 25, 26]; and, as supporting perspectives, symbolic interactionism and social phenomenology [27, 28, 29, 30]. Empirical studies were chosen purposively when they described interaction in video-mediated teaching, camera use, AI-detection tools, or generative AI tutoring. Three regulatory frameworks were read as illustrative cases of principle-based regulation: UNESCO's guidance, the EU AI Act, and Russian federal instruments on AI and school digitalization. They represent, respectively, an international advisory framework, a binding supranational regulation, and a national strategy tied to state infrastructure. The documents were read for the level at which they address educational practice. No formal document analysis was performed, and the claims made here about these documents should be read accordingly.

3. Theoretical Resources: The Interaction Order and Its Traditions

The approaches discussed below share an interest in how social order is produced in situations. They are not interchangeable, and the differences between them are relevant for the argument. The argument therefore gives Goffman and ethnomethodology the central role because both treat the interaction order as a domain in its own right and use symbolic interactionism and phenomenology to specify the experiential and self-related side of that order.

3.1. Goffman and the Interaction Order

In his early work, Goffman described social life through a dramaturgical vocabulary. Individuals perform for audiences, manage the impressions they give off, and separate a front region, in which performances are staged, from a back region, in which they can be relaxed or prepared [19]. In the essays collected in *Interaction Ritual*, he showed that encounters are sustained by face-work, the small ritual acts through which participants protect their own and others' social value [20]. *Frame Analysis* later examined how participants define what kind of activity is going on [21], and *Forms of Talk* decomposed the roles of speaker and hearer into a participation framework. A speaker may be the author of words, their animator, or the principal whose position they express, while hearers may be ratified or unratified, and addressed or unaddressed [22].

In his final address Goffman gathered these themes under the concept of the interaction order. Face-to-face interaction, he argued, forms a substantive domain with its conditions and constraints, loosely coupled to social structure and irreducible to it [17]. Rawls developed this point into the claim that the interaction order is an order *sui generis* [18], and Collins built on it a theory in which chains of interaction rituals generate emotional energy and group membership [31]. Two implications are central for the present argument. Institutional rules do not determine interaction, because interaction has requirements of its own. At the same time, what happens in interaction can have structural consequences, since resources, reputations, and inequalities are reproduced through it.

Goffman explicitly restricted his analysis to situations of physical co-presence. Subsequent research has shown that his concepts can be extended with care. Knorr Cetina argued that screen projections can constitute synthetic situations [11], Rettie examined which Goffmanian concepts transfer to synchronous and asynchronous mediated communication [12], and Hogan

distinguished live performances from the curated "exhibitions" typical of social media [32]. This review follows that line of work and treats screen-mediated classrooms as extensions of the interaction order rather than as a separate virtual realm.

3.2. Ethnomethodology and Conversation Analysis

Ethnomethodology, which Harold Garfinkel developed from Schutz's phenomenology and from a critical engagement with Parsons's theory of action, asks how members of a setting produce and recognize social order through their own practical methods [23, 25]. Its central concept is accountability: actions are organized so that they can be seen and reported as what they are. Garfinkel's breaching demonstrations showed that when background expectations are disrupted, participants work hard to restore a sense of normality, which reveals how much ordinary order depends on unnoticed practical work [23]. Conversation analysis, which grew out of this program, describes how institutional roles and asymmetries are produced turn by turn in talk [26].

Suchman applied this perspective to human-machine interaction. Plans, she argued, do not determine action; they are resources that participants consult and adapt in concrete circumstances [33]. This insight is directly relevant to regulation, since a rule or a guideline is itself a kind of plan.

Using ethnomethodology in a paper that draws implications for policy requires a clarification. Garfinkel and Sacks recommended ethnomethodological indifference, a policy of abstaining from judgments about the adequacy or value of members' practices [24]. The present paper does not derive normative prescriptions from ethnomethodology. It uses ethnomethodological findings descriptively to identify where and how formal rules are completed in practice. The normative conclusions in Section 5.1 rest on aims stated in the regulatory documents themselves, such as human-centeredness and non-discrimination, together with the argument that these aims cannot be assessed without attention to the practices that ethnomethodology describes.

3.3. Interactionism and Phenomenology as Supporting Perspectives

Symbolic interactionism contributes an account of the self. For Mead, the self develops as individuals learn to take the attitudes of others toward themselves, culminating in the attitude of a generalized other that represents the organized community [27]. Blumer, who coined the term *symbolic interactionism*, stressed that people act toward things on the basis of meanings that arise in interaction and are modified through interpretation [28]. Later interactionists have used this approach to show how culture is produced in small-scale settings [34]. The question of who counts as a significant other becomes pressing when an AI system is available as a constant conversational partner.

Social phenomenology contributes an account of experience. Schutz analyzed the everyday lifeworld as an intersubjective world organized by a stock of knowledge and by typifications that participants take for granted [29, 35], and Berger and Luckmann extended this analysis into a general theory of the social construction of reality [30]. Postphenomenology adds attention to the ways in which technologies mediate perception. Ihde distinguished embodiment relations, in which a technology becomes part of how one perceives, from hermeneutic, alterity, and background relations [36]. These perspectives help to describe how students experience screen-mediated and AI-mediated learning, and the mechanisms in Section 4 locate this experience within the interaction order.

4. Three Mechanisms of Refraction

The regulatory frameworks introduced above address AI in education through principles, risk categories, and infrastructure. The mechanisms described in this section specify how the interaction order transforms such interventions once they reach classrooms. Table 1 summarizes the framework. The mechanisms are analytically distinct but empirically intertwined, as the examples below show.

Table 1. Mechanisms through which the interaction order refracts AI-in-education policy.

Mechanism	Theoretical sources	Illustrative phenomena	Question for regulation
Situated completion of rules	Ethnomethodology; conversation analysis; Suchman; Schutz's typifications	Camera and chat rules; repair of silence; use of AI-detection results; "My School" and Sferum	How is a rule made to work in practice, by whom, and at what cost?
Redistribution of exposure and face-work	Goffman's dramaturgy and interaction ritual; media theory of context collapse; phenomenology of embodiment	Camera rules; proctoring; videoconference fatigue; AI-polished writing and biased detection; state class chats	Who bears the costs of visibility, and how are unequal backstage resources converted into unequal standing?
Reconfiguration of participation frameworks	Goffman's participation framework; symbolic interactionism; human-computer interaction research; CA studies of conversational agents	AI tutors in the evaluation slot; chatbots as interlocutors; AI-assisted theses; disclosure of machine participants	Which interactional roles does an AI system occupy, and which does it take over from teachers and peers?

4.1. The Situated Completion of Rules

Regulation and institutional guidelines reach classrooms in the form of plans. A university may require that seminars be held with cameras switched on, a school may require that communication with parents run through a state platform, and a department may require that every assignment pass through an AI-detection tool. From an ethnomethodological perspective, each of these rules must be completed in situated action before it has any effect [23, 33].

Research on classroom interaction offers a baseline for seeing how this completion works. Mehan showed that lessons are organized in recurrent initiation-response-evaluation sequences, in which the teacher asks a question, a student answers, and the teacher evaluates the answer [37]. Related research has described the same three-part structure differently. Sinclair and Coulthard characterized the third move as feedback rather than evaluation, which yields the initiation-response-feedback (IRF) model [38], and Wells showed that this move can extend and build on students' contributions rather than only assess them [39]. The IRE sequence is used here as a baseline because it is a widespread and well-described pattern of classroom talk, not because lessons are always organized in this way. In video-mediated teaching each part of this sequence has to be reorganized. Questions addressed to a grid of muted participants often meet silence, and the silence is ambiguous, since it can indicate ignorance, reluctance to unmute, or a failed connection. Conversation-analytic studies indicate that teachers and students resolve such problems through locally invented procedures, such as addressing students by name, moving questions to the chat, or negotiating when microphones should be opened [14, 15]. Participation in these settings is achieved through practical work with the interface that no guideline specifies.

The same holds for policy instruments. A camera rule does not define what counts as sufficient visibility, how a teacher should respond to a student who switches the camera off, or when an exception is legitimate. These questions are settled in interaction, often tacitly, and teachers become the main agents of this settlement. In Schutz's terms, such settlement draws on typifications that participants take for granted, such as what a normal lesson, an attentive student, or a legitimate excuse looks like [29]. Blumer's point that meanings arise in interaction applies here as well: what a rule requires is not fixed by its wording but is established as participants act on it [28]. State infrastructure changes the conditions of such work without removing it. The Russian federal system "My School," for example, is defined by a government resolution in terms of its components, participants, information flows, and data protection [10]. What the system means in a given school depends on how teachers integrate it into lessons, how they handle technical failures, and how they reconcile it with established routines. A detection tool is completed similarly. Its output is a probability score, and the score becomes an accusation, a conversation, or nothing at all only through a teacher's interpretive work.

The first mechanism thus bears on where policy effects are located. Much of what a regulation actually does is decided in situated completion, and this work remains largely invisible to indicators such as adoption rates, login statistics, or compliance reports. Evaluation that relies solely on such indicators records the plan and misses its completion.

4.2. The Redistribution of Exposure and Face-Work

Goffman's distinction between front and back regions explains why visibility rules in digital education are so contested. A webcam turns part of the student's home into a potential front region and exposes what would normally remain backstage: the room, family members, noise, and signs of material circumstances. In a survey of undergraduates who kept their cameras off, the most common reasons were concern about appearance, other people visible in the background, and weak internet connections [40]. From a dramaturgical perspective, these are problems of impression management, and they are unequally distributed.

Mediated communication intensifies the problem because it collapses the boundaries between audiences. Meyrowitz argued that electronic media merge previously separate social situations and expose behavior that used to belong to the back region [41], and Marwick and boyd described context collapse as the flattening of distinct audiences into a single one [42]. A student who joins a seminar from home performs at once before a teacher and peers and before family members. Camera rules ask this student to manage several audiences simultaneously, and students with a private room and a stable connection can do so far more easily than those living in crowded housing.

The phenomenological side of the same process concerns the experience of sustained visibility. Bailenson attributed videoconference fatigue to nonverbal overload, including prolonged close-up gaze and constant self-view [43], and Fauville and colleagues distinguished general, social, emotional, visual, and motivational dimensions of this fatigue [44]. Phenomenological critiques of online education point in a similar direction by stressing the loss of embodied presence [45]. In Ihde's terms, a well-designed platform recedes into the background of experience, whereas a demanding one stays in the foreground and absorbs attention [36]. The emergency remote teaching of 2020, which Hodges and colleagues distinguished from planned online learning [46], made these costs visible on a large scale.

Automated proctoring and AI-assisted writing extend the mechanism. The AI Act treats systems that monitor students during tests as high-risk (Annex III, point 3(d)) [7], which

acknowledges the stakes while framing them as a question of system properties. The Act also prohibits AI systems that infer the emotions of natural persons in educational institutions, except for medical or safety reasons (Article 5(1)(f)) [7]. Interactionally, proctoring moves surveillance into the back region and turns the home into an examination hall. AI-assisted writing works in the opposite direction. When students use generative AI to polish emails, forum posts, or essays, they manage the impression they give to teachers, and detection software then acts as a check on the performance. The reliability of this check is itself unequal. Liang and colleagues found that several widely used GPT detectors classified a majority of essays written by non-native English speakers as AI-generated while rarely flagging essays by native speakers [47]. The students who face the heaviest demands of impression management are thus also the most likely to be suspected of an illegitimate performance.

Visibility and verification rules, in other words, do more than make students observable. They redistribute the costs of face-work and convert differences in backstage resources, such as space, connectivity, and linguistic capital, into differences in classroom standing.

4.3. The Reconfiguration of Participation Frameworks

The third mechanism concerns AI systems as participants in educational interaction. Research on human-computer interaction has long shown that people apply social rules to machines [48]. Weizenbaum observed that users of his simple ELIZA program quickly treated it as an understanding listener [49], and Turkle described how people come to expect attention and companionship from technologies [50]. Studies of computer-mediated communication add that text-based exchanges can become hyperpersonal because senders edit their messages and receivers fill gaps with their expectations [51], and that cues such as emoticons are used in ways that parallel facial expression [52]. Recent interactionist work discusses how generative AI may take on features of a generalized other in the formation of the self [53].

Conversation-analytic and ethnomethodological research on conversational agents allows this point to be stated more precisely. Porcheron and colleagues showed that the use of voice assistants in family homes is embedded in ongoing multi-party activities such as family meals and that this use is made accountable to these settings and finely coordinated with the sequential organization of the surrounding talk [54]. Pelikan and Broth found that people talking to a humanoid robot adapt the design and timing of their turns to what the machine can process [55]. These studies suggest that a machine does not hold participant status by itself, because it cannot be held accountable in the way that Goffman's categories presuppose. It becomes a participant only to the extent that people treat it as one, addressing it and orienting to its responses as relevant. In what follows, AI systems are therefore treated as resources that acquire participant status only through the conduct of the people around them. This links the third mechanism to the situated completion of rules described in Section 4.1.

Goffman's participation framework makes it possible to specify what changes when such a system enters a lesson [22]. A chatbot that answers a student's question is the animator of its words, but authorship is distributed: the wording is produced by the model and its training data, while the student's prompt defines the task and shapes the output, so that the student is in part a co-author. The student also usually acts as the principal, since it is the student who adopts the output and answers for it, a position that the system itself cannot occupy. The thesis case in Section 4.4 shows the same distribution of roles in an assessment setting. The student may address the system, the teacher may remain an unaddressed bystander, and peers may become unratified overhearers or disappear from the exchange altogether. The system can also

occupy the evaluation slot of the initiation-response-evaluation sequence that Mehan identified as a core structure of classroom talk [37]. When a student submits an answer and receives immediate feedback from an AI tutor, the evaluative turn that once belonged to the teacher passes to a machine.

Recent experimental evidence can be read in these terms. In a large field experiment with nearly one thousand mathematics students at a high school in Turkey, Bastani and colleagues found that access to a GPT-4 tutor improved performance during practice, whereas students who had relied on a standard chatbot interface performed worse once access was revoked; a version designed to give teacher-designed hints instead of answers largely mitigated this effect [56]. The authors interpret the result in terms of skill acquisition. A participation-framework reading adds that the unconstrained chatbot occupied the evaluation slot and much of the response slot of the sequence, so that the student's own turn was hollowed out, while the constrained version returned the response slot to the student. Design choices that appear purely technical thus redistribute interactional roles.

This mechanism also clarifies what transparency obligations can and cannot achieve. Article 50(1) of the AI Act requires that AI systems intended to interact directly with natural persons be designed so that the persons concerned are informed that they are interacting with an AI system, unless this is obvious from the context [7]. What counts as obvious is itself worked out by participants in interaction. Disclosure settles the question of what kind of participant is present, yet it leaves open which roles that participant occupies. Debates on whether AI could replace teachers show that the relevant question concerns the relationship of teaching itself [16], and critical scholarship warns that data-driven systems can steer learners toward predefined behaviors in ways that undermine autonomy [3]. From an interactionist perspective, the more serious risk is a gradual shift in the others whose responses students consider when they evaluate themselves [27]; deception is a secondary concern.

4.4. An Illustrative Case: Digital Schooling and Generative AI in Russia

The three mechanisms can be observed together in the recent development of digital education in Russia. The case is instructive because Russian policy has combined a strong reliance on state digital infrastructure with rapid and largely uncoordinated responses to generative AI. It is presented here as an illustration based on public documents and reported events, not as an empirical study, and the observations below are offered as starting points for research rather than as findings.

The first element is the regulation of digital communication in schools. Amendments to the Federal Law on Information that entered into force on 1 March 2023 restricted the use of foreign information systems and messaging services in educational organizations [57], and the federal system "My School" was established as the state infrastructure for school digitalization [10]. The communication platform Sferum was promoted as the domestic channel for contact among teachers, students, and parents. How this rule was completed in practice illustrates the first mechanism. In a letter of July 2023 responding to a citizen's appeal, the Ministry of Education stated that Sferum was not mandatory, that it served as an auxiliary tool for interaction between teachers and students, and that if parents declined digital resources, instruction would be organized with traditional textbooks and notebooks [58]. That such a clarification was needed suggests that the legal provision could be read locally as an obligation to move all communication to a single platform. The letter responds to an individual appeal and does not show how widespread such readings were; establishing this would require systematic

study of school practices. A national rule could thus acquire different practical meanings as administrators, teachers, and parents completed it locally.

The same shift redistributed exposure. A class chat on a state platform differs from a private messenger group in several respects: it changes who can see a message, which records are kept, and how parents, teachers, and administrators appear to one another. In dramaturgical terms, part of the back region of school life, such as informal exchanges among parents or between teachers and families, was relocated into a setting that participants might reasonably treat as more official and more observable. Whether this altered the tone and frequency of communication is an empirical question. It is, however, precisely the kind of question that compliance indicators, such as the number of connected users, cannot answer.

The second element concerns generative AI in higher education. In early 2023 a graduate of the Russian State University for the Humanities (RSUH, known by its Russian abbreviation RGGU) reported that he had prepared his final thesis in about a day with the help of ChatGPT and had defended it with a satisfactory grade; the text had passed the Antiplagiat originality check at 82 percent against a required threshold of 70 percent [59, 60]. At the time, this check measured textual originality, that is, the absence of matches with existing sources, and was not designed to identify machine-generated text. The university responded by proposing that access to ChatGPT in educational organizations be restricted [59], but the graduate ultimately received his diploma in March 2023 [60]. The formal procedures involved—the originality check and the defense—presuppose a participation framework in which the student is at once the author and the animator of the text. Generative AI separated these roles. The student acted as a principal who set goals and as an editor who selected, translated, and revised output, while the system produced much of the wording. Existing procedures had no means of registering this rearrangement, and the institution's first response addressed the technology rather than the framework of assessment.

The third element is the spread of automated AI detection. In 2023 the Antiplagiat system, which many Russian universities use to check theses, added a function for identifying machine-generated text to its paid version, and the developer later reported detection accuracy of up to 98 percent [61]. These figures come from the developer and, to the author's knowledge, have not been evaluated independently, while research on English-language detectors has shown that such tools can systematically misclassify texts written by non-native speakers [47]. In the terms used here, detection extends the second mechanism. It introduces a new audience for the student's performance whose judgments are opaque and difficult to contest, and it shifts the burden of proof onto students whose writing happens to resemble machine output.

Taken together, the Russian case shows the three mechanisms operating within a single policy environment. A legal requirement concerning infrastructure was completed locally in divergent ways; platform and detection choices redistributed visibility and the burden of face-work; and generative AI rearranged participation roles faster than assessment procedures could adapt. None of these effects can be read from the documents themselves. They become visible only when one asks how rules are enacted in class chats, thesis defenses, and originality checks. This is the level at which the propositions developed in the next section can be tested, for example, through comparative studies of how schools interpreted the 2023 communication rules or of how thesis committees now treat detection reports.

5. Discussion

5.1. Implications for Regulation

The three mechanisms show why principle-based regulation reaches education only partially. UNESCO's guidance, the EU AI Act, and the Russian federal instruments address AI through principles, risk categories, obligations, and infrastructure [6, 7, 9, 10]. They differ considerably. The EU framework is binding and risk-based; UNESCO's guidance is advisory and oriented toward human-centeredness; and the Russian instruments link AI development to national strategic goals and to state-operated platforms. All three, however, treat the classroom encounter mainly as the place where compliance occurs. The analysis above suggests that the encounter is where regulatory effects are produced. Three propositions follow, each of which can be examined empirically.

Proposition 1 (situated completion). The effects of an educational technology rule depend on the interactional work through which teachers and students complete it. Evaluations that rely on adoption and compliance indicators will therefore systematically misestimate those effects, and the error will be largest where rules are ambiguous and teachers' discretion is wide.

Proposition 2 (exposure). The stricter a visibility or verification rule, the more it converts unequal backstage resources into unequal classroom standing. Rules on cameras, proctoring, and AI detection are therefore likely to reproduce inequalities of housing, connectivity, and language even when they are formally applied to all students in the same way. Strictness can be treated as a graded variable with several dimensions: the scope of the rule (which activities and settings it covers), the severity of sanctions for non-compliance, the availability of exceptions, and the degree to which monitoring and judgment are automated. These dimensions can be coded from institutional documents and compared across institutions.

Proposition 3 (participation). The educational effect of an AI system depends on the interactional roles it occupies. Systems that take over the response or evaluation slots of classroom sequences will tend to improve immediate performance while weakening independent learning, whereas systems constrained to supportive roles will be less likely to have these effects. A further, exploratory sub-claim is that systems occupying the evaluation slot also weaken the evaluative role of the teacher; existing evidence bears on this claim less directly, and it is offered as a question for research.

For policy design, these propositions imply that impact assessment should include an interaction-level component. Before a tool or rule is introduced widely, pilot studies can observe how it is completed in real lessons, who bears its visibility costs, and which roles AI systems take on in classroom talk. Assessment of this kind is consistent with the human-centered orientation of UNESCO's guidance and with the risk-based logic of the AI Act, and it carries both to the level at which students and teachers actually encounter them.

The AI Act already contains an instrument into which such a component could be built. Under Article 27, deployers that are bodies governed by public law, or private entities providing public services, must assess the impact of a high-risk system on fundamental rights before deploying it, including the persons likely to be affected and the specific risks of harm to them [7]. For public schools and universities that deploy AI systems listed in Annex III under education, an interaction-level component of this assessment could specify how a system is likely to be completed in lessons, which groups of students bear its visibility costs, and which interactional roles it takes over from teachers. Because the high-risk requirements will apply to such systems only from 2 December 2027 [8], there is time to develop and pilot assessments of this kind before the obligation takes effect.

5.2. Limitations and Research Agenda

The argument has several limitations. It is a narrative synthesis, and the empirical studies on which it draws were conducted mostly in Western higher education and during the pandemic period, so their transfer to other settings, including Russian schools, requires caution. The evidence is not exclusively Western, as the Turkish high school experiment discussed in Section 4.3 shows, but most of it concerns universities, whereas the Russian case in Section 4.4 is largely about schools. This difference may matter for all three mechanisms, since school students are minors and their parents take a direct part in school communication. The regulatory documents were read as illustrative cases rather than analyzed systematically. The propositions are formulated with these limits in mind. Each can be tested through video-based classroom ethnography and conversation analysis of AI-mediated lessons, through comparative studies of camera and proctoring rules across institutions with different student populations, and through experimental designs that vary the interactional roles assigned to AI tutors.

6. Conclusions

Debates on AI in education have been conducted largely at the level of systems, data, and principles. This paper has argued that another level deserves systematic attention. The encounters in which students, teachers, and machines meet form an interaction order with its own regularities, and these regularities refract regulation in patterned ways. Drawing on Goffman and ethnomethodology, with support from symbolic interactionism and phenomenology, the review identified three mechanisms of refraction: the situated completion of rules, the redistribution of exposure and face-work, and the reconfiguration of participation frameworks when AI systems join classroom talk.

The contribution of micro-sociology here is a set of testable claims about where policy effects are produced and how inequalities arise in the course of ordinary interaction. Regulatory frameworks such as UNESCO's guidance, the EU AI Act, and the Russian federal instruments state aims that can be neither achieved nor assessed without attention to this level. Complementing principle-based regulation with interaction-level assessment would allow these frameworks to meet their own stated goals.

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