Communication, technologies et développement

Appels en cours

Regulation of artificial intelligence in the educational field: Discourse, devices, practices

Coordination

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Artificial intelligence (hereafter AI) is not a recent field of research. It was during the Darmouth conference in 1956 that the pioneers of this notion first mentioned AI as such. Since then, this idea has nourished all of the fantasies and hopes surrounding the idea of a "thinking machine" capable of competing with humanity in all fields: from art to science, including agriculture or even education. It goes without saying that there are many expectations as well as fears that come with practices. Hopes for an innovative and high-quality education accessible to all, coexists with a fear of progressive annihilation of human relations, which are nevertheless considered to be essential to any educational relationship. At an institutional level, the development of AI in the educational field is encouraged — as evidenced, for example, by the *Artificial Intelligence project for and by teachers "AI4T: l'Intelligence Artificielle pour et par* les professors", under the initiative of the French Minister in charge of national education. However, the ethical questions surrounding the development of these potential innovations have not been removed by public policies. These questions were brought up in a new resolution on AI relating to education, culture and audiovisual, adopted in May 2021 by the European Parliament. This is seen as a step forwards in what concerns European regulation of AI, which would set a legal framework to allow for the fundamental rights of individuals to be respected.

A number of values are as being central, such as transparency (Cellard & Masure, 2018; Chevret-Castellani & Labelle, 2019), fairness or even basic human rights. In the field of education, the introduction of AI is planned to allow "individualisation ″ of learning and promote greater "inclusion ″ by reducing the "digital divide " through the creation of infrastructures. This resolution is in line with the principles of the Beijing consensus (Unesco, 2019), which, while striving for a "systematic use" of AI in education, calls for the development of a "humanist approach" in line with the principles of Unesco.As technological developments intensify, it seems to be accepted, from the point of view of both private and public stakeholders, that law is no longer presented as the only solution to regulate the development of AI. Law and regulations are presented as either ineffective with regard to the speed of adaptation necessary to changes, or as slowing down innovation. For public authorities, however, it is a question of walking a fine line between the economic demands and the promises AI presents for growth on one hand and social acceptability of these promises on the other hand. Acknowledging that law is still a means of regulation, how about the applications of AI in the field of education? This question leads to a reflection on the methods for collecting data, processing and conditions for sharing them. Indeed, education is a "common good" (Bourdin, 2019) which requires specific attention to the conditions in which information is exchanged.

These exchanges relate to users as much as to specific systems and professional practices. What are the alternatives to law emerging today and what modalities do they imply? At an international level, the regulation of artificial intelligence leads to the adoption of "stakeholder" approaches (Massit-Folléa, 2014), the unique feature of which is that they bring together supporters of different modes of intervention, from self-regulation to co-regulation. However, the "stakeholder" approach leads to a plurality of standards. What does this plurality consist of when it comes to regulating AI applications in education? Or to put the question another way: what types of stakeholders are involved? How are norms (discursive, ethical, technical, professional and social) constructed? This is what the proposed articles will seek to explore through the following five axes.

Axis 1: Regulation by ethics

An ethical reflection based on discussion (Ganascia, 2019) is considered as opening a horizon of rules in order to live together. In so far as it makes it possible to set principles guiding action, ethics is presented by public and political actors as a means of regulation, either by the common values that it could tend to build (Unesco, 2019), either as necessary to complete the law (Cnil, 2017), or even to replace it in the face of uncertainty about developments in AI (Villani, 2018). Within the framework of this “ethical AI”, the values put forward are multiple: transparency, human dignity, fairness, human autonomy confronted with the machines, etc.

These values would require postures, such as reflexivity and vigilance. Are they universal and unanimously shared? What about distinctions made between principles for the regulation and values? To what extent would principles for regulation contribute to the development of AI in education? This axis invites us to question ethics either from the point of view of discourse in texts at the national, European or international level, or from the point of view of the mechanisms mobilized for the construction of principles. The proposals will present an interest in ethical discourse on AI in education and / or on the mechanisms put in place to develop principles for the regulation about AI in this field.

Axis 2: Regulation as an object of discourse

As an object of discourse, AI is especially attractive to study : on the one hand, there is a profusion of texts (reports, statements…) from international, european and national institutions, and on the other hand, there is a very wide scope of stakes (industrial, economic, educational, politic…). This subject of AI in education does not elude the repeating rhetoric in ICT development, which place side by side risks and opportunities, challenges and uncertainties in technological change. This axis of the call of papers aims to think about the mediations at work in the discourses pushing for public policy planning. There is at the same time an injunction to innovate and a call to maintain an ethical framework with new shapes of regulation. It seems to us that there is a strong challenge of questioning (problematization) on discourses mobilised; we think about neutralisation which removes contradictions (Krieg-Planque, 2014) and “uterquisation” which play into the accumulation of issues noncompatible and which turns out to be a new technique of neutralisation (Jeanneret, 2017). The proposals might analyze discourses in a comparative perspective at international or national scale, examine discourse techniques mobilised in the discourses of industrial and political advocates, or investigate how a (new) story of civilization change or “education revolution” emerges. The proposals will bring a particular attention to the way the discourses redefine the relation between innovation, implying necessary progress, and regulation, conceived as outreach of political values.

Axis 3: Regulation by design

Consultations and exchanges about AI regulation and more broadly computer devices bring to light the search for new modes of regulation. Conventionally, regulation is being either carried by a legal framework (acts, decrees…), or defined by the market structure (price, infrastructures access…), or defined by social norms (information campaign…). However, new modes of regulation emerge: on the one hand, we observe the creation of many communication devices which forster friction between public and private actors (Chevret-Castellani & Labelle, 2019). On the other hand, we observe, following on from the “code is law” of Lawrence Lessig, the progression of a “regulation by design” which Karen Yeung outlined the contours (Yeung, 2017). This “regulation by design” aims to incorporate regulation from the time of conception of the technological devices and thus impose a pre-established framework without the need of human action. The stake is to frame the practices and the data treatments from the technical development by anticipating the type of data, their computation and their means of distribution and sharing.

These evolutions invite questioning of this “regulation by design” in the field of AI dedicated to the education sector through the analysis of some devices like “nudges” (incentive behavior) and the use of big data. For this purpose, the proposals will make sure to analyze devices which use “regulation by design” or to clarify some of ethical, technical, political objections: the explainability of the technical system, the technical solutionism replacing the resolution of the initial problems (Morozov, 2014).

Axis 4: Regulation by pedagogy

If the « General Data Protection Regulation » (GDPR) strengthens personal data protection, the progress of AI in education invites the greatest vigilance (MENJS, 2021). The educational offer is indeed plural and exponential: some free and open source programs coexist with powerful tools engineered by private corporations from all countries. AI brings the promise of personalized and customized learning paths: to what extent should the collection, retention and archiving of information needed to build learning paths be limited (Peraya, 2019)?

Beyond these deontological and ethical questions about data collection and sharing, some practical pedagogical questions arise: definition of the teacher's role of mediator or regulator; fiability of knowledge assessment system, evaluation and control of disinformation, or even deepfake, risks (Capelle et al., 2018). Finally, to what extent does the pedagogical practice in itself include a regulation activity?

This axis tackles a practical approach of AI regulation. To further reflect on AI and its regulation, some critical experiences of professionals in the field could be submitted, simultaneously with more didactical proposals.

Axis 5: Regulation by training

In order to assess the trust to be placed in it, preoccupations about the explainability of AI presuppose a reflection on the knowledge necessary to understand its principles and groundings. As AI is indeed becoming increasingly important in all areas of social life, training in uses is therefore becoming a topical subject of study. It involves questioning the training of teachers, which can be considered according to two approaches that might seem at first contradictory: learning the code and 'computer thinking', on the one hand, the ability to interpret and use the devices on the other (de la Higuera, 2019). A number of questions then arise on the type of skills to be acquired to allow a careful use of AI, on the resources and tools available or on the challenges of lifelong training (Cordier et al., 2021). In this context, what impact on research, in particular through the generalization of open access publications, according to the Second National Plan for Open Science (MESRI, 2021)? This axis invites us to question the role of training in allowing the development of a professional ethos participating in regulation by actors themselves.

Submission guidelines

Abstracts must be submitted in French, Spanish or English (maximum of 7000 characters, including spaces and bibliography). Titles and keywords are requested in three languages (French, Spanish, English). The proposals will be double-blind peer reviewed by the members of the scientific community.

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Key Dates

· Abstract submission: 10 December 2021
· Announcement of Accepted Abstracts: 7 January 2022
· Articles are expected by February 28, 2022
· Return to authors on March 28, 2022
· Return of final articles on April 28, 2022
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