

# PhD Defence: Abdourakhmane Ndiaye

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Lieu(x)

Pôle Tertiaire - Site La Rotonde - 26 avenue Léon Blum - 63000 Clermont-Ferrand

Room 313 - Pascal

## Changements climatiques: De la modélisation du phénomène à son éducation. Application au cas des enseignements sénégalais du primaire

### JURY

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### SUMMARY OF THESIS

Our research has been focused on clarifying the scope, characteristics and principles of Climate Change Education for Sustainable Development (CCESD) in order to implement curricula. This issue is part of a dual framework: an interdisciplinary approach (linking Climate Science, Economics and Education Sciences) and the integration of CCESD into the primary cycle of the Senegalese education system. Our research methodology was based on two inputs: the dynamics of complex systems (Forrester, 1969, Morin, 1977, 1980) to provide knowledge and the REDOC model (Representations, Educational Approach, Didactic Tools and Skills) to understand teachers' representations. The results of our research led us to identify two postulates, facilitating a CCESD. On the one hand, the register of knowledge that must be activated to implement CCESD (four types : scientific knowledge, institutional knowledge, measured knowledge and pedagogical knowledge). On the other hand, the analysis of learners' representations is a necessary and essential step to set up a diversified and complementary set of pedagogies, develop appropriate didactic tools and propose a contextualised skills reference framework. In our research, the

representations of Senegalese primary school teachers were discussed on the basis of a survey. We highlighted their representations of sustainable development, climate change or global warming. In the case of Senegal, we observed that the issue of climate change had to be linked to other controversial issues in the school system: the status of teachers, the quality of infrastructure, the issue of public health, the problem of the lack of school canteens, etc. Another way of reminding us that the goals of sustainable development (SGD) are systemic and that quality education (SDG 4) can be a key driver for change.

## KEYWORDS

Climate change Education, Knowledge, Models, REDOC, Representations, Skills

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