

Advances of the anthropological theory of the didactic

Hamid Chaachoua¹

Université Grenoble-Alpes, Laboratoire LIG, équipe METAH

<https://orcid.org/0000-0002-6850-9052>

Annie Bessot²

Université Grenoble-Alpes, Laboratoire LIG, équipe METAH

<https://orcid.org/0000-0003-4556-059X>

Saddo Ag Almouloud³

Université Fédérale de Pará – Brésil

<https://orcid.org/0000-0002-8391-7054>

The anthropological theory of the didactic (ATD) currently plays a prominent role in international research in didactics. Five international conferences have been organised on this subject so far: Baeza (Spain) in 2005, Uzès (France) in 2007, Sant Hilari Sacalm (Spain) in 2010, Toulouse (France) in 2013, Castro Urdiales (Spain) in 2016 and Autrans (France) in 2018. These conferences bring together researchers interested in the ATD around the following objectives:

- Establishing an updated overview of the results and progress in the ATD, concerning both basic research and the development of education and teacher training systems;
- Developing a research programme around the most relevant open problems, either related to difficulties affecting education systems or the development of didactics as a scientific discipline;
- Identifying and studying the specific problems raised by the extension of the ATD's conceptual and methodological tools to other fields.

The ATD research programme has been initially developed in the French and Spanish research communities in didactics of mathematics. Currently, it is present far

¹ hamid.chaachoua@imag.fr

² annie.bessot@gmail.com

³ saddoag@gmail.com

beyond this first circle. Moreover, it approaches broader didactic phenomena, both as regards the bodies of knowledge considered and the type of institutions through which knowledge disseminates (e.g. museums or communication media of various types).

Content and structure of this issue

In this issue of the journal *Educação Matemática Pesquisa* we will present the papers prepared by researchers interested in the framework of ATD, which have been prepared from their contributions to the sixth International Congress of ATD.

In the opening, a text by Yves Chevallard presents the latest advances in the anthropological theory of the didactic. In particular, it highlights the questions that originates the use and development of this theoretical framework.

Other articles in this issue appear grouped around three axes that we explain in the following sections.

Axis 1. Analysing and Assessing Uses of the ATD in didactics research and teaching

The increasing dissemination of the anthropological theory of the didactic raises a major problem in many intertwined questions. One of these questions is the degree of penetration of the ATD into a variety of fields of didactic research, well beyond mathematics (from which it originates), from literature to science through art or information technology. A companion question is, how do researchers use the ATD, and, most importantly, which parts of the ATD do they effectively use? Is the full import of the theory recognised and drawn upon? Are there any misunderstandings about what the ATD can achieve and what it is allegedly not yet prepared to accomplish? And what then should we do about them? This topic therefore calls for an open and dynamic assessment of the research done in several areas of the “didactic continent” under the auspices of the ATD.

Axis 2. The Paradigm of Questioning the World and the Curricular Issue

This topic concerns the study of the historical transition from the classical paradigm (based on the sequential access to previously established knowledge) to an emerging didactic paradigm in which one ideally starts from a question and tries to work out an answer to that question, without any prejudice regarding the kinds of tools needed to elaborate the answer sought after. In this *paradigm of questioning the world*⁴, in which the notion of *inquiry* (of a given question) and of *study and research paths* (SRP) play a key role, the works of culture do not vanish: they are simply assigned a more authentically *functional* role, which requires studying a given work—in synergy with other works—with the *aim* of providing an appropriate answer to a question or set of questions, which correlatively become part and parcel of a “new” curriculum based on the study of questions. This theme opens a new field of research, that of the modelling and critical study of the multifaceted notion of enquiry-based teaching. It also raises questions about the design of curricula based on the notion of enquiry.

Axis 3. ATD and the professionalization of the teaching profession

Newcomers to the ATD as a praxeological complex should be reminded that many of its key constituents were forged in the frame of teacher education in an effort to change the “craft of teaching” into a full-fledged profession. The core of this topic is the study of the teaching “semiprofessions” in school, university or vocational school. It is based on two main concepts, firstly that of *profession* (as distinguished from the notion of “semiprofession”⁵), and secondly, the concept of *problems of a profession*, which refers to the difficulties one has to deal with when carrying out this profession. The main idea

⁴ In this regard, the special issue of this journal published in 2019 (Vol. 21) entitled *The paradigm of questioning the world in research and teaching* can be consulted.

⁵ Read about: Chavallard, Y. & Cirade, G. Les ressources manquantes comme problème professionnel. In: *Le travail documentaire des professeurs en mathématiques*, Rennes: PUR & Lyon: INRP, p. 41-55, 2010. We can also refer in this issue to Michèle Artaud's text.

here is that, however “subjective” it may seem to others, any observed “difficulty” must be taken seriously and looked at as a problem to be solved in the framework of the ATD.

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