

Book Reviews

Buty, C. & Plantin, C. (eds.) (2009). *Argumenter en classe de sciences*. Paris: INRP.

In recent years, a growing number of studies is aimed at the analysis of argumentative discourse in a science learning context (Driver et al. 2000; Jiménez-Alexandre et al. 2000; Kelly & Takao 2002; Zohar & Nemet 2002). These works draw, among others, from two different frameworks. One of them focuses on highlighting the importance of discourse in the construction of scientific knowledge (Knorr-Cetina 1999; Latour & Woolgar 1986) and its consequences for education (Pontecorvo 1987). A second framework moves from a sociocultural perspective (Vygotsky 1978; Wertsch 1991) by pointing out the role of social interaction in learning and thinking processes.

The eight chapters of “Argumenter en classe de sciences” represent a collection of empirical studies devoted to the analysis of argumentative processes in different science learning contexts. They belong to the research strand on the use of argumentation in the context of teaching of scientific disciplines introduced by Tiberghien and Plantin and further developed by the works of Douaire (2004), Kelly & Duschl (2002), Erduran & Jiménez-Alexandre (2007). Nowadays, the *fée argumentation* (p.244) – as she is

called by Buty & Plantin, the scientific directors of this book – is invoked as an approach that may answer many pedagogical issues. This is also pointed out by Muller-Mirza in the accurate preface to the volume:

“Fondées sur des recherches, évoquées tout au long de l’ouvrage, dans différents domaines – épistémologie des sciences, didactique des sciences, sciences de l’éducation, psychologie sociale du développement, etc. – les pratiques argumentatives apparaissent effectivement intéressantes dans l’enseignement des disciplines scientifiques, et ceci pour les trois raisons suivantes, tout au moins: les interactions sociales jouent un rôle central dans la construction de connaissances; l’argumentation est au cœur de la démarche scientifique; l’apprenant est acteur dans l’acquisition de nouvelles connaissances.”

Considering the results of the empirical research, two main aspects come to light: the richness of argumentative exchanges realized by both students and teachers and the evolution of the argumentative debate aiming at the construction of real understanding.

The diversity of the data is the result of the variety of educational levels of students (ranging from elementary school to university) and to the types of class organization. These features allow to describe and analyse the use and effects of argumentation practices in teaching from different angles.

In the first chapter, Jimenez-Alexandre & Bustamante advance the idea that learning a science is to integrate a number of valid epistemic practices related the scientific community. They also provide a matrix of epistemological and practical tools useful to describe epistemic practices in the science learning context and to advance the development of content and the behaviour of teachers.

In their chapter, Orange, Lhoste & Orange-Ravachol investigate the conditions under which argumentation in the context of science learning can foster the learner's passage from common knowledge to scientific knowledge. This path is possible only if students have the chance to propose ideas and voice opposition within the debate. The educational commitment of teachers is two-fold: they should promote the production of arguments and control the dynamics of the argumentative debate involving students.

In chapter three, Simonneaux & Albe focus their research not only on students' ability, but also on their attitude towards such activities to analyse and express their opinion on controversial scientific issues. According to the authors it is a fundamental task of educational institutions to train students to produce sound arguments (see van Eemeren & Grootendorst 2003, 2005) about their position on current issues in research and in society (p. 117), while the educational system is in charge of defining the skills that each student should acquire by the end of compulsory schooling in order to position him/herself in society as an autonomous and responsible citizen.

How the characteristics of scientific thought, argumentative by nature, emerge in a science learning context, is the theme of chapter four, written by Bisault. Didactic work in a such a context, "*la pratique scientifique scolaire*," can indeed be regarded as a reconstruction for learning purposes of certain aspects of scientific research (p.153). Of particular interest in this chapter is the reproduction of a university department by elementary school pupils acting as a community of researchers. The analysis showed that communication and argumentation both play a central role both in research and in learning activities in the classroom.

Héraud, Clement & Errera in their chapter analyse how the ambiguity and referential plurality of statements may allow the construction of scientific concepts starting from common knowledge. Referring to the theoretical model of the "*jeux de langage*" (Clément et al. 2004; Durand-Guerrier et al. 2006), the authors carried out an analysis of a corpus of extended argumentative dialogues between teachers and students. This experiment shows how teachers use argumentative processes to help students overcome ambiguities in the discourse and build their own research questions, which are necessary conditions for creating scientific knowledge in the school context.

The chapter by Buty & Plantin gives an overview of some problems that science learning contexts might raise for the study of argumentation. The main research question of this contribution is: "Who validates the arguments produced in the classroom, and how does this validation take place?"

As already noted (see ch. 2 and 5), the teacher's role is crucial in guiding students to *argumenter valablement*. As the authors write: "*Les élèves ont besoin de suffisamment de connaissances, à la fois conceptuelles et pratiques, en même temps que de méthodes argumentatives. Pour acquérir ces connaissances et ces méthodes, il faut du temps. Le rôle de l'enseignant, à la fois comme valideur et comme constructeur patient de ces compétences, est fondamental*" (p. 31).

In their contribution (ch. 7), Rebière, Schneeberger & Jaubert analyse the process of the gradual construction of a pertinent position by students. This is considered essential to the learning of scientific disciplines. The task of teachers is to make students aware of the criteria for the acceptability of a scientific proposition as well as to establish and guide the *dispositifs d'argumentation* that can accommodate the different positions announced and to allow their full development and understanding.

The eighth and last chapter, written by Fillon and Peterfalvi, takes on the issue of ambiguity in argumentative debates in classrooms (see ch. 5). The elements of the analysis mainly taken into consideration are both the effect of polysemioticity of terms and the misunderstandings about the nature of the problem to which the statement refers. The authors conclude by affirming that the argument context in which a linguistic expression is produced, strongly influences the dynamics of comprehension between interacting individuals.

This volume provides valuable insights on an impressively rich set of topics, also managing to link them in a unitary design.

In conclusion, the merit of this work is that of highlighting how the use of argumentation practices in a science learning context ensure significant benefits:

- supporting the development of communicative competences;
- supporting the choice of theories or positions based on rational criteria;
- supporting the enculturation into the practices of scientific culture and the development of epistemic criteria for knowledge evaluation;
- supporting the acquisition of scientific literacy, both oral and written.

In the editors' opinion, the achievement of these benefits is not granted simply by the introduction of argumentation in the classroom, but requires a coordinated, complex and systematic set of pedagogical and curricular assessment initiatives which need to be supervised by teachers.

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F ioretti, Natascha, Russ-Mohl, Stephan (eds.) (2009): *Merging Media, converging Newsrooms*. Lugano: CFS-Casagrande editore.

L'ouvrage est issu d'un colloque réalisé en mars 2008 à l'Ecole suisse de journalisme à Lucerne (MAZ), organisé conjointement avec l'Université de la Suisse italienne et l'Observatoire européen du journalisme (EJO). Différents spécialistes européens des médias, aussi bien universitaires que praticiens, se relaient pour rendre compte de l'état actuel des rédactions des médias, bousculées par les évolutions technologiques et les pressions financières. L'ouvrage, structuré en quatre parties, permet au lecteur de se faire une idée précise des conditions de travail actuelles des journalistes. Ce point constitue la principale valeur ajoutée des actes de ce colloque, même si à côté des représentants des éditeurs, la voix des syndicats manquera aux lecteurs pour comprendre complètement les bienfaits et les menaces sur la profession de journaliste. L'un des constats majeurs est que le métier connaît une évolution sans précédent, laquelle marquera durablement cette profession. Dans un contexte de fusions des entreprises médiatiques orchestrées par des multinationales de l'information, les journalistes sont ainsi obligés de s'adapter aux différents types de consommation de l'information (écrit, vidéo, audio) sur une multiplication des supports (presse, télévision, radio, internet, téléphonie mobile). A la lecture des différents articles, l'avenir de la profession de journaliste se révèle incertain, conséquence d'une dépendance croissante des médias envers le