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# **PUBLISHING AND DISSEMINATING RESEARCH OUTCOMES: CHALLENGES OF A FRENCH INTERNATIONAL JOURNAL OF RESEARCH IN SCIENCE AND TECHNOLOGY EDUCATION**

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*Abstract: This contribution to the symposium will present the challenges that a French international journal of research in science and technology education (RDST Recherches en didactique des sciences et des technologies) encounters to accomplish its missions: publishing research outcomes from the French-speaking community of researchers in science and technology education and disseminating them towards the French-speaking community of researchers, teacher students and teacher trainers.*

*Keywords: Organization of educational research, Science Communication*

## **PRESENTATION OF THE JOURNAL**

### **The foundation of RDST**

RDST (Recherches en didactique des sciences et des technologies) is a French international journal of research in science and technology education. The first issue of RDST was published in June 2010 (9 years ago). This new French-speaking journal was the result of the merging of two French journals Aster (first issue in 1985) and Didaskalia (first issue in 1993)(Morge, 2015). Both journals published articles in the field of the didactics of biology, chemistry, geology, physics and technology as RDST does. Both were edited by the same institution, the INRP (national institute for pedagogical research), which became the IFe' (French Institute of Education) in 2011 and is now part of the  cole normale sup rieure de Lyon (ENS Lyon) comparable to a university.

The INRP was assigned to develop and encourage research in education and teacher training, specifically through its publications department. The merging of these two journals came from a political decision made by their editors in chief and the INRP. This decision was made because the articles published by the journals were on the same themes and at the same frequency of publication, twice a year. Nevertheless, the functioning of each journal was different. Aster published only themed issues whereas Didaskalia published only articles which did not respond to a call, these articles are labelled *varia* articles in RDST. The merging did not cancel these differences and an issue of RDST is composed of two parts: a thematic part and a *varia* part.

### **The functioning of the journal**

The journal is led by two editors in chief who are assisted by an editorial board (12 members). The reviewers are generally chosen among a reading board that is updated each year to include new members or remove members who are not anymore active in research. The editorial board and the editors in chief have meetings three times a year. During these meetings the following points may be on the agenda: the theme of a call for the thematic part of the journal and guest editors for this issue are chosen; the reviewers' reports of proposals for a thematic part are discussed and a collective decision is made; the list of *varia* articles accepted, under revision or rejected is communicated; the political decisions regarding the life and the development of the journal are debated and taken. Proposals received by the journal and to be accepted as *varia* articles are treated

by one of the editors in chief and a member of the editorial board, and both choose the reviewers and make a synthesis of their reports to the authors. The composition of the boards can be found online <https://journals.openedition.org/rdst/>.

## **RDST SEEKS TO ORIENTATE RESEARCH THEMES**

RDST contributes to the production of knowledge in the field of the didactics of science and technology. It publishes research conducted on the learning and teaching of science and technology (K-12 and university level), on teacher training about these disciplines and reflexions on scientific and technological knowledge. The thematic calls for proposals are communicated more than a year before the dead line, and currently the next themes are scheduled till 2023. The themes are chosen after consulting the members of the reading board or examining the emergent topics or the topics that are studied again among the French-speaking international conferences. The themed issues of Aster were linked to the studies funded by the INRP, the vanishing of this institutional relationship does not anymore enable to really orientate the research themes. It happened that a thematic issue on interdisciplinarity between mathematics and science could not be published because of a lack of proposal whereas the editorial board thought that this very theme would have launched specific studies. Another themed issue about pedagogical content knowledge (RDST 15) which is a popular theme among English-speaking researchers received little attention and two of the three published articles included the PCK framework into French frameworks. This suggests that the French frameworks are strongly grounded, and that “foreign” concepts may not be considered if they do not match issues currently at stake.

Some brief studies may be conducted to respond to a thematic call but most of the time large studies have been started before the call. One cannot say that RDST orientates research themes, but it disseminates what is done and the number of articles in a thematic issue informs about the topicality of the theme.

## **RDST DISSEMINATES RESEARCH OUTCOMES TOWARDS A VARIOUS READERSHIP**

Most authors who published in RDST are researchers or teachers who earned a doctorate or PhD students. The readers are researchers and PhD students in science education and technology at first and then teacher trainers and teacher students. Indeed, nearly all teacher training institutions in France are subscribers to the journal. The research outcome published in RDST provide the teacher trainers and their students for instance with studies showing the impact of some practices on the conceptualisation of some students in a given context. The published articles also display theoretical reflexions about some teaching and learning sequences or the epistemology of the knowledge to be taught. Some articles are dedicated to teacher trainers, they are labelled innovation reports and analyse critically some innovative teaching sequences most of the time. But not all teacher trainers are researchers themselves and some of them could encounter difficulties to adapt research outcomes in their own teaching. This could become a matter of reflection.

## **DEVELOPING THE READERSHIP AND THE ATTRACTIVITY OF THE JOURNAL**

From January 2019 RDST is included in the journals bundle published on the online OpenEdition platform (<https://www.openedition.org/>) which groups numerous French speaking journals in the humanities and the social sciences. From now then the library and institutions that are subscribers to this bundle can provide their members and readers with the issues and the articles online right from their publication. Before that, articles and issues of RDST were available online only two years after their publication, and readers had to buy the paper issue to access the articles (in fact they did not) if they could not come to the library. This new situation provides the journal with the opportunity to growth the readership and the opportunity to attract new authors.

Indeed, articles could be read sooner by readers. A mailing campaign should be done among foreign university libraries and teacher training institutions to gain new subscribers. Another change is under examination, the possibility to publish online the *varia* articles as soon as they are accepted and before their inclusion in an issue.

## **RDST IS AN INTERNATIONAL JOURNAL**

According to bibliometric data and most scholars, *international* journals of research in science education are to be found among those that are published in English. The hegemony of English as a language of publication has been emphasised (Milne, Siry, & Mueller, 2015). Nevertheless, although RDST is a non-English-speaking but French journal it is considered as an international one among the community of French-speaking researchers and is mentioned in the Scimago journal and country Rank. The French national council of universities (CNU) is the institution authorising people having earned a doctorate to apply researcher positions in the universities in France. The CNU acknowledges RDST as an international journal due to the international members of its reading board (44 French and 24 foreigners). International members are not only coming from French-speaking countries (Belgium, Switzerland, Canada, Senegal), some of them are in south European countries (Spain, Italy, Greece, Portugal) and in central and south America but not even one in English-speaking countries. This fact shows that the research traditions in the field of didactics of science and technology are close to the French tradition in these countries at least among certain researchers. Another objective fact enabling to consider RDST as an international journal is the composition of its readership: besides the French-speaking European people and Canadian, numerous readers are living in north and west Africa. Moreover, as editors in chief we can testify that the journal receives proposals from authors living in the French-speaking countries in Europe, in Africa and Canada.

Non-English-speaking journals enable the expression of research practices characterised by their historical development and the intellectual tradition of the country; neglecting their voice could lead to a uniformization of problems and research practices. In addition, RDST has an important role in disseminating research outcomes in French-speaking Africa where researchers in science education are seldom.

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