

Educational research at CIDTFF...

...meeting national and international challenges...

The Research Centre for Didactics and Technology in Teacher Education (CIDTFF) is one of the 13 R&D units working in the field of educational sciences and policies in Portugal. Located at the Department of Education of the University of Aveiro (UA) (www.ua.pt), this research unit was created in 1994 and has been financed by the Fundação para a Ciência e a Tecnologia (Foundation for Science and Technology, Ministry of Science) since 1996.

Recognising the need to examine the interface of the teaching and learning and technology of specific subject areas (such as Chemistry, Maths, English, Portuguese) and teacher education and supervision, CIDTFF emerged as one of the few research units operating within such a unique framework in Portugal. As a result of the work developed and of the remarks made by international experts in the successive external evaluations carried out by FCT, the unit has widened the range of its research to more integrative areas such as quality evaluation, science education and society, education for sustainable development, multicultural issues, and health professionals supervision. This widening orientation is reinforced in the 2007/10 activity plan in course.

Rated as 'excellent' in all international evaluations conducted so far (total of four), CIDTFF has been officially recognised by the Ministry of Science as one of the leading educational research centres in Portugal, having reached an outstanding level of performance in particular domains.

Who we are

In June 2010, 137 integrated researchers and 10 collaborators worked in the CIDTFF:

- 56 of whom have a PhD degree: 5 full professors; 15 associate

professors; 20 assistant professors; 2 teaching assistants; 6 full-time researchers; 7 postdoctoral students; 1 research grant;

- 81 non-PhD: 3 assistant lecturers/PhD students; 70 full- or part-time PhD students; 5 full-time scholarships for technical and administrative support; 1 teaching assistant; 2 assistant lecturers.

Of the 137 members of CIDTFF, 7 are foreign researchers (4 from Brazil, 2 from the UK and 1 from Morocco).

The CIDTFF has an inter-institutional composition, integrating researchers from 4 different universities and 3 polytechnic institutions from Portugal.

CIDTFF members are frequently invited to:

- Integrate high level management and governing bodies in different Portuguese institutions (at the moment, two members hold senior posts in the Ministry of Education);
- Participate in and coordinate specific programmes of the Ministry of Education (evaluation of secondary schools; coordination of national in-service teacher education programmes; coordination and development of Portuguese basic and secondary curricular programmes; supervision, monitoring and evaluation of teachers' probationary period);
- Integrate evaluation panels at both national and international level (FCT panels, academic vivas, PhD thesis, university evaluation and doctoral programmes evaluation);
- Coordinate and participate in cooperation programmes with other countries, namely Portuguese speaking countries (eg. Master's courses in Cape Verde and Mozambique, education/training of

high level staff – administration and teaching – in Angola, and curricular redefinition of East-Timor general secondary education);

- Coordinate and participate in national and international research projects/networks funded by high level public and private agencies (FCT, CAPES, European Community, Gulbenkian Foundation);
- Integrate scientific committees of national and international journals, books and scientific events.

Our strategic policy

Key strategic features of our research work are the emphasis on internationalisation, the balance between research and development, the focus on transdisciplinary and cross disciplinary areas, the emphasis on new contexts (eg. virtual worlds and Web 2.0 tools) and the establishment/development of networks and partnerships. All these guiding principles are interrelated with the postulate of the reinforcement of critical mass and the support of young researchers. Such awareness has led to the creation of two Bologna doctoral programmes (Didactics and Education; Multimedia in Education), recognised by the Ministry of Science and Technology, which attract a significant number of candidates, mainly foreign.

How we organise ourselves

Our unit is organised into three research lines:

Education, supervision and development

This line focuses on educational, professional and institutional development. Framed within the lifelong learning paradigm and socio-constructivist approaches, and resorting to qualitative methodologies that privilege verbal data collected in naturalistic contexts, this research line explores formal and

non-formal contexts and their relationships, bearing in mind the diversity and dynamics of contemporary societies/schools and the potentialities of information and communication technologies.

Education, teaching/learning and society

This research line focuses on citizenship teaching/learning studies, namely on science/technology/society, conducted in formal and non-formal contexts and relying on the lifelong learning paradigm and socio/constructivist approaches.

Quality evaluation in education

The aim of this line is to develop studies that explore up-to-date educational challenges (at a national and international level) through evaluation processes in order to establish guidelines to improve the quality of answers to educational challenges, propose evaluation processes to monitor good practices and disseminate good practices.

In order to accomplish the goals set for the three lines, the centre is organised in seven different research laboratories, each one focusing on specific issues (cf. www.ua.pt/cidttf/PageText.aspx?id=8720):

- LEDUC – Laboratory for Science Education;
- LCD – Laboratory of Digital Contents;
- LALE – Open Laboratory for Foreign Language Learning;
- LEM@TIC – Laboratory for Mathematics Education;
- LEIP – Research Laboratory in Portuguese Education;
- LAQE – Laboratory for the Evaluation of Educational Quality¹;
- UTIS – Transdisciplinary Unit of Research on Supervision².

Besides these organic structures, CIDTFF also has a 'Science Garden' (www.ua.pt/jardimdaciencia), an open space for children (four to 12 years old) and their teachers to carry out non-formal science activities that aim at fostering a better understanding of the formal science curriculum contents.

How we respond to educational challenges

The main issues in education today are more global than national/local. Educational challenges need to be addressed through the development of research within the scope of an international community/framework. Internationalisation is thus one of our main concerns. Some of activities developed in 2009 highlight this particular feature of our work.

Participation in and coordination of international research networks/projects, such as:

- Galapro – Formation de Formateurs à l'Intercompréhension en Langues Romanes (www.galapro.eu);
- Modélisation de la CompleXité (www.mcxapc.org);
- Chain Stories (www.chainstories.eu);
- Redinter – The European Network of Intercomprehension (www.redinter.eu);
- Sexuality and gender in the media discourse: educational and social implications and the development of an alternative approach to teacher education. (<http://sites.google.com/site/sexualitygender-mediacidttf>);
- TEIS – Education Technology and Social Research;
- Science Education Research in the Ibero-American community: identity and development perspectives;
- Social interactions in virtual learning environments;
- A study of university teaching, learning and assessment using student generated questions;
- European Teachers Professional Development for Science Teaching in a Web-based Environment (EuSTD-web) (www.muni.cz/research/projects/2781);
- Western-Eastern Teacher Education Network (www.weten.org);
- Ibero-American Association for Science, Technology and Society in Science Education;

- Curriculum proposals in Brazil and Portugal: global-local relationship;
- Teacher performance evaluation: understanding its complexity for research-based decision-making;
- Informal Elderly Caretakers: from the identification of needs to the development of intervention strategies.

Exchange of researchers

In 2009, we received 45 researchers from 12 foreign countries and CIDTFF members visited 36 different countries, where they participated, for example, in scientific events, PhD examinations and provided lectures/formal courses.

Organisation of international scientific events both in Portugal and abroad

Educational research has an essential role in the promotion of exchange at all levels of educational systems, having therefore also an important influence on the economic, social and cultural development of societies. If we consider the congruity of formal programmes and the quality of the research carried out, it becomes evident that assuring qualified doctoral education is a top priority. To invest in the quality of doctoral education is to increase the development of the country. In order to deepen this principle, the CIDTFF is open to reinforce its collaborations with other European partners.

¹ Transdisciplinary labs

² Ibid



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