



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD

AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2013

SECRETARÍA DE ESTADO
DE INVESTIGACIÓN
DESARROLLO E INNOVACIÓN

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SUBDIRECCIÓN GENERAL
DE RECURSOS HUMANOS
PARA LA INVESTIGACIÓN

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Título:

The Dialogic Turn of the Learning Sciences: Theoretical Developments and Their Consequences for the Design of Successful Learning Environments. The Case of Dialogic Learning in Interactive Groups.

Resumen de la Memoria:

Since 2002 I have investigated learning processes in connection to school success for all students. I have contributed this knowledge through involvement in three R+D national projects dealing with the topics of reading, student grouping, and interaction; two European Projects from the 5th and 6th EU Framework Programs on ethnic and cultural minorities and school success; and two Socrates Projects on improving learning.

With my double PhD by the University of Wisconsin-Madison in Educational Psychology and Curriculum and Instruction, which I did as a Fulbright scholar, I framed my research trajectory within the field of the Learning Sciences, a young line of research of major influence internationally. This interdisciplinary field establishes synergies between educational psychology, cognitive science, linguistics, developmental psychology, neuroscience, etc, to both provide the most updated scientific explanations of human learning and then design learning environments that building upon such evidence produce better learning outcomes. Conceptually, the Learning Sciences have experienced a Dialogic Turn, which I have theorized, emphasizing culture and dialogue as central elements for learning. My research advances the current state of the art by means of studying dialogic learning in learning environments that have proven to raise the academic achievement of all students. Concretely, by examining learning processes in Interactive Groups I have indicated the need to account for socio-cultural elements when students construct knowledge together, beyond structural features of the discourse employed. Thus, I have detailed the importance of participation structures, the degree of equity in communication, the use of cultural codes when promoting interaction, and I have coined a new notion of **dialogic distribution of intelligence**. One central finding from these analyses has been to dismantle the deficit thinking often applied to adults from cultural minorities and without academic background, by showing that the cultural intelligence of all adults is unique and effective in guiding dialogic learning processes.

Also, I have advanced the Learning Sciences methodologically through developing the **communicative interaction analysis**. All these questions are now being further explored in the research project for which I am Principal Investigator: **Math, Science and Technology for All: Evidence-based Learning Environments for the 21st Century**, funded with 65.249,46€ within the Recercaixa Program.

I have introduced the field of the Learning Sciences in Spain through the aforementioned research projects but also with the organization of the First International Scientific Seminar in Learning Sciences. This was a top scientific forum that brought to Spain the leading learning scientists worldwide, from the universities of Harvard, Oxford, Cambridge, Northwestern, Wisconsin-Madison, etc. I collaborate with these and other scholars in China, Germany, Brazil, etc, in the development of dialogic learning studies. Additionally, I have been involved as CREA researcher in the development of the theoretical bases of the Learning Communities Project, now implemented in more than 150 schools around Spain. I have led the transfer of the project to Peru and Guatemala, and have disseminated Successful Educational Actions in the Balkans and Turkey.

Resumen del Currículum Vitae:

I have a double PhD in Educational Psychology and Curriculum & Instruction by the University of Wisconsin-Madison, which is ranked first in both disciplines. The University of Wisconsin-Madison granted me the 2011 Academic Achievement Award for my outstanding academic achievement in my Master and PhD at UW-Madison, being the only student from Europe to receive this Distinction among all graduate students in all disciplines. I was at UW-Madison as a Fulbright fellow, and the aforementioned award added to a trajectory of outstanding academic and scientific achievements, as I also received the Extraordinary Award for outstanding academic achievement in my two prior degrees in Teacher Education and Educational Psychology at the Universitat de Barcelona. I was also professor of educational psychology and literacy courses at the UW-Madison School of Education, and keynote speaker for the prestigious Wisconsin Center of Educational Research. Recently, I have received the invitation from the University of Wurzburg to occupy a three-month Visiting Lectureship to introduce in their Master and BA programs the line of research on Learning Sciences and collaborate in transnational research projects that involve some German and Chinese universities.



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My research background is large. I started my trajectory as researcher while in my last year in Educational Psychology, and since then I have been involved R&D national and European projects, among which I highlight the INCLUD-ED Project from the 6th Framework Program of Research of the EU and which has had enormous socio-political impact, with the European Commission and the Parliament recommending the Member States to implement the scientific evidences of success identified in the project. All this research activity has been developed at the Center of Research in Theories and Practices that Overcome Inequalities at the University of Barcelona, one of the most prestigious research centers in social sciences in Europe. At present I am Principal Investigator of a competitive research project on the dialogic learning of mathematics, science and technology in Interactive Groups to identify elements of this successful learning environment that could inform other classrooms for the academic success of all students in those curricular areas. I am also member of the research project IMPACT-EV, from the 7th Framework Programme of Research that will establish the criteria for the evaluation of the scientific, social and political impact of all SSH research in Europe. I am also evaluating scientific activities, as a member of the editorial board of various international journals and of Fulbright evaluation committees.

My strong record of scientific publications includes two books on dialogic learning and two on successful educational actions (1 in press), five articles indexed in JCR (1 in press), five book chapters, and more than ten articles in other scholarly journals. One of the books is a solo authorship and will have a foreword written by Dr. Courtney Cazden, one of the founding scholars of the field of dialogic learning studies. I am also the editor of the International Journal of Educational Psychology where have already published most relevant authors in educational psychology, including Jerome Bruner, Robert Sternberg, Barbara Rogoff, Courtney Cazden, and Carol K.K Chan among others.



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Título:

Investigating self-regulated learning models and the effects of self-assessment on self-regulation

Resumen de la Memoria:

There are two main lines of work in my research. My first line of work is understanding the effects of self-assessment (SA) in self-regulated learning (SRL). SA is crucial for students' learning as by self-assessing their work students can detect aspects that need improvement. Though all the SRL models consider SA a crucial skill, there was no previous research that supported this claim. Therefore my work focuses on analysing the effects of three different types of SA (standard SA, rubrics & scripts) on SRL. In a first stage, I compared the effects of rubrics vs. scripts vs. control groups on SRL. Our results showed that while both instruments are better than not instrument, rubrics and scripts have salient distinct features useful for different purposes (CV article numbers AN: 7, 12, 17 & 18).

To measure the effect of our interventions measurement instruments were needed. We developed a self-regulation questionnaire (Art. N. 3) and other instruments that were presented in each empirical article. In addition, I reviewed the state of the art in the field of SA by publishing 4 reviews with theoretical and empirical findings (Art. N 11, 13, 14 & 15).

At a later stage my work has continued in three lines of research. First, comparing standard SA and peer-assessment against the use of rubrics investigating their effects in SRL, accuracy and learning (Art. N 4 & 10). Second, I conducted a national survey among Spanish primary, secondary and higher education teachers (1500 participants) exploring their use and conceptions about formative assessment (SA, peer-assessment, feedback, etc.) (Art. N. 3). This has shed light on the use of formative assessment in real Spanish educational settings. Third, I am currently writing a theoretical review exploring the frontiers and future of the SA field. This review highlights five major areas that need to be addressed to move the field forward in the coming years.

My second main line of work is related to SRL models, theories and empirical evidence supporting them. As a natural consequence of investigating the first line of work I studied the most important SRL models (e.g. Zimmerman, Winne). First, comparing the seven traditions in the SRL around five empirical questions (Art. N 19). Second, exploring Zimmerman's cyclical model in great detail and updating it based on the latest empirical evidence (Art. N 6 & 8). This is not only an important update of the model but also the first time it has been published in detail in Spanish. And, third, analysing the empirical evidence in the latest SRL model named socially shared regulated learning (AN 1 & 2).

All this research has led to the publication of 20 articles in a time span of four years. Fourteen of these articles have JCR impact factor (three of them in the first quartile), seventeen have SJR (SCOPUS) impact factor (five of them in the first quartile).

Resumen del Currículum Vitae:

My 5 major areas of achievements are:

1) Research groups experience. I have worked in three relevant educational psychology groups. Two of them located in Spain, one directed by Jesús Alonso-Tapia the other by Carles Monereo. Both are renowned scholars that have made major impact in the Spanish educational psychology. Currently I am working in a recognized international group under the supervision of Sanna Järvelä one of the international scholars making major impact in the self-regulated learning field.

2) Scientific production. My production is characterized by being first author in the majority of the articles (17/21), small number of authors (13 publications only 2 authors, 7 three authors, 1 four authors), and the high quality of the journals (3 publications 1st quartile JCR, 5 1st quartile SCOPUS, all the publications have impact factor -JCR, SCOPUS and IN-RECS-). Also, I have been publishing a significant number of articles since 2013 (8 articles), in 2014 I already have 10 articles in press and six other sent for publication (three of them in second round of review). In terms of conference participation the main characteristics of my production are: high number of presentations (27), mainly first author (21), majority of paper presentations (24), small number of authors, and vast majority of international conferences.

3) Fellowship and mobility. In terms of funding I have been awarded important high competition fellowships. Specially the FPI-MEC, the Alianza 4 Universidades post-doctoral funding and my current contract funded by the Finnish Academy. Along my career I have spent one academic year in the USA, three 4-months stays in international foreign universities (USA and Belgium) and one ERASMUS visit (Finland). Currently I am working abroad in Finland which is a country with a top international educational system and top quality education research.

4) Visibility in the international scientific community. First, my position as coordinator of an important educational assessment



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association (EARLI SIG-1 Assessment and evaluation) situates me in a visible position for the next four years among the international community. Second, I recently entered the Assessment for Learning International Network (AfLIN) in which only recognized scholars are invited to participate. I am the youngest researcher in the network (<http://assessment4learning.com/delegates>) and part of the European delegation. In the 2014 conference I will act as a keynote speaker. Third, in the 2013 EARLI conference I was invited to participate as a discussant in one symposium on SRL. Only recognized scholars are invited to be discussants at the EARLI conferences. In sum my work has international repercussion that will continue to increase in the coming years due to the positions I am entitled.

5) Management, coordination and teaching. First, I have experience as organizer committee of two international conferences (300 participants). Second, as EARLI SIG-1 coordinator I manage a group with a significant budget (50000€/year) and number of affiliated (250). Third, I have experience as coordinator of large data collection (around 3500 secondary students). Fourth, I have experience in supervising pupils' research (five master theses). And, fifth, I have 29 ECTS credits of teaching experience, some of them from an international Master's Degree Programme.