

STSM SCIENTIFIC REPORT

Reference Code: COST-STSM-IS0703-05946

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STSM Title: *Cognitive Self-Regulation Instruction: Effects on the Orchestration of Writing Process and its Relationship with Text Quality*

The main purpose of this STSM was center on the shared research interest of Amsterdam-Utrecht, Nottingham Trent and León University research teams in the study of cognitive and self-regulated strategy instruction for improving students' writing competence, trying to understand the cause of its effectiveness.

Since 2003, Mark Torrance (Nottingham Trent University) and myself (León University team) have collaborated in an instructional research line in writing composition, with subsequent studies focused on analyzing the effectiveness of a kind of Cognitive and Self-Regulated Instruction (named CSRI) for improving students' writing proficiency. In this sense, this STSM in Amsterdam supposed a new and enriching collaboration with the Amsterdam and Utrecht teams (Gert Rijlaarsdam and Huub van den Bergh) in the study of this kind of strategy-focused writing instruction, which allowed us to apply their innovative methodological approach to study writing process, based on multilevel models of analyses, for analyzing the effects of CSRI instruction.

As a result of the approval of our STSM in Amsterdam, previously to it, all together by email discussed and planned collectively an intervention study aimed, mainly, to study the underlying mechanisms or components that explain the CSRI's efficacy for improving students' writing competence.

Briefly, the final designed study supposed a complex lagged and cross-panel design. In the first part, two experimental groups (with a intervention lagging one component behind in one experimental group) received each of the four instructional components of the CSRI model (1st teacher cognitive modeling, 2nd metacognitive knowledge of writing strategies and processes, 3rd student emulation working in pairs, and 4th student emulation working individually). Other additional group was an ordinary instruction with the same writing practice (control group). All

of them at intervals corresponding to the end of each instructional component were tested with written products and writing process measures.

In the second part of the designed study, experimental and control groups were inter-changed. The first two experimental groups received ordinary normal curricula with the same writing practice, and the third group received the same previous CSRI instruction, but all of them focusing on a different textual genre. The same design with the same instructional components and the same testing moments was followed in this second part. Besides, measures of writing process measures through writing log – on-line assessment and measures of modulation variables, such as, self-efficacy and knowledge of writing were collected in pre and post test of each part of the CSRI instruction. Additionally, we collected data about students' characteristics, such as, writing style, self-monitoring, numeric and verbal reasoning, and level of achievement or performance.

This study was conducted in Spain during the school year 2009-2010, doing the sampling and collecting all data previously to the STSM in Amsterdam. All data of this CSRI study were available in the date of our STSM, for working collaboratively in it. During the stay we combined individual work, with work in pairs, with extensive group discussion all together, and extended tutorial sessions of Amsterdam-Utrecht team focused on statistical analyses.

In sum, during the STSM we could manage to do and plan preliminary statistical analyses from the study, focused on three main axes:

- To study the effects of the key elements or components of the CSRI instructional program
- To study the relations between writing process indicators and text quality as a result of the CSRI intervention, based on multilevel models of analyses, which allow us to estimate the relationships between occurrence of a cognitive activity as a function on time (orchestration), and its relationship with text quality.
- To study the relationship between some students' characteristics (such as: writing style, self-monitoring, etc.) and the efficacy of CSRI instruction and its effects on writing strategies of students.

At the same time, we discussed in detail about theoretical and instructional implications of the previous findings in relation to writing instruction and development of writing competence.

Finally, we discussed and developed the dissemination strategy of the study findings, involving several complementary papers and possible conference or symposium presentations about this cooperative study resulting from this enriching STSM. The projected papers/conferences/presentations will be developed during the following school year according to the planned dissemination strategy.

Additionally to this collaborative study, this STSM allowed Torrance and me to do complementary analyses and plan dissemination of findings from two additional studies, developed previously as a result of our extensive collaboration in the past.

En León, a 8 de Julio de 2010

Fdo. Raquel Fidalgo