


UOC Universitat Oberta de Catalunya

 Centre for Learning Sciences and Technologies
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How does feedback and peer feedback affect collaborative writing in a virtual learning environment?

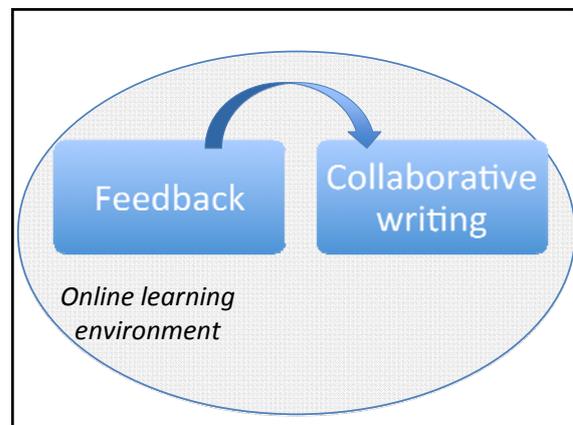
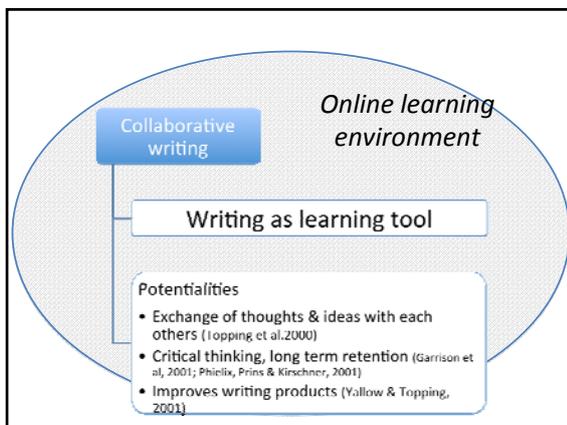
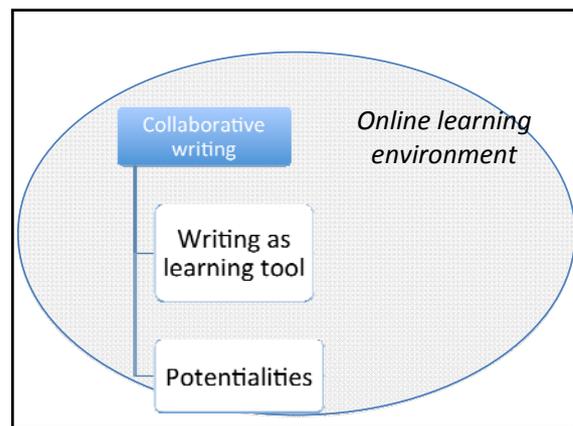
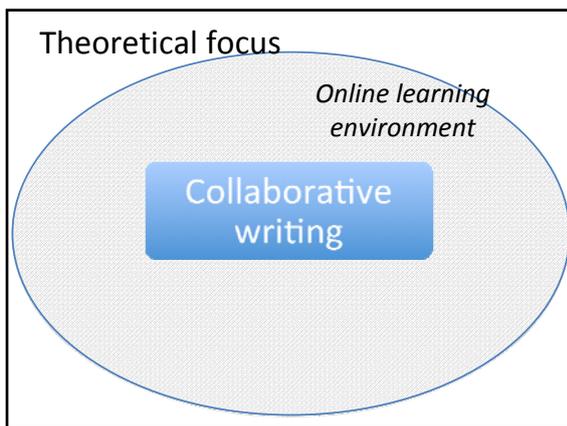
Teresa Guasch
 Department of Psychology and Educacion. UOC
 Presentation at the Open University of the Netherlands
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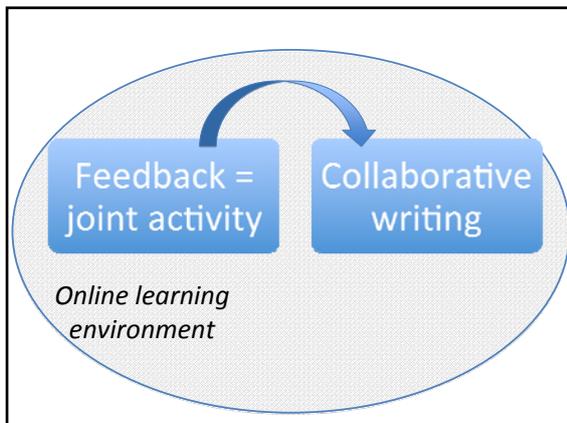
T.Guasch; A. Espasa; I. Alvarez & P. Kirschner

*E-feedback in Collaborative Writing processes: Development of teaching and learning competencies in online environments (Feed2learn). Ministry of Research and Innovation. Spain. (2011-2013). EDU2010-19407

Outline

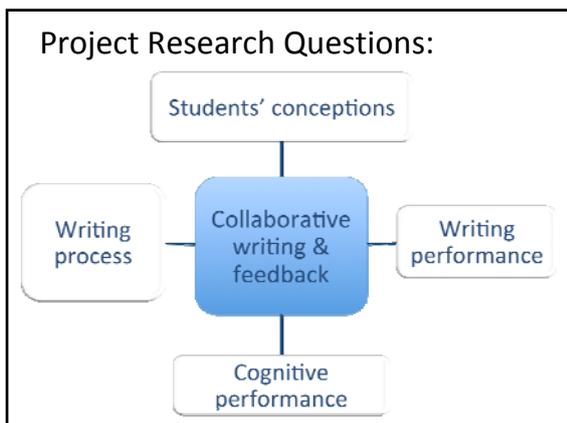
1. Theoretical focus
2. Problem & Research questions of the project
3. Study 1. First results
4. Next steps





Limitations:

- Few studies on how ICT promotes the improvement of academic collaborative writing
- Not clear evidence about feedback' characteristics to contribute to learning in a writing situation in an **online learning environment**.



Project Research Questions:

- About **students' conceptions** about **writing & FB**:
 - **How** are students' conceptions (about writing and feedback) related to writing performance in a VLE?
- About **writing product**:
 - Which kind of feedback and peer feedback contributes to improve students' writing performance in a VLE?

Project Research Questions:

- About **writing process**:
 - How does feedback affect the writing process?
 - What do students do with teacher's feedback? Which kind of changes do they make into their texts considering teacher's feedback?
 - What do the students do with peer feedback?
- About **cognitive performance**
 - How do students process feedback and peer feedback? Why?

Study 1: How does FB and peer feedback affect collaborative writing in a VLE?

- Which kind of feedback and peer feedback contributes to improve students' writing performance?
- What is the effect of an specific feedback in students' learning (conceptual knowledge and application knowledge)? And, what is the effect of a specific peer feedback?
- Which kind of feedback or peer feedback affect on students' knowledge transfer (long term effect on individual writing)?

Context

Universitat Oberta de Catalunya
(Barcelona)

- More than 50.000 students
- Fully online (virtual campus)
- Based on **written** & **asynchronous** communication



Participants

141 students (distributed in groups of 5 members)

Educational Psychology module (15 weeks).

Design

Pre-test 3 weeks	Intervention 4 weeks	Post-test 1	Post-test 2 4 weeks
Assessment:	4 types of FB * instructor or/and peers	Assessment:	Assessment:
-Previous knowledge	FB A: Corrective FB B: Epistemic FB C: Suggestive FB D: Epistemic + Suggestive	Test: - Conceptual Knowledge	-New writing task.
-Writing conceptions		-Application Knowledge	
-Feedback conceptions			
Individual essay	Collaborative essay		Individual essay (transference)

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Measures

- **Writing performance** (Reznitskaya et al., 2008).
 - Textual
 - Hypothetical
 - Abstract
 - Contextualised
- **Student's learning**
 - Conceptual knowledge
 - Procedural knowledge

Results

1. Descriptive results about collaboration
2. Collaborative writing performance and learning
3. Individual writing performance and learning

Descriptive results. *Collaborative activity*

1. Students participated actively in the peer feedback demand.
 - Number of comments:
peer feedback condition > instructor condition
2. Students cooperated between them during the essay writing process.
3. However, during the peer feedback process students distributed the task between them (no discussion and sharing comments) (Cerrato & Rodriguez, 2002; Mauri et al., 2011).
4. Students were very satisfied with the feedback and peer feedback process.

Results.

Feedback and *collaborative writing performance*

1. Significance effect of types of feedback.
2. All groups showed statistically significant improvements in the final text.
3. Groups that improved more:
 - Teacher epistemic feedback
 - Teacher FB + epistemic Peer feedback
4. Groups that improved less:
 - Teacher corrective feedback

Results. Feedback and *writing performance*

Conditions	Before Feedback (first draft)		After Feedback (final essay)		Difference	Relative improvement %
	M	SD	M	SD		
Corrective feedback (FB)	2,52	1,38	3,79	1,34	1,27	50,40
Epistemic FB	1,83	0,38	4,67	1,27	2,84	155,19
Suggestive FB	2,15	0,97	3,60	1,39	1,45	67,44
Epistemic + Suggestive FB	2,59	1,30	4,71	0,98	2,12	81,85

First Results. Feedback and *writing performance*

Conditions	Before feedback		After feedback		Difference	Relative improvement %
	M	SD	M	SD		
Corrective feedback (FB)	4,22	1,20	5	1	0,78	18,5
Corrective FB + peers	1,75	0,44	3,25	1,12	1,50	85,7
Epistemic FB	2	0	5,5	0,53	3,50	175
Epistemic FB + peers	1,75	0,44	4,25	1,33	2,50	142,9
Suggestive FB	1,85	0,80	4,08	1,75	2,23	120,5
Suggestive FB + peers	2,3	1,03	3,37	1,15	1,07	46,5
Epistemic + suggestive FB	3,53	1,64	5,67	0,49	2,14	60,6
Epistemic + suggestive FB + peers	2,04	0,60	4,15	0,73	2,11	103,4

Examples of Epistemic feedback

Quan parlem de coneixements secundaris o de les **enseñanzas secundarias**, fem referència a la repartició del conjunt de saber i d'ides que coneixem d'alguna cosa, en un conjunt de diferents circumstàncies que ens envolten com a individus socials i culturals. És habitual en la situació de classe, del rebre i reme de vot i nou anys, sorgir conversacions que plantegen dubtes, preguntes i una mica la divertida un entorn obert a la trobada. Aquesta situació permet que es parli en una mateixa situació evocant els coneixements que tenim de la seva realitat i creant un discurs amb idees que passen per contraposades, relacionades, ramades i crítiques. D'aquesta manera, es podrà percebre la **heterogeneïtat del discurs**, que es dona en contextos de desenvolupament com pot ser la família (**discurs primari**) o als que es desenvolupen posteriorment a aquesta, són del context social (**discurs secundari**). Per tant, aquest context, que situa en una distribució social del coneixement, on els alumnes comparteixen una combinació de mètodes, instruments i entorn que determina un context de conducta (expressió d'interessos, preguntes, recerca de respostes, curiós, etc.) i aquest coneixement queda distribuït en aquest context, el comportament i, en definitiva, així reforça la **consciència col·lectiva** del grup.

¹Hernández, E. i Llorca P. (2007). *Procesos educativos i contextos del desenvolupament humà*. Barcelona: Editorial DOC. Mòdul 4, p. 7

Per tant, aquest text ens apropa a una forma d'ensenyament que situa escola i vida quotidiana d'una manera més propera. De fet, si ja acadèmic es va construir el mètode que s'usen interessos i motivacions per part dels alumnes, i aquestes motivacions s'oposen de la seva quotidianitat. És en el context de l'escola i sobretot als interessos dels alumnes que es va construir el coneixement.

D'aquesta manera, doncs, els alumnes van construint coneixement "Cuando compartimos con otros entre otros, surgen contradicciones, preguntas diferentes y aparecen entonces nuevos problemas [...] i aquesta coneixement es construeixen mitjançant el discurs. En el nivell del discurs que es formen preguntes i es debaten idees que sorgiran, al mateix temps que es va construint el discurs. Els alumnes són aquesta metodologia "interactiva", és a dir, s'habiliten en la capacitat d'anàlisi, explicació i crítica. Per tant, els alumnes fan servir un **discurs primari** per comunicar-se i un **discurs secundari**, que representa un ús específic del discurs segons les situacions i segueix un procés d'aprenentatge. En d'aquesta manera, que el discurs secundari és posició davant del context acadèmic, properament dit, on l'intercanvi de coneixement, les preguntes formulades, les contradiccions, etc., generen i produeixen l'elaboració d'un discurs en constant construcció, a partir d'aquestes preguntes. I el **discurs expert**, es pot arribar a l'**aprenentatge significatiu** que es produeix per l'interacció entre el coneixement (saber) i la nova informació, d'aquesta manera, queda més integrada a l'estructura.

Openning [Disc 1] You can see the expert level but how do you explain your knowledge?

Openning [Disc 2] When do you use the expert level? Do you use it in the classroom? Do you use it in the laboratory? Do you use it in the field? Do you use it in the home?

Openning [Disc 3] How do you use the expert level? Do you use it in the classroom? Do you use it in the laboratory? Do you use it in the field? Do you use it in the home?

What do you think about giving support to the authors that relate scientific and novice knowledge?

Can you explain why do you talk here about written discourse?

First Results.

Feedback and *individual writing performance*

1. Scores: 2nd individual essay > 1st individual essay
2. Students that improved more and also scored higher → Epistemic feedback condition
3. Not statistically significant relationship: Students scores in the collaborative activity and the post-test individual essay (transfer learning).
4. Not statistically significant relationship: Students scores in the collaborative activity and the conceptual and application knowledge test.

Next steps

- Increase the **number of participants** (more groups per condition): to relate writing performance with learning
- **Writing process**
- **Cognitive performance**
- **Reduce instructors' work through writing-feedback systems**

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e-learning

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