

COLLABORATIVE LEARNING IN A VIRTUAL WRITING ENVIRONMENT

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In a constructivist approach of learning collaborative tasks are considered an effective way of promoting learning. In an academic writing course in Spanish as a foreign language, students worked collaboratively on writing tasks and provided peer feedback facilitated by regular E-mail and word processing tools. Evaluation results show that collaborative writing was both attainable and valuable, according to teachers and students. Peer feedback played an important role in the learning process. ICT was a necessary tool for supporting the peer feedback system and the teachers' document management. Especially for the teachers regular E-mail and word processing facilities were insufficient for efficient document handling and assessment. A virtual writing environment is proposed that facilitates both collaborative group work and process and document management.

1 Introduction

In 2002 the University of Utrecht introduced a new educational system based on the Anglo-Saxon two-way system of bachelor and master degrees, a model that within a few years will be adopted by all European Universities, according to the Bologna agreement signed in 1999. The University of Utrecht used this major system change to innovate teaching methods as well. In the former system courses usually consisted of a two hours lecture a week and a two hours seminar or tutorial in small groups. In the new system the number of contact hours per week has raised considerably and almost all classes are given in small groups. Didactically it was felt that in general in the former system the students were not stimulated sufficiently to participate actively in class, in consequence of which they only started studying short before the final exams. By implementing a more activating method of teaching the university aimed at increasing students' commitment to their studies, classes and final success.

To prepare students better for a professional career after finishing their study, academic skills play an important role in the new study programs. One of these is the use of information and communication technologies (ICTs) for information processing and group work. For language students, apart from such general skills as analysing and problem solving, writing is one of the major academic skills they should acquire, since our Western culture essentially is a written one and since language students very frequently fulfil jobs where the major part of the communication takes place in writing. Therefore, students should be able to write for a wide range of different readers using a variety of text types and styles.

2 Background

The writing of academic texts is essential in the foreign languages curriculum at the University of Utrecht. In the Spanish curriculum, among others, it was experienced in previous years that students working on their own did not approach writing as a complex process of planning, structuring, revising, rewriting, re-planning, etc. They delivered their first draft as if it were a final version. If writers are stimulated to work together, however, they have to constantly negotiate the purpose of their writing and the process. They have to make the writing strategies explicit they otherwise use implicitly, which promotes learning [2].

In a constructivist approach of learning, collaborative tasks are commonly considered an effective way of promoting learning [4, 6]. Johnson and Johnson [4] recommend the implementation of mutual interaction, interdependency and responsibility. In this respect, writing tasks can be carried out collaboratively by working simultaneously together on a text or by providing feedback on draft texts written by other individuals [5]. Another important issue in collaborative writing is that students read the texts written by other

students, adopt the role of interested readers and commentators and help each other in the elaboration of better texts. Furthermore, they do not only learn from receiving feedback and subsequent revision, but also from providing feedback, as this forces them to evaluate their peers' work at different levels and to make their observations and comments explicit to the writer [1, 3].

In order to support students and teachers in intensive writing training, generic ICT tools or specific virtual writing environments can be used for collaborative writing, peer feedback and online publication of revised writing products. Collaborating in written tasks implicates the exchange of lots of different document versions, attached feedback, revisions etc., within student groups and between students and teachers. Logistically, ICT tools of any kind can support and structure this group work process. However, fine-tuned groupware facilities might be necessary for document exchange and management to take place efficiently and effectively.

3 Experimental study

3.1 Pilot experiment

In order to promote the process of writing in its full complexity, we implemented the concept of collaborative writing. In the present study, a group of 20 2nd year students of Spanish worked collaboratively in a virtual learning environment that supported regular class meetings. Student pairs completed two-weekly writing tasks. Tasks were created around the concept of a virtual journal for philology students, which served as a coherent framework for writing texts. Student pairs had to choose 5 out of 8 tasks pertaining to different journal sections, such as letters to the editor, leading article, book reviews, young promises, tales / poems, interviews, news / curiosities.

After having elected the tasks student pairs engaged in the following procedure (see also <http://www.let.uu.nl/~Dorien.Nieuwenhuijsen/personal/cursos/tv5/>):

1. they analysed the task: they discussed its purpose and undertook the steps to pursue it;
2. they analysed models provided for different text types. This analysis was guided with questions promoting reflection and analytic ability;
3. they then started the writing process discussing the purpose of their text, the audience, the content, the structure;
4. they wrote their first draft and sent it for comments to another student pair;
5. the student pair provided feedback on content, structure and form according to a checklist;
6. based on these comments, the authors wrote their second version and sent it to the teacher for assessment;
7. the authors reviewed their second version and wrote the final one, based on the teacher's feedback;
8. they filled in a reflection form in which they indicated how they had collaborated on the writing task;
9. the final version was published in the on-line journal *Matutino* (<http://www.let.uu.nl/users/Kristi.Jauregi/personal/revista%20digital/portadamatutino.htm>)

Students had deadlines for achievement of each task. They did not only hand in the written product, but also the analyses of relevant text types, their draft version, their peers comments, the second version and the reflection form. In the first experimental year, students and teachers used regular E-mail, mailing lists and word processing tools for document exchange and peer feedback.

3.2 Evaluation procedure

Evaluations were carried out by means of questionnaires filled out by the students at the end of the course period. 18 students completed the questionnaires. The evaluation covered the organization of the group work, the usefulness of collaborative writing tasks, the usefulness of peer feedback and the satisfaction with the software used for collaborative learning. The questionnaires contained five-point scale answer

options and space for further remarks. Furthermore, interviews were conducted with a sample of students and tutors for additional information. Means and standard deviations were calculated from the completed questionnaires for the group as a whole.

4 Results

A summary of the most relevant mean scores is given in Table 1.

Table 1. Means on the five-point scale questionnaire

translated and abbreviated questionnaire		Spanish writing course
		N=18
		M (max. = 5.00)
1.	collaborative writing tasks useful	3.88
2.	task implementation in the course schedule attainable	3.61
3.	online publication of the final products motivating	2.88
4.	feedback meetings valuable	2.86
5.	regular ICT tools satisfactory for collaboration	4.06
6.	amount of received peer feedback satisfactory	3.16
7.	amount of received teacher feedback satisfactory	3.73
8.	writing collaboratively in pairs valuable	3.81
9.	receiving peer feedback instructive	3.71
10.	providing peer feedback useful for own learning	4.12
11.	performing tasks collaboratively more efficient than individually	2.94
12.	performing tasks collaboratively better result than individually	3.50

Students were positive about the usefulness of the collaborative writing tasks ($M=3.88$) and about the attainability of the task implementation in the course schedule (3.61). In the actual set-up, publication of the final products in an on-line journal did not positively influence their motivation (2.88). As most feedback took place electronically, feedback meetings in class were not considered to be particularly useful (2.86). Students were fairly positive about the application of regular E-mail for document exchange and regular word processing for providing feedback (4.06). They were rather positive about the feedback they received from their peers (3.16), but more positive about the feedback they received from their teachers (3.73).

Collaborating during the writing process was evaluated positive (3.81), as were both receiving and providing peer feedback (3.71 and 4.12, respectively). However, students felt that performing writing tasks collaboratively was less efficient than individually (2.94), whereas the final result was considered to be better (3.50).

5 Discussion and further developments

The students reported they benefited from the intensive writing tasks and from the peer feedback system. Interestingly, in their view collaborative writing was less efficient than performing individual writing tasks. It should be emphasized, however, that “less efficient” from the students’ point of view does not imply

“less effective” or “less useful” from a learning point of view. When students work collaboratively on a task, they have to constantly negotiate: reflect, analyse, clarify ideas and strategies, etc. This interaction and negotiation may feel as time-consuming, but is essential for collaborative learning in general and for language acquisition in particular. It is not surprising, therefore, that the students considered their final products to be better than if they had been written individually. The teachers too were satisfied about the quality of the collaboratively written texts, also in comparison with the texts written in years previous to the experiment. According to the interviews and additional remarks, ICT support was felt to be necessary and usable for the exchange of draft texts and feedback, especially as many students did not visit the university on a daily basis.

As the results of the writing project on the whole were promising, it was decided to continue its implementation the next year. In the remaining of this section, we will elaborate on the results of the project evaluation that are particularly taken into account for the next course.

Although students found it easy to work with regular E-mail and word processing tools for giving and receiving peer feedback and handing in second and final versions to the teachers, the teachers themselves were less positive about this procedure. Their E-mail boxes got overloaded several times, attachments sometimes could not be opened, previous and final versions were not well distinguished, students did not clearly label their documents, etc. Furthermore, the teachers indicated that providing specific feedback in time on all versions of all groups was almost an impossible job, especially as no standardized feedback aid was used. A more specific ICT environment for guiding and assessing collaborative writing, therefore, is necessary to be implemented for this writing course.

In the pilot project deadlines were set for the five writing tasks students had to perform, but no consequences were drawn in case the students did not send in their work in time. This led to the undesirable situation in which students waited until the final deadline before handing in most of their work at once. Therefore, to avoid work overload for both students and teachers at the very end of the course, much firmer deadlines will be stated in the next project.

The students' final texts were published in the virtual journal *Matutino*. Although this was a platform especially created for the students who participated in the project, only the teachers had access to it, i.e. they were the only ones with publishing rights. Apart from the fact that the publishing of documents was a very time-consuming job, students indicated they felt less involved in it, because they had no active access rights. A writing environment in which teachers as well as students could collaborate exchanging and publishing documents, could probably increase students' commitment.

On the other hand, we also faced some didactic problems, more serious in our view. To guarantee that peer feedback would be effective students were provided with a checklist to help them to comment systematically on the work of the other pair. However, the quality of the feedback varied quite a lot between pairs. Some pairs only gave hints about possible errors or mistakes, whereas other pairs actually corrected the work of their peer students, which sometimes resulted in the rewriting of whole paragraphs. Since some pairs were more proficient in Spanish than others, some pairs benefited much more from the peer feedback than others did. Although students reported they found the checklist helpful, in the next version of this project we will give more specific instructions about the required form and content of the peer feedback.

Before starting a new writing task every pair had to analyse a number of authentic texts and see what aspects or vocabulary are characteristic for a certain type of text. After completing the writing task they had to fill in a form in which they indicated how they had divided the work among the two of them. We found that roughly after the first two writing tasks some students tended to work less seriously on this first and last part of the writing task. The collaboration form did not tell the teachers sufficiently which student was responsible for what part of the work. We sometimes had the impression that one of the two students had contributed a lot more than the other in a particular writing task, which made a fair grading rather difficult. The problem we faced here is one of the major problems in all group work and unfortunately there is no easy solution for it. We will focus on the construction of complex tasks in which students depend on each other's contribution in order to satisfactorily fulfil the task. Additionally, it is considered to introduce some smaller individual tasks within a writing task, provided that this does not affect the collaborative learning approach.

In order to further improve efficiency and transparency of the collaborative writing tasks, the department is now experimenting with an online environment specifically developed for collaborative writing

and online publication. It was decided not to use regular virtual learning environments such as Blackboard or WebCT, as these do not provide specific support for peer feedback and document handling. The collaborative writing environment, Concourse (www.concourse.nl), is an object-oriented groupware program that enhances learner autonomy in writing, providing peer feedback and publishing. The environment consists of three levels: private spaces, group spaces and a public space. Student pairs work in private workspaces and publish their drafts in the group space. Other pairs give micro-level feedback on these internally published products using the “track changes” option in MS Word, and macro-level feedback using the “comments” object in Concourse. In the latter case, all comments can be labelled, archived, and searched for further study. After revision in the private spaces, texts are published again in the group space for assessment. After assessment they will automatically be published in the online journal which is part of the public space, to be read by other students and teachers. Additionally the writing feedback system “Textpert” from World Wide Writing (www.worldwidewriting.com), developed at Nijmegen University in the Netherlands, is considered to be used as a standard feedback tool for both teachers and students.

6 Conclusion

Working collaboratively on academic writing tasks was both attainable and valuable, according to teachers and students. Peer feedback played an important role in the learning process; students’ motivation and final achievements were high. ICT was a necessary tool for supporting the peer feedback system and the teachers’ document management. Especially for the teachers regular E-mail facilities were insufficient for efficient document handling. A virtual writing environment should facilitate both collaborative group work and teachers’ process and document management.

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