Investigación e Innovación Educativa

Tendencias y Retos

Inmaculada Aznar Díaz

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PEER-BLOGGING AS A TUTORING TECHNIQUE AT HIGHER EDUCATION

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1. INTRODUCTION

In the last decades we have seen numerous changes in Higher Education brought about by the now consolidated Bologna Process and its subsequent creation of the European Higher Education Area (EHEA). Particularly in Spain, Bologna has meant a revolution both in the structure of university degrees and in the pedagogical closeness that underlies them. The change from a paradigm centred on the teacher to another where the student is the centre of learning was necessary. As stated by the 47 Education Ministers gathered together in Bucharest in 2012: "We reiterate our commitment to promote student-centred learning in higher education, characterised by innovative methods of teaching that involve students as active participants in their own learning" (EHEA Ministerial Conference, 2012, p. 2). In this new EHEA the emphasis is placed on the importance of self-evaluation and constructive learning that allows the student to deal with the challenges that the labour market of the 21st Century presents. In this sense there is no doubt that society requires citizens who are technologically competent and able to work in a team. In the technological field and in education, Information and Communication Technologies (ICT) has gained a priority position, thanks to the fact that today's young people belong

to the "dot com generation", so that internet, social networks, blogs, podcasts etc. form a part of their daily routine (Palfrey & Gasser, 2008). However, in education we still have to advance in cooperative methodologies that encourage group work and reflective learning, as well as the self-critical spirit and the ability for self-improvement.

Finally, universities have the challenge of not remaining on a theoretical level and knowing how to advance in practical terms so that, through a guided introduction to the working world, the university students complete their university training and achieve a practical application of their knowledge. In the case that concerns us, teacher training, it is indisputable that teaching practices are an essential element but, at the same time, they remain one of the main challenges when combining theory and practice in a real teaching context (Hsu, 2005; Rodríguez et al., 2011). Some of the problems that future teachers experience during their placements have been outlined by Wang and Odell (2002), among which we will highlight emotional and psychological stress, lack of support and the conceptual conflict over teaching and learning.

2. PROBLEM OF RESEARCH

The practical component in teacher training has a special relevance and complexity when difficult situations have to be dealt with while a group of students puts their expectations on the future teacher. The situation is still more complex if you have to use a language that is not your own in order to communicate in the classroom. In this sense, tutoring plays a hugely important role. During a learning period of 10 weeks students on placement had, among other tasks, the weekly submission of a journal that includes the description of the tasks carried out in the classroom along with a reflection on them. Our previous experience indicated that this journal was not as effective as it was believed because supervisors could not give immediate responses to the problems students reflected on, and because one hour was not enough to solve all their doubts.

In order to solve the problem, and at the same time adapt to the European directives on interactive learning through ICT, it was decided to carry out action research that would test the peer tutoring technique coupled with new technologies in a way that would update and solve the problems encountered with the traditional reflective journal.

3. METHODOLOGY OF RESEARCH

Being the main purpose of our project to change the way in which our students had to reflect on their teaching practice, action research was considered as the most suitable paradigm. According to Wallace (1998, p.17), "Action research is conducted by teachers and for teachers. It is small scale, contextualized, localized, and aimed at discovering, developing, or monitoring changes to practice". This methodology allows the teacher-researcher to reflect on problems found in their classes with the reliability of a research paradigm. The different phases in our research design are summarised in the Figure 1:
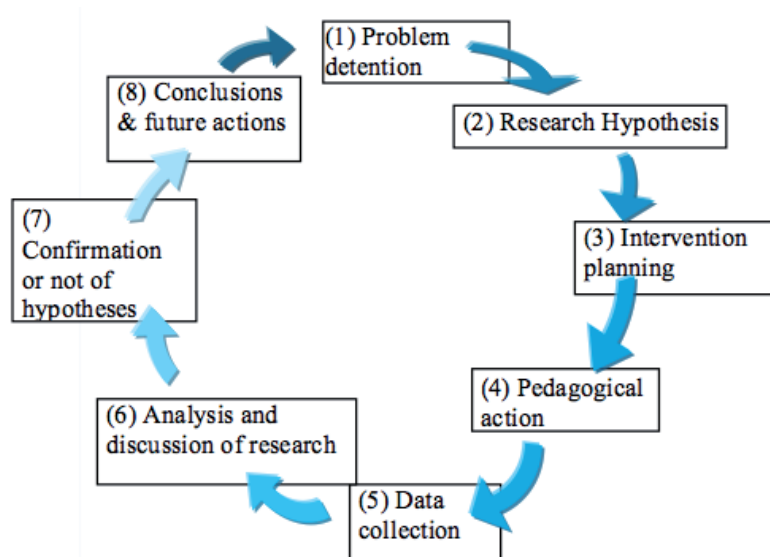
Figure 1. Action research cycle.

The research design is based on the "before and after" experimental methodology using the spiral structure, hence, giving the chance of reshaping the intervention and acting again after a first set of conclusions. It is a flexible methodology that can be adapted in the process as the research action develops (Wallace, 1998).

3.1. RESEARCH HYPOTHESES AND OBJECTIVES

The research hypotheses were the following:

- The use of the peer-blogging technique presents greater benefits for students than the traditional reflective journal, promoting a deeper, more reflective and more active learning.

- Interaction and feedback are greater with the peer-blogging technique, promoting the exchange of ideas, and experiences; and establishing a real community of learning, thanks to technology-mediated communication.

- The peer-blogging technique in pairs generates closer collaborative ties than among a larger group.

Based on these hypotheses, the following research objectives were set:

- To determine the level of student satisfaction of the peer-blogging experience in their teaching practices.

- To assess the role of this experience for the improvement of the communicative competence in English.

- To describe the types of interactions that occur with this methodology.

- To analyse the differences, if any, between small group and large group peer-blogging.

3.2. PARTICIPANTS

The research was conducted with a total of 17 final year students specialising in Teaching English as a Foreign Language (TEFL), while they did their teaching practices. It took two academic years; during the first, nine participants grouped together in pairs, and one group of three, were involved in this study; the number of participants in the following academic year was 8 and they all made up a single community of learning. The sample's characteristics can be seen in Table 1. It should be pointed out that the majority of the participants in both years were female. They all have experience as English language students as part of their compulsory studies and, in regard to teaching experience, it is significant in the second academic year.

With respect to previous experience on a technological level, there is an inverted imbalance between both groups. The technological evolution between one group and the other is interesting, perhaps motivated by a lower average age in the second, confirming what many authors continue to affirm about native digitals (Palfrey & Gasser, 2008).

Table 1

Description of the participants

		YEAR 2016-2017	YEAR 2017-2018	TOTAL PARTICIPANTS
Gender	Woman	77.7% (n=7)	75% (n=6)	76.5% (n=13)
	Man	22.3% (n=2)	25% (n=2)	23.5% (n=4)
Average age		26.3	22.5	24.4
Average number of years studying English		10.1	14.1	12
Previous teaching experience	Yes	33.4% (n=3)	75% (n=6)	53% (n=9)
No		66.6% (n=6)	25% (n=2)	47% (n=8)
Prior knowledge about blogs	Yes	66.6% (n=6)	75% (n=6)	70.6% (n=12)
No		33.4% (n=3)	25% (n=2)	29.4% (n=5)
Creation of a blog	Yes	11.1% (n=1)	75% (n=6)	41.1% (n=7)
No		88.9% (n=8)	25% (n=2)	58.9% (n=10)
Blog participation	Yes	22.3% (n=2)	87.5% (n=7)	53% (n=9)
No		77.7% (n=7)	12.5% (n=1)	47% (n=8)

3.3. INSTRUMENT AND PROCEDURES

To know the participants' degree of satisfaction with the experience, a survey was conducted at the end of the module. It was an adhoc questionnaire distributed via the internet using the Likert-type scale of closed questions from 1 (min.) to 4 (max.). The areas in the questionnaire are: a) personal information, b) benefits derived from the experience, c) the purpose of peers' posts, and d) global scores for the experience.

The main idea was to work on peer tutoring through blogs, with the intention of breaking down obstacles to time and space, increasing interaction and feedback for students on placement and, therefore, promoting reflective and cooperative learning.

During the year 2016-2017 the participants worked in pairs according to the educational level at which they did their practices at schools, while in the year 2017-2018 it was decided that the whole group would have access to each other's blogs, creating a single learning community.

In both years, each participating student started a private blog, which was accessible to their peers. Every day, they had to publish a reflection in English about their experience at school, request opinions about something related to their learning process or their plan schedule and, at the same time, they had to read whatever their peers had published and comment on it. At the beginning, the supervisors would also include notes on their students' blogs in order to promote communication, but just as the experience continued, the supervisors stopped intervening in order not to inhibit them.

In the majority of cases, the students shared the materials they were developing and published videos they had recorded in class, with the appropriate permission, which allowed their classmates to see how a given activity worked. The peers would add comments and suggest new ideas for accompaniments or for better educational development. Once they were familiar with the technique, they started to ask for help from their peers who they teamed up with when the situation demanded it. Sometimes they would find a joint solution collaborating in the creation of materials, sharing techniques, and activities among other things. Peer interaction also included messages of encouragement and advice in the face of difficult situations.

3.4. DATA ANALYSIS

Being the nature of the analysis to know the participants' opinion about the experience, a descriptive statistical analysis was used. Descriptive analysis includes the basic measures of central tendency and dispersion with all the dependent and independent variables. All inferential work has been done on the basis of non-parametric statistics due to the small number of participants in each group, therefore, not assuming normality in the data. The test used to analyse the effect of the independent variable "academic year" on the dependent variables is the Man Whitney U test for two independent groups. This test was only carried out with those variables where some difference was found between the two groups. All statistical analysis was carried out with the software SPSS 17 for Windows. Results from both descriptive and inferential analysis have been organized according to the independent variables: benefits, types of posts and global marks.

4. RESULTS

Results are organized according to the three set of independent variables.

4.1. BENEFITS DERIVED FROM THE EXPERIENCE

The first area of the questionnaire focused on the possible benefits derived from the experience. The results of the descriptive analysis are compiled in Table 2.

Table 2

Benefits derived from the experience (1= Completely disagree - 4= Completely agree)

No	The experience...		N	Min.	Max.	Mean	Mode	SD
1	[it has allowed me to broaden my knowledge of English language teaching.]	2016/2017	9	2	4	3.67	4	.707
		2017/2018	8	3	4	3.38	3	.518
2	[it has helped me reduce my anxiety when coming face to face with the classes.]	2016/2017	9	2	4	2.56	2	.726
		2017/2018	8	2	4	3.00	3	.756
3	[it has helped me be more proactive in my own learning process.]	2016/2017	9	3	4	3.67	4	.500
		2017/2018	8	3	4	3.88	4	.354
4	[it has helped me innovate in my classes.]	2016/2017	9	3	4	3.67	4	.500
		2017/2018	8	3	4	3.75	4	.463
5	[it has helped me rethink my planning.]	2016/2017	9	1	4	2.67	3	1.118
		2017/2018	8	3	4	3.88	4	.354

6	[it has helped me rethink my way of doing classes.]	2016/2017	9	3	4	3.78	4	.441
		2017/2018	8	1	4	2.88	3	.835
7	[it has helped me improve my teaching practice.]	2016/2017	9	3	4	3.78	4	.441
		2017/2018	8	3	4	3.25	3	.463
8	[it has helped me develop my technological competence.]	2016/2017	9	2	4	3.56	4	.726
		2017/2018	8	3	4	3.63	4	.518
9	[it has helped me develop my communicative competence in English.]	2016/2017	9	2	4	3.11	3	.601
		2017/2018	8	2	4	3.75	4	.707

It can be seen that most of the participants consider that they have gained many benefits from this experience, there not being a single average score below 2 (out of 4) and the majority of the averages being between the values 3 and 4. There are minimal differences between the results of both groups. Nevertheless, the corresponding non-parametric test was conducted to corroborate these differences in those variables that presented, approximately, a difference of one point between the two academic years (variables 5 and 6).

Table 3

The Mann-Whitney U non-parametric test results[b]

	Degree of agreement [it has helped me rethink my planning]	Degree of agreement [it has helped me rethink my way of doing classes.]
Mann-Whitney U	11.000	11.500
Wilcoxon W	56.000	47.500
Z	-2.645	-2.646

Asymptotic significance (bilateral)	.008	.008
Exact sig. [2*(Sig. unilateral)]	.015(a)	.015(a)

(a) Not corrected for ties.

(b) Grouping variable: academic year.

4.2. Type of posts

A section of questions was designed to determine the purpose of the entries that had been posted on the blogs and to analyse the type of interactions that occur. Results have been summarised in Table 4.

Table 4

Results by type of post by peer (1=Never - 4=Always)

No.	The peers' posts were aiming to...		N	Min.	Max.	Mean	Mode	SD
1	[provide solutions to problems.]	2016/2017	9	2	4	2.89	3	.782
		2017/2018	8	1	4	2.75	2	1.165
2	[give ideas about materials and resources.]	2016/2017	9	1	4	2.44	2	.882
		2017/2018	8	1	4	3.13	4	1.126
3	[explain a technique or methodology.]	2016/2017	9	1	2	1.78	2	.441
		2017/2018	8	2	3	2.88	3	.354
4	[give encouragement.]	2016/2017	9	2	4	2.89	2	.928
		2017/2018	8	3	4	3.50	3	.535
5	[correct a linguistic error.]	2016/2017	9	1	3	1.89	2	.601
		2017/2018	8	1	2	1.38	1	.518
6	[describe their daily performance at school.]	2016/2017	9	3	4	3.67	4	.500
		2017/2018	8	3	4	3.63	4	.518

The majority of the groups in which the posts have been categorised have received a moderate frequency with averages between 2 (sometimes) and 3 (often). As in the previous section, few differences between both groups have been found. However, we proceeded to conduct the Man-Whitney U inferential test on those dependent variables that present a difference of at least one point, obtaining positive results in significance.

Table 5

The Mann-Whitney U non-parametric test results[b]

	Posts from peers [to explain a technique or methodology].
Mann-Whitney U	3.500
Wilcoxon W	48.500
Z	-3.438
Asymtotic significance (bilateral)	.001
Exact sig. [2*(Sig. unilateral)]	.001(a)

(a) Not corrected for ties.

(b) Grouping variable: academic year.

4.3. Global scores

Finally, the global scores for the experience were obtained taking the two variables for the global score into account: one about the peers and the other about the experience.

Table 6

Results of the overall scores

		YEAR 2016-2017	YEAR 2017-2018
The score for peer performance.	Mean	6.89	6.88
	Medium	7.00	7.00
	SD	2.619	1.808
	Minimum	4	5
	Maximum	10	10
Global score.	Mean	9.00	9.13
	Medium	9.00	9.00
	SD	1.000	.641

Minimum	7	8
Maximum	10	10

5. DISCUSSION

The initial hypothesis made reference to the possible advantages that this experience could have tackling those problems that have been documented by several authors (Hsu, 2005; Wang & Odell, 2002). The global scores given by students to the experience demonstrate that for both it was very satisfactory, being the scores 9 and 9.13 (out of 10) respectively. Additionally, with respect to the benefits of this experience, scores between 3 and 4 can be found in almost all items of the questionnaire. These results endorse recent research that highlights the benefits of peer-tutoring through digital resources like those carried out by Al-Hebaishi (2012) and Deng and Yuen (2011) among others.

Some noteworthy data are: a) the highest scores are those that lead to the improvement of their English teaching profile, b) it is considered very relevant that this active methodology has helped students to truly feel part of their own learning, and c) the participants have also noticed an improvement in both their technological competence and their communicative competence in English. This aspect is especially important as future language teaching professionals must develop autonomous learning strategies that will allow continuous learning of the language, and d) it should be highlighted that the lowest average is in variable 2, reduction of anxiety in class thanks to the peer-blogging experience. Three averages close to 3 can be found, but this fact could indicate that the transference of the benefits of this experience to the classroom is harder to find.

According to these results, the first hypothesis of our research can be confirmed.

The second hypothesis stated that interaction and feedback were greater and more consistent with the peer-blogging technique, and consolidated a real community of learning. In both groups the usual type of intervention was the description of the daily performance at school despite stressing the importance of the reflections about the teaching experience. As it was said, supervisors did not want to intervene in the process, perhaps it would be a case of proposing a group leader (Ladyshewsky & Gardner, 2008) who would help to moderate and encourage other types of contributions in such a way that the balances would lean more towards reflection. At the opposite end of the scale, there were fewer

interventions to correct any linguistic errors with a mean lower than 2 and a mode, in the case of group 2, of 1. This fact in particular suggests that some steps should be taken to improve not only the students' written fluency, but also linguistic correction. Being aware that the students did not want to correct their peers' errors, perhaps a system of individual linguistic correction should be attempted by supervisor through private messages that would not disturb the good group dynamics.

Nevertheless, the participants affirm that they have shared ideas and materials; given solutions to any problems outlined; and encouraged their peers quite frequently. So this interaction is considered much greater and richer than what usually exists between supervisor and student using the traditional journal. A community of learning was generated (Killeavy & Moloney, 2010).

The average score that the participants awarded their peers should not be underestimated: it was close to 7 in both groups. It is necessary, in this case, to analyse the sample dispersion since a very high standard deviation was observed. It seems that not all group members agreed with their peers' performance and this intensifies in group 1. It is very interesting that group 2 has an average of 3.50 for the frequency of posts related to emotional support for their peers, constituting psychological support for the participants. This brings us to the following hypothesis.

Regarding the final hypothesis, that a group of two would establish closer ties as peers and therefore a more intimate community of learning capable of reaching deeper reflections, the results do not seem to corroborate this hypothesis. While it is true that not too many differences between the two groups were noticed, there are quite varied scores between group 1 and group 2 in variable 5 (a difference of 1.21 points between the averages) and variable 6 (a difference of 0.9 points between the averages), differences that were corroborated with the non-parametric tests for independent samples. Both are related to the possibility that the experience would produce changes in the classroom situation. In the case of variable 5 quite a broad standard deviation was noticed (SD=1.118) so it can be considered that there are some extreme concrete scores that have produced that low average. However, in the case of variable 6, the scores are more homogeneous and the standard deviation does not stand out. Participants in group 2 consider that the experience has not had much influence on their way of teaching. In this sense, studies like those of Hou, Chang and Sung (2009) can be pointed out. After extensive research with more

than 470 teachers working with reflective blogs as part of their continuous training, they concluded that although these tools are useful to outline ideas and share experiences, the deep level of reflection that would improve teaching practice was hard to reach. The previous teaching experience of the group which was much greater than that of the year before should be pointed out as a possible justification. It is usually more complicated for those teachers with a very noticeable teaching style to modify their way of teaching, even more so if the suggestions come from a peer. However, more detailed research on these aspects would be necessary to be able to arrive at more accurate conclusions.

On the other hand, and delving into the differences between the two models of peer-tutoring that have been put in place, differences of 1.1 points have been found in variable 3 for the type of interventions. According to the participants, few posts were given to explain teaching techniques or strategies in group 1, while group 2 consider that their peers contributed many posts of this type. The results of the inferential Mann-Whitney U test (Table 5) statistically corroborate this significance. It can be assumed that in the larger group there was greater interaction and feedback principally due to the number of people who participated. This, along with the results that were analysed about the differences between both groups in regard to benefits received, could indicate that a larger group would benefit from a higher number of interactions, establishing a more compact and dynamic community of learning. Equally, this seems to have an effect on the need for the groups to be larger so that possible disagreements with peers do not affect the group of two and destroy the experience. In this sense, our findings support those presented by Ladyshewsky and Gardner (2008) about the suitability of the groups between 7 and 10 students in order to carry out peer tutoring techniques.

6. CONCLUSIONS

The peer-blogging experience has been highly satisfactory for the students, encouraging the exchange of ideas, materials, and reflections, and constructing an educational community thanks to the effectiveness of technology-mediated communication and peer-tutoring technique. It can also be considered that having constant interaction with a peer facilitates communication, reducing the inhibitions that students usually have when facing an academic tutor. This peer to peer relationship, already highlighted by Bruffee (1993), has been one of the keys to the experience's success. The students felt very comfortable

sharing their knowledge and problems with other peers who were in similar situations; they enjoyed showing the material that they were creating and their self-esteem increased when their peers and teachers praised their work. All of this reduced the effects of the traditional problems during the field practices (Wang & Odell, 2002) such as isolation, and the lack of resources and ideas.

An essential piece to achieving that dynamism and interaction in this experience has been found in the form of the 2.0 tools, especially the blogs. Their function has been decisive for the improvement of the students' competence in English and in their technological skills. Results also confirm that this type of active methodology increases the role of the student in their own learning in addition to consolidating and putting what is known as a community of learning into operation, as in real life situations.

In regard to the development of communicative competence in English, the participants claim to have improved significantly thanks to the cooperative writing that the experience brought with it. However, few corrections were produced, making it impossible to confirm that these contributions in English have gone from a level of fluency to a level of correct discourse. A discourse analysis of the students and the introduction of techniques that would allow corrections without interrupting the secure space that the peer-blogging technique supposes could be future lines of research.

Regarding the differences between peer-tutoring in pairs or in a larger group, we have not been able to confirm that the participants of the first experience have achieved deeper reflections. However, a greater richness in the contributions of the larger group has been noticed, so we consider that this larger community of learning is more beneficial than a pair.

We do not want to conclude without drawing attention to the limitations of this study. However, the main objective of this experiment has been achieved since solutions to the problems arising in our teaching situation have been found. It is hoped that these contributions can be useful for the creation of new teaching practices programmes in the Education Degree specialising in a modern language (English).

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