SPACE FOR TEACHING SUPPORT AND INNOVATION:
THREE YEARS OF COLLABORATIVE WORK

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Abstract

The teaching assistants in the School of Psychology at the Autonomous University of Barcelona are a group of students who provide support to the teaching staff. After three years, collaborative work has proven to be an effective method for the execution of the teaching assistants' responsibilities. The results of two satisfaction surveys, one answered by the teaching staff and another by the teaching assistants, are analysed in this paper.

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1 INTRODUCTION

The 2012-2013 academic year was the third year that the School of Psychology at the Autonomous University of Barcelona (UAB, Universitat Autònoma de Barcelona) utilized teaching assistants (TAs from now on). These TAs provide support to the teaching staff through a collaborative working method, which is an innovative approach and differentiates them from the rest of the TAs at the university.

The informal feedback received by the teaching staff over these three years seems to reflect the efficacy of this approach. This article seeks to confirm and elaborate on this point.

In order to achieve this objective we used the following methodology: 1) Survey both teaching staff and TAs (using one survey for the teaching staff and a different survey for the TAs). 2) Carry out comparative analysis of the results of the current teaching staff survey and another one handed out the year before (2011-2012).

1.1 Who are the TAs and what do they do?

The TAs at the UAB's School of Psychology are a team of twelve graduate and post graduate students who provide support to the teaching staff in their delegable tasks, within the working framework of the Space for Teaching Support and Innovation (ESID, Espai de Suport i Innovació Docent) housed in the same school. The team is led by a coordinator, who matches the needs of the teaching staff with the TAs available and leads the group. The ESID has its own space to carry out its tasks and is open to everybody in the School of Psychology to solve and improve teaching issues. In addition, it was created as a platform to provide teaching resources for future postgraduates of the school.

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The several tasks that the TAs perform can be classified into the following categories:

- Face to face teaching and exam proctoring: Support is provided during classroom lectures and during exams. TAs help teachers supervise students during exams and learning evidences (i.e. partial exams) (e.g.: handing exams to the students, collecting them back, posting exam information, etc.).

- Distance teaching and exam preparation: TAs create drafts or proposals for study materials and collaborate with the design of some hands-on sessions. They also provide organisation and research software for teachers, create on demand evaluation tools, and help teachers manage the online campus (Moodle).

- PIAP: TAs provide comprehensive assistance to the Loan Service for Psychological Assessment Instruments of the School (PIAP, Préstec d'Instruments d'Avaluació Psicològica), which is under the control of the ESID. TAs explain the regulations of use, retrieve the tests, and manage the loan process, as well as assist in the correction of the instruments when it is needed. The PIAP is a service created more than fifteen years ago in order to provide psychological tools of assessment and diagnosis, like personality and intelligence tests, to students and teachers in the School of Psychology.

- Internal tasks: TAs are engrossed in their own projects as a group, such as managing the program "Find yourself", aimed at the exchange students within the school, organising academic events, creating course surveys, and participating in conferences, among others.

1.2 What is collaborative work?

As described by Jiménez-González (2009), collaborative work is all the intentional processes of a group aimed at achieving common goals, while ultimately promoting the exchange of ideas by its members. Tasks are assigned according to the individual skills and competences required to achieve a concrete goal, under the direction of a coordinator. In order to meet their objectives, it is necessary for the group to promote empathy and interdependence, while also making sure to select the right person for each task. The author also explains that in collaborative work, contributions made by all team members must be treated critically and constructively. Of equal importance, all members contribute ideas and arguments pertaining to the shared, core information. Thus, the obtained results are not the sum of teamwork but the reflection of the group's cohesion. Taking this into account, Echazarreta, Prados, Poch and Soler (2009) underline the importance of discerning between collaborative work and other modalities of group organisation, and they propose some differentiating characteristics:

- Collaborative work is based on a strong relationship of interdependence of the different members. Thus, the final achievement of the goals concerns all members.

- Goals are met by both individual and group tasks.

- All members have their share of responsibility for the execution of tasks.

- There is a clear responsibility of each individual member of the group to achieve the ultimate goal.

- Responsibility of each member is shared.

- In terms of group members' abilities and qualities, groups are heterogeneous, unlike traditional work groups, which are more homogeneous.

- Collaborative work requires communication skills, symmetrical and reciprocal relationships, and a desire to contribute to the completion of tasks.

- There is interdependence among group members.

López (2009) also stresses the growing importance of information and communication technologies in collaborative work.

In addition, research shows collaborative work is beneficial not only in employment settings (Adler, Heckschener & Prusak, 2011) and university settings (Guàrdia-Olmos, Peró-Cebollero, Freixa-Blanxart, Turbany-Oset & Gordóvil-Merino, 2013), but also in elementary (Fawcett & Garton, 2005) and secondary school settings (César & Santos, 2006). Thus, it does not seem unreasonable to argue that collaborative work is the best tool for accomplishing the tasks of the ESID.

1.3 The collaborative work of the TAs

- Transversal tasks (distance teaching, exam assistance, and internal tasks): The coordinator evaluates the pertinence of the demands made by the teaching staff (through the Protocol de gestió de tasques (Tasks management protocol), a form created to fulfil this need), as well as the resources available to meet them. Then, these demands are assigned to the TAs as specific tasks. Tasks are performed in groups thereby promoting the exchange of ideas, methods, and knowledge, while recognizing a shared responsibility for the outcome. The distribution of the work among TAs is based on their skills, current workload, and availability.

- Shift tasks (face to face teaching, exam assistance, and PIAP): The TAs organise themselves in pairs, rotating work shifts which cover all school teaching hours. During these shifts, the TAs work at the ESID office providing face to face tutoring, exam preparation/practice, and PIAP assistance in addition to their assigned transversal tasks.

- Weekly group meeting: This is the formal meeting time for the TAs and the coordinator. New tasks are assigned and the status of on-going tasks is discussed in these sessions. In addition, new ideas and proposals are brought to the table, improvements are suggested, and doubts and/or difficulties are shared.

- Tools for communication and internal tasks: The TAs utilize new information and communication technologies to coordinate and perform their duties. The main tools used are various Google resources, including Google Drive, and Dropbox.

2 METHODOLOGY

Two satisfaction surveys were handed out in order to assess the efficacy and performance of the TAs' collaborative work approach. These surveys were designed last year and some modifications have been added with the purpose of obtaining better data. One survey was aimed at the teaching staff to reflect their degree of satisfaction with the general ESID services, the Moodle support, the TAs' tasks, and the PIAP services. There were a total of seventeen questions evaluated with two Likert scales (for each question, respondents had to choose among 5 levels of satisfaction), and a final, open ended question allowing respondents to address anything they wished.

Another survey aimed at the current and former TAs surveyed different aspects of their work experience. It included a total of eight questions evaluated with a Likert scale (for each question, respondents had to choose among 10 levels of satisfaction), plus two census questions, two job related questions, and a final, open ended question allowing respondents to address anything they wished.

Participation was voluntary and participants accessed the surveys through an online link designed with the Google survey tool which was available for three months (January to March 2013). 64 teaching staff surveys and 21 TA surveys were collected in total. Subobjectives 1 and 2 were analysed through an approach in which different statistical methods were used with the focus on obtaining both a simple and comparative standard mean.

3 RESULTS

3.1 Analysis of the results from the two surveys (academic year 2012-2013)

Firstly, the teaching staff survey reveals high overall satisfaction with the general ESID services (Table 1), Moodle support, and PIAP ($\pm$ >4/5). However, only 32.5% of the teachers felt that their knowledge, confidence, and control over new and/or more complex materials had increased thanks to the work of the ESID and TAs.

Regarding the specific assessment of TAs' work, there are several interesting results. Teachers know surprisingly little about the TAs' responsibilities. Teachers who were aware, however, were very positive in their feedback regarding the TAs' usefulness, diligence, effectiveness, and desire to be helpful.

Lastly, it is worth mentioning that all the questions addressing the specific tasks carried out by the TAs came back with very high marks, "Exam proctoring" being the highest one in the ranking with 9.36/10 points.

Results of the teaching staff survey (academic year 2012-2013)			
Variables		Likert scale 1-5	Percentages
Overall satisfaction	ESID	4.48	89.60%
	Online campus/Moodle support	3.98	79.60%
	PIAP	4.28	85.60%
	Improvement of knowledge	/	32.50%
Overall assessment of the TAs' work	Knowledge of the tasks	1.79	35.80%
	Utility of the tasks	4.56	91.20%
	Response capacity	4.59	91.80%
	Response efficacy	4.69	93.80%
	Active participation	4.56	91.20%
Assessment of TAs' specific tasks	Exam proctoring	9.36	93.60%
	Moodle support	8.89	88.90%
	Biopac/Educlick* support	8.39	83.90%
	Classroom support	8.56	85.60%
	Qualification tools	8.06	80.60%
	General teaching support	8.44	84.40%

*Teaching instruments

Table 1. The first two main rows correspond to overall tasks and perception of the quality of the work carried out in the ESID. The third row represents each specific task. The column "Likert scale" represents the direct score obtained from the survey (out of 5 or 10 points), whereas the last column represents the percentage score used to compare the different scales of the study

Regarding the current and former TA survey (Table 2), it is noteworthy that overall satisfaction with the experience came back at 83.8%. The variables which look into the different aspects of TAs' work and their methodology (individual work, group work, other types of work, internal communication, and coordination) also came back with similar high values (± >8<9). The assessment of the relationship with the teachers and the training received have slightly lower marks (>7<8). To finish, it is noteworthy that over half of the participants believe that their work experience as a TA has helped them gain access to the job market (59.9%), and that 52% of them are currently employed.

Result of the current and former TA survey (academic course 2012-2013)		
Variables	Likert scale 1-10	Percentages
Overall satisfaction with the experience	8.38	83.80%
Individual work	8.04	80.40%
Group work	8.67	86.70%
Other types of work	8.19	81.90%
Internal communication	8.00	80.00%
Coordination	7.90	79.00%
Relationship with the teachers	7.62	76.20%
Training received	7.33	73.30%
Help in accessing the job market	/	59.90%
Currently employed	/	52.00%

Table 2. The column "Likert scale" represents the direct score obtained from the survey (10 point scale), whereas the last column represents the percentage score used to compare the different scales of the study

3.2 Comparative analysis of the results of the teaching staff surveys (academic years 2011-2012 and 2012-2013)

In this first set of data addressing overall satisfaction (Figure 1), it should be observed that the assessment values are pretty similar between both years, with variations below five points in both directions.
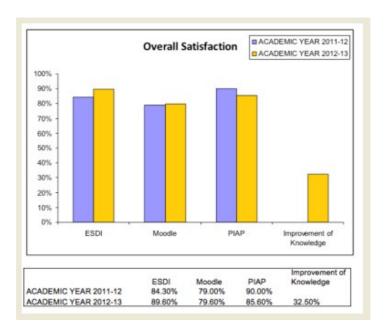

	ESDI	Moodle	PIAP	Improvement of Knowledge
ACADEMIC YEAR 2011-12	84.30%	79.00%	90.00%	
ACADEMIC YEAR 2012-13	89.60%	79.60%	85.60%	32.50%

Figure 1. Overall satisfaction

Regarding the assessment of the TAs' work (Figure 2), the decrease in awareness of the TAs' tasks is significant. It was already quite low the first year (around 50%), and this year it has gone down to 35.8%. Despite this, the assessment of the TAs' usefulness increased from 76% last year to 91.2% this year. The rest of the variables show very similar values, with minor variations between the two academic years.
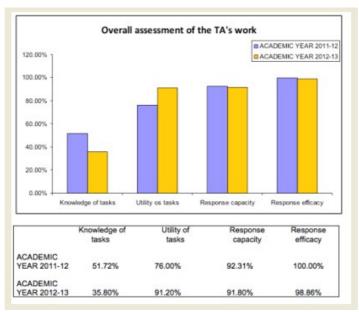

	Knowledge of tasks	Utility of tasks	Response capacity	Response efficacy
ACADEMIC YEAR 2011-12	51.72%	76.00%	92.31%	100.00%
ACADEMIC YEAR 2012-13	35.80%	91.20%	91.80%	98.86%

Figure 2. Overall satisfaction with the TAs' work

Lastly, the comparative analysis of satisfaction with the specific tasks carried out by the TAs (Figure 3) shows a similar pattern to that observed in previous results, with insignificant variations up and down. It is interesting to note that the assessment of the support given in the classroom has increased from 62% to 85.6%. Also noteworthy is the smaller increase from 74% to 80% in satisfaction with the qualification tools.

Finally, regarding the qualitative data (open ended questions), this year's teachers' comments revolve around the PIAP service, asking, for example, for the extension of the loan periods. By contrast, last year's teacher's comments revolved around their lack of awareness with respect to the TAs' responsibilities. This seems to indicate that even if the work of the TAs is still largely unknown (as shown in the above data), the role of the TAs is nonetheless becoming more and more recognized.
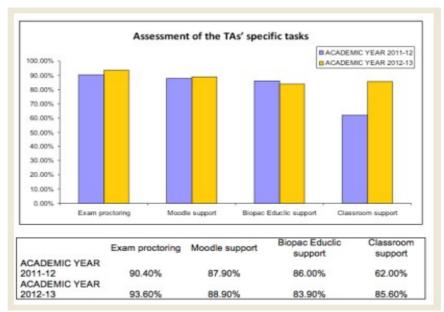

	Exam proctoring	Moodle support	Biopac Educlic support	Classroom support
ACADEMIC YEAR 2011-12	90.40%	87.90%	86.00%	62.00%
ACADEMIC YEAR 2012-13	93.60%	88.90%	83.90%	85.60%

Figure 3. Assessment of the TAs' specific tasks

4 DISCUSSION AND CONCLUSIONS

Considering the feedback received from the teaching staff and the results obtained in last year's survey (CIDUI, 2012), coupled with the theoretical arguments about collaborative work, it seems relatively safe to say:

- The results of the teaching staff survey (academic year 2012-2013) show very high satisfaction.
- The comparative data of the two teaching staff surveys (academic years 2011-2012 and 2012-2013) confirm the stated argument that collaborative work provides more efficiency and better performance.
- The results from the current and former TAs show they find the experience to be a positive one. They are especially pleased to have learned new methods and procedures for completing group work.

Generally, it seems that the ESID is doing a good job and the collaborative work approach is the best approach for carrying out their tasks. Nevertheless, some points ought to be discussed.

Regarding the specific tasks completed, both years most of them were perceived as satisfactory; however, the assessment of support within the classroom has increased notably. This could be an indicator of the growing experience of the ESID over the three years. In addition, this demonstrates the importance of collaborative work in order to overcome novel and unexpected incidents. For example, studies demonstrate that the use of collaborative group work in psychology classes led to an increase in the number of students passing the course (Guàrdia-Olmos et al., 2013).

Despite the lack of awareness with regard to what is expected of the TAs, teachers who are aware report a great deal of satisfaction with TAs' diligence and effectiveness when completing tasks. Thus, it seems clear, for the benefit of future projects, that we need to improve our communication through advertising and promotion of the activities performed by the ESID.

Finally, it is worth mentioning that the overall number of tasks carried out by the TAs this year has increased. In part, this is because the TAs' work has expanded to new work areas such are the collaboration with the UAB's Solidarity Foundation, the organisation of academic events (e.g.: graduation ceremony), and the managing of support programs for exchange students. Furthermore, compared with previous data, an increase in the degree of satisfaction concerning the traditional services provided (Moodle support and PIAP) has been observed.

Taking all this into consideration, we cautiously believe that collaborative work, with constant coordination, is the key to obtaining high quality work from the TAs. It is necessary to follow up the presented data with a standardized method in order to obtain consistent longitudinal analysis. It should also be noted that the high satisfaction values registered by both surveys not only reaffirm the efficiency of collaborative work at different levels, but also indicate overall satisfaction with the approach. Moreover, it would be interesting to develop new ways to test the effectiveness of collaborative work in order to gain a better understanding of this process and to be able to measure on a greater scale its degree of effectiveness.

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BIOGRAPHY

The Space for Teaching Support and Innovation emerges from the need to provide transversal support to all the newly implemented subjects within the School of Psychology. It is coordinated by the Dean's office team at the School of Psychology. This unit consists of one manager (Juan Muñoz), a senior technician in IT platform administration (Iván Sibilla), a senior technician in teaching support and innovation (Gisela Rodríguez-Hansen), who coordinates the team of 12 scholarship holders at the unit, and a technician in charge of the materials and the loan service for psychological tests (Jordi Rodríguez).