Active Learning Inspired by Team-Based Learning and Project-Based Learning

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Abstract

When learning content knowledge is not enough in an academic subject, knowledge application becomes the teaching goal. Using the Team-Based Learning approach has proved to be an excellent instructional method for this purpose. The aim of this article is to present a design I have devised for the subject of Pragmatics exploring TBL's pedagogical potential. My research is enriched exploring the insight of Project-Based Learning: choosing challenging taks. I have used a descriptive-comparative methodology for my design's premises, and the qualitative method of supporting my claims with my students' reflective appraisals. Results: the pedagogical values and success of this design.

Keywords: Innovative teaching and learning, hybrid learning design. Team-Based Learning (TBL), Project-Based Learning (PBL), pragmatics.

Aprendizaje activo inspirado en aprendizaje-basado en equipos y aprendizaje-basado en proyectos

Resumen

Cuando en una asignatura académica no basta con aprender los contenidos, la aplicación de dichos contenidos se convierte en el objetivo de la enseñanza. El uso del enfoque del Aprendizaje-Basado-en-Equipos ha demostrado ser un excelente método pedagógico para este fin. El objetivo de este artículo es presentar un diseño que he creado para la asignatura de Pragmática, explorando el potencial pedagógico del ABE. Esta investigación se ha enriquecido explorando la esencia del Aprendizaje-Basado-en-Proyectos: escoger tareas estimulantes y retadoras. Se ha utilizado una metodología descriptiva-comparativa para las premisas de este diseño, y el método cualitativo de apoyar argumentos con los escritos reflexivos de mis estudiantes. Resultados: el valor pedagógico y el éxito de este diseño.

Palabras clave: Enseñanza y aprendizaje innovador. Diseño de aprendizaje híbrido. Aprendizaje basado en equipos (ABE). Aprendizaje basado en proyectos (ABP). Pragmática.

1. INTRODUCTION

In some academic subjects, learning cannot stop with the acquisition of content knowlege or conceptual understanding. Learning only makes sense when students acquire the ability to apply this knowledge to expand their in-depth understanding of reality.

To attain this pedagogical goal in the subject of Pragmatics (for the Degree in English Studies), I have devised a design that has explored the core features of two instructional approaches based on active learning, Team-based learning and Project-based learning. I claim that each one of them can complement and enrich the other. In my research for this hybrid design, I have mainly relied on Team-based learning, as I will show in the course of this article. But, in addition, I have also explored and profited

from the key insight coming from Project-based learning: the empowering potential in the process of learning of choosing a complex and challenging project. In this particular subject I will refer to here, the team task or project I have chosen for my students to focus on has been an analysis of the persuasive tactics of well known TV advertisements, an alluring real world domain for students to apply the concepts presented in the subject of Pragmatics, which deals with the cognitive, social and cultural dimensions of communication. I consider that this project provides 'world authenticity', an essential feature to attract students' interest and energy, as PBL is so keen to explore and highlight.

2. THEORETICAL FRAMEWORK

I will refer to Project-based learning and Team-based learning in this section, even though my hybrid design has been mainly inspired by Team-based learning.

The corner stone of Project-based learning are Projects that connect with students' own concerns, cultures, identities, and issues, which have an impact on in their lives (Blumenfeld et a., 1991). In this active instructional strategy, students work in groups deepening into their projects and the outcome is a collaborative style. Their involvement is increased and they finally acquire not only new knowledge but also critical thinking/problem solving skills, as well as the ability to collaborate in group work and be responsible for their work. These are considered success skills in our 21first century. The teacher becomes a guide, a motivator, a facilitator. One of the findings of my research is that Project-based learning can be complemented with insights from Team-based learning, because of the awareness this instructional approach has constructed around some key components. My design attest to this claim, as will be shown in this article. Let me introduce now some caveats related to TBL.

Team-based learning (TBL) is a teaching strategy in which active learning is enhanced even in large classes, since students learn how to apply subject concepts rather than simply learning them to be tested on them in a final exam. Students assimilate content as a result of engaging in group assignments whose aim is knowledge application. While having cognitive enrichment, understanding content material in depth, they

become more responsible about their own learning. As a consequence of the team-based learning process, student groups are transformed into powerful learning teams. This is found in business and educational settings. It was Larry Michaelsen who designed TBL in the late 1970s at the university of Oklahoma Business School. In the 1990s, Boyd Richards and colleages began implementing it in a Medical School with great success. Michaelsen, with other scholars, has published extensively to implement this effective learning approach in the academic setting (see Michaelsen, Sweet, & Parmelee, 2008; Parmelee & Michaelsen, 2010; Davidson, Major & Michaelsen (eds.), 2014). They have spotted patterns of effective team development in a wide range of academic contexts. As Michaelsen, Knight, & Fink (2002, pag. ix) stated, "When faculty members complain that students are not showing interest in their courses, will not do the homework, or just generally do no seem to be understanding the material, team-based learning is one of the most powerful tools we can recommend."

Awareness of the use of team-based learning has spread internationally (see for instance McMahon, 2010 for a review of TBL and an implementation in medical teaching) but before presenting in detail the principles that I have selected for the implementation of my design, a word of warning is compulsory: small group learning is not synonymous with team-based learning. In TBL the classroom experience is transformed. Group learning can be classified into: casual, where activities are unstructured; cooperative or collaborative, articulated around carefully structured activities and team-based learning, which has some distinctive features which I will review in the course of this article, focusing on those that I have selected for my design.

In the casual use of small groups, exercises are *ad hoc*. It is a way of breaking up lecturing, but no planning is required, and has no impact on the course structure. In the cooperative mode (also called collaborative), activities are carefully planned and structured, they are embedded into the course structure, but there is no transformation of traditional course teaching. Some small-group activities are associated with some particular points or lessons, but the overall structure of the course remains unaltered. In contrast, team-based learning entails a transformative use of the small group dynamics. In TBL small groups are changed into high performance learning teams. TBL has an impact on the structure of the

course, that is, a change is required in the sense that teaching content is not the goal, but a first step. The main objective for students is to acquire the skills to apply that content.

Teachers in college-level or university teaching feel encouraged to engage their students in the use of team work once they see the value of teaching beyond content, and thus of enhancing students' interactional skills as well as their problem-solving skills. But, as stated above, in order to reach quality learning, groups must evolve into teams and follow some premises. Now I will proceed to show the methodologies I have followed for this research into an effective use of Team-based learning, enriched with the main insight from Project-based learning, aiming at achieving significant learning in the subject of Pragmatics.

3. METHODOLOGIES USED IN THIS RESEARCH: DESCRIPTIVE-COMPARATIVE METHODOLOGY TO ANALYSE MY DESIGN'S PREMISES. QUALITATIVE METHODOLOGY TO SUPPORT ITS PEDAGOGICAL VALUES

As stated above, Team-based learning needs to meet some principles or premises to reach its educational potential. Now, I will proceed to present my research into my own selection of TBL premises that I consider essential. Using a descriptive-comparative methodology, I will describe them first in order to show the way my particular design has adopted or modified them. I have devised and optimized this innovative design over the last ten years, for the subject of Pragmatics (Degree of English Studies), achieving great success. Following a qualitative methodology, I will introduce relevant fragments from my students' reflective appraisals on the implementation of this design to support my claims in relation to the pedagogical value of each premise and of the design per se. I must say at this point that a quantitative method is not relevant in this research since all the reflective appraisals I have received from my students after the completion of their team assignment have praised the qualitative change in their understanding of the subject and of publicity thanks to this design.

4. ANALYSIS OF SELECTED TBL'S PREMISES COMPARED WITH MY PARTICULAR IMPLEMENTATION IN MY DESIGN. IMPACT ON MY STUDENTS

4.1. Commitment to the group

What distinguishes teams from groups is that in teams, its members have a higher commitment to the group since the group is an entity gaining in cohesion, tolerance of each other and motivation to accomplish very challenging learning tasks. This is achieved because the team is composed of the same students throughout the course. In fact, teams are characterized by the time spent interacting, going deeper into the content material that they will have to use to solve problems or complete assignments. In my design, I found the convenience of maintaining the same students in each team all through the course (in the first minor assignments and in the last major assignment, that will be described in another section). That increased their trust in each other, their cohesion and sense of a joined accomplishment.

4.2. Individual and team accountability

Another important element in TBL is highlighting individual and team accountability for investing time and effort into the team goal. In my design, this is a natural outcome, since I offer this instructional strategy to my students only on the condition that they attend classes and of their commitment to the group, so that when they engage in the major team assignment (which is the last one, and the most important), those who do not commit themselves can be expelled from the group by their team mates. Those who decide not to take this chance have the option of passing a traditional exam. In this way, since it is an instructional strategy that they choose to follow, since they always have the option of a traditional exam, they are more open to appreciate the advantages of TBL to achieve an active learning of the subject, the skill of applying subject content and a high grade. They become more aware that the requisite for all these benefits is their commitment to team work.

4.3. Knowledge application

In team-based learning, memorizing content is not the aim (in contrast to most traditional teaching), but training the capability of student members to solve problems or issues by applying content. The outcome

is that this skill, knowledge application, is greatly enhanced. That is why this educational strategy can and should be used when courses not only have content but content that needs to be used or applied to solve problems, challenges, etc. The pedagogical advantage is that this allows students to engage in significant learning tasks, their motivation is highly increased and this leads to high quality accomplishments. This is well attested in the design I have implemented with my students. In a hundred per cent of my students' reflective appraisals their sense of having achieved goals beyond their expectatitons is always one of the praises they have for this method. In their words: "It is the group project (of an advert analysis) what has resulted more beneficial in the long run, for the reason that the group dynamics has enabled us to join forces and, thus, to come to a closer approach to the subject of Pragmatics and to the concepts discussed in class."

4.4. Creating significant group assignments

Cooperation among group members is not enough. Creating assignments that are significant for them, as I have mentioned above, is a very important procedure and should never be underestimated. Challenging students with stimulating and meaningful projects has proved to be the corner stone in this instructional strategy, as lecturers exploring team-based learning are showing in their research (see McInerney & Fink. 2003). They summarized the outcomes of implementing TBL (and that coincides with the results of my own research, as this article will show) in these words: "Overall, team-based learning with challenging projects improved the students' comprehension and retention of information, critical thinking, and attitudes about the course and focused student-instructor interactions on learning rather than grades." (McInerney & Fink. 2003: 3).

Regarding this key element, I should say that this essential feature is also a core component of Project-based learning. In PBL, choosing significant assignments which offer students world authenticity is the key to promote students' involvement as a working group and their sense of ownership of their project. As a consequence, they excell in their accomplishments. In this particular aspect, I claim that my design is a hybrid mixture of these two instructional strategies. The team task that I have devised for my students not only encompasses the subject conceptual frameworks. TV publicity is the real world domain I have chosen for

them to apply all the abstract concepts presented in the subject of Pragmatics (Degree of English Studies). Their task is to deconstruct the persuasive tactics used in well known TV advertisements using those concepts as tools. This assignment is very attractive and alluring for them, and exploring the communicative strategies used in very famous TV ads, such as those of Coca-Cola or other drinks, of Ikea, famous perfumes, etc. is experienced by them as a quest of discovery that finally transform the way they understand the subject and the way they interpret publicity. In their words: "This analysis has helped us to have a better understanding of Pragmatic concepts (…) With the analysis of the advertisement, we have seen them in practice, and we have learned that they are present in our everyday life."

4.5. Preparation, application and assessment phases of team-based learning

Another distinct feature of Team-based learning as an instructional strategy is that it cannot be equated to isolated or independent group activities. In its standard implementation, it involves a sequence of learning activities and the consequence is that the course needs to be reestructured. This sequence is flexible, since it should be adapted to specific teaching circumstances, but in general terms, it revolves around the topical units the course is divided up and follows three phases: preparation, application and assessment. The preparation phase means that students do the reading assignments for each unit the course is divided into. That is not meant to be an in-depth understanding of the content material, but a first introduction. This out-of-class activity is followed by some tests in class (firstly, individual tests, and secondly group tests, so that they begin to appreciate the value of the group). Two in-class activities follow: accomplishing the application and the assessment phases. In the application phase, students, now organized around groups, use or apply that content and in the last phase, they receive feedback. This is repeated for each topical unit. Once they have had enough practice in applying content, they are presented with the last group activity, by which they are graded.

In my implementation, I do follow the three-phase structure (preparation, application and assessment), but in my particular design I decided it was more useful to embed intense team-based learning as the final stage in the course, once all the concepts have been presented in the first eight weeks. So, even though teams begin working on minor tasks

after each main topic is introduced, I found out that it is only when all the conceptual frameworks have been presented in class that students can grasp their full analytical potential, since these conceptual frameworks complement one another. That is the most appropriate time to train their application skills to the major task of deconstructing the persuasive tactics used in a TV commercial. Therefore, the team based strategy is intensively used as the last stage of the learning process, which spans the last four weeks of the curricular time devoted to my subject (Pragmatics). I devised this design for the sake of my specific teaching target, which is successfully achieved, as the reflective appraisals of my students attest. Quantitave speaking, I have never received a reflective appraisal which did not praise the qualitative change they have experienced in their learning of this subject after the completion of their group assignment. In their words: "At first, we all thought that the Pragmatic concepts we had studied in class were too abstract and general to apply them correctly in the analysis of an advertisement, but then, little by little, we realized that our advertisement could be perfectly related and analysed according to these Pragmatic concepts."

4.6. Number of students in each group

Regarding the number of students in each group, in cooperative learning, four or fewer students is the recommended size, whereas team learning requires a larger group, around eight. My design approaches the recommendations for team learning, but in addition to the average number of eight students, I found out that a slightly higher number is also feasible, and in both cases (eight students or even ten or eleven), teams have proven to yield incredibly good results, as my students have attested to in their reflective appraisals. I have witnessed how large groups learn to function as efficient teams. As they say in their appraisals: "To achieve the final task, we saw the importance of groups being large (around ten or even eleven), since had they been smaller, we would have missed the pleasure of listening to so many interesting opinions and contributions."

Thanks to organizing my students into such large teams, I could include a tecnique in my design that I have borrowed from the world of publicity: brainstorming. I suggest them using this strategy in their first meetings, after they have agreed on which TV advert to choose. Once they engage in the stage of having to apply the conceptual frameworks explained in class and in the set readings, brainstorming is surprisingly effective (and

fun) to get them into the analytical process and explore paths of interpretation to go deeper into or to discard, while learning in an active and critical, high-order thinking style. This is the way we humans have evolved to, cognition is intertwined with the thrill of discovery to solve challenges, and this is experienced and greatly appreciated by my students: "Working in teams and using brainstorming as a technique to put forward ideas, our doubts could be solved because everyone of us provided different points of view. We think that the concepts and theories presented in class are now clearer, once we have used them in a practical way, applying them to understand the TV comercial." In the words of another team: "We thought that working with a group of ten persons was going to be crazy, but, surprisingly, it was better than we expected. We think that the brainstorming method was a very good idea, because it allowed each person to say something about each aspect, and this is very interesting because it is a way of listening and contrasting different opinions."

4.7. Grading group work

A very important feature refers to whether to grade group work or not. In cooperative learning, it is just optional, whereas in team learning, it is considered critically important. In my design, what I found over the years of implementing it is the convenience of grading it, with a special type of marking. Since the main target in my design is not just the end product but mainly the process I want them to undergo to achieve significant learning, I have optimized my evaluation system by granting them forty percent of the final grade in the subject. All members of the group receive the same percentage, forty marks of the final grade (in a total of one hundred) in exchange for committing to the task and engaging in the enduring process that leads to the desired outcome, which is a thorough deconstruction of the persuasive tactics used by TV publicists from the communicative perspective that Pragmatics explores. At this point, a contextualization is needed. At the beginning of the course, I offer my students the choice of not engaging in this group dynamics if they are not going to attend classes, and in that case, they will do this pragmatic analysis as an exam, at the end of the course, together with the test that all of them have to pass. But if they do choose this team-based instruction, the condition is a complete commitment to engaging in the process, to the point that those who do not, can be expelled from the group by its mates. In this way I make sure that all of them commit to it and work in-

tensively to accomplish the set target, which is when the final learning and an in-depth undertanding of the subject is achieved.

Therefore, granting them this generous percentage of the final grade, forty percent, in exchange for their engagement in the process, according to my research into the best implementation of this design, becomes an essential condition. It is a very important strategy to allure them in the initial stage, when they feel lost in this new enterprise; in the middle stage, when they have to work hard to apply all the concepts, and see which ones are useful or relevant in their analysis; and in the last stage, when they finally reach a rich and in-depth understanding of the persuasive tactics found in TV adverts.

I decided to give the same mark to all the members of the team, since those who lag behind can be expelled from the group. Not creating individual differences has also proven to be a very important part of the evaluation strategy. It is a psychological strategy by means of which their focus is not on who is doing more or less, but on their shared challenge. As a result, they gather their energy as a single soul, become a cohesive team and are equally stimulated to engage in the process of learning, i.e., of experiencing learning not as a product but to focus on the process, which is experienced by them as a transformative experience. They become increasingly aware, in the weeks that this assignment lasts, that their teams have evolved into efficient working groups, and that their cooperative and interactive skills of being able to work in teams are enhanced. This is highly appreciated in their reflective appraisals. "We are very happy with the group work outcome. In spite of the difficulties we found, we've learnt that the combination of hard work and cooperation can yield very good results. We should also state that in this way the concepts of a subject as complex as Pragmatics, finally made sense."

4.8. Class time. TBL: The primary mode of instruction or a module in an existing course

TBL is an instructional strategy that can be the only mode of instruction in a course, or only one module in an existing course. So, even in courses mainly based on lectures, it may be the case that instructors will try out a TBL module or two. The condition is that it has to be completely integrated into the course design. This should not be underestimated, since TBL works best when it is tighly integrated into the course design. I have come to the same conclusion in the implementation of my

design, where this strategy functions as a module. This module encompasses the final stage in the learning process and spans around the third part of the curricular time devoted to my subject.

4.9. Identify content elements that need to be mastered before

Another important tip according to the above authors is to identify content elements that need to be mastered before students are ready to solve the problems. In a standard team-based learning approach, students are required to read set readings before coming to class. Content is introduced in that way, so that class time is devoted to the skill of applying content to solve problems, issues, etc. In my specific design, I found that using class time to explicate intricate concepts of the subject is of paramount importance, since simply by reading on their own this type of literature is not enough. In addition, in my design my students have to master all the subject concepts presented in class the previous weeks. Even though I organise some minor team-based assignments along the way, following the sequence in which conceptual frameworks are presented and explained in class, I consider these tasks just preparatory for the final major team assignment, since it is only then when they can grasp the whole picture of the subject conceptual frameworks and gauge how they complement each other for an in-depth understanding of processes of communication and processes of persuasion in TV advertisement. Only then a thorough comprehension is achieved. This fact is explicitly stated by them and recorded in their reflective appraisals, as shown above.

4.10. Feedback

Feedback on their performance is another important feature in this instructional method. This is critical in team learning (and nice but not critical in cooperative learning). In my design, feedback is essential. They highly appreciate the feedback I give them during the process they undergo. I have developed an awareness of how much they need it in the different stages they go through. When their analysis is almost finished, but they still have doubts, I use my tutorial time to meet one team at a time. I spend around one hour and a half or even two hours or longer with them, all the time they need until everything is completely clear for them: concepts that are not well understood or well applied. This part of the process that they share with me in these out of class meetings, when they receive my feedback to their particular analysis before presenting it in

front of all their classmates, is highly valued by them. In their words: "It has been a very positive experience to exchange ideas and points of view. In addition, the teacher's feedback has helped us to correct some concepts we were not clear about."

4.11. A special feature of my design: asking students their reflective appraisals as teams

Another special feature I have introduced in my design is that in addition to my feedback as a teacher, I require of them to give me their 'feeback', a reflective appraisal each team has to hand in, once they have completed and presented their analysis to all their classmates, as an exercise to reflect and ponder on the benefits of this type of team learning. This is crucial in my design, since requiring of them to take time to assess this style of active learning, once they have gone through the whole experience, is very revealing of its great pedagogical potential, from two main dimensions: the energizing group dynamics that is generated in this way, which always surprises them, and the active way by means of which subject concepts are applied and completely understood. As a bypro-duct, they get a thorough view of the communicative strategies used in publicity. Reflections such as these attest to the efficacy of the design I have implemented: "Doing this team work has been a challenge and a qualitative change in the way we now understand the subject. It has definitely granted us the knowledge we needed to analyse the TV ad thanks to the interaction and cooperation among team members and the brainstorm technique we were advised to follow in the first stages."

4.12. Teaching situations where team learning is most useful

The team-based approach is most useful in certain teaching situations. In large classes, it is an effective strategy to prevent student passivity and the overall poor evaluation that is achieved by students (as indicated in Michaelsen, L. K., Knight, A. B., & Fink, L. D., 2002: 21). Also in classes with student diversity, since they gather forces to attain their goal. In courses with extended meeting times, such as three hour lectures or longer (half days or whole days in weekend courses). Class sessions are used to engage students in learning to apply the subject content. In my design, my class sessions last two hours on average, a span of time I found very useful for this team-based strategy (that I use as the last stage in the learning process, as indicated before). Finally, another teaching

situation where team learning is the best option is in courses that prefer to train thinking skills instead of content memorization. In the application phase of team learning, students have to exchange ideas and use them in many different ways. As experts on team-based learning claim, "teams outperform even the highest individual scores over time" (Michaelsen, L. K., Knight, A. B., & Fink, L. D., 2002: 20). This is confirmed in my students' reflective appraisals. They unanimously assert that this interactive style of discussing and talking around concepts with the aim of applying them in their assigned analysis leads to an in-depth understanding of the subject content. In their words: "By doing this group work, we have been able to contrast opinions, grasp aspects that, had we done it individually, would have escaped out attention; therefore, this strategy has been a way to enrich us."

Therefore, in this process they acquire critical thinking skills (since content is applied) along with creative thinking skills. These skills are more valuable than rote learning in this particular subject, since Pragmatics tries to explain and explore the on-going process of communication in all its cognitive, social and cultural dimensions. I have chosen the genre of TV publicity because this type of persuasive discourse is deep rooted in our daily lives and over the years of its implementation this task has proved to pose a very appealing challenge for students to engage in team-based instruction.

5. CONCLUSIONS

Team-based learning is an effective instructional strategy which I claim is not only useful in health professions education and related science disciplines, for its values and benefits can be obtained in academic subjects in which content has the potentiality to be applied, as has been shown in the design I have devised for this particular subject, Pragmatics (Degree of English Studies at the university of Salamanca, Spain). Outstanding values are that TBL is suitable for large classes, it is very engaging for students, it helps develop in them valuable competencies and skills: interactional and teamwork skills, high order thinking skills (critical thinking, creative thinking), and knowledge application skills. Many professional organizations demand people with these skills, a fact that should be taken into account in the higher education curriculum.

A basic tenet in TBL is the shift from a traditional teaching style (with a focus on how best to present course concepts and test them in a traditional exam) to the more ambitious target of training students to learn to apply or use those concepts. Students are no longer passive recipients of content knowledge and teachers are no longer just lecturers but instructors, designers of team assignments that promote practical understanding of the subject and enhance the transformation of a group of students into an efficient team. I have presented here my selection of premises that efficient teams need to have, adding the adaptations that my particular design requires, according to the research I have conducted to optimize it over the last ten years of implementing it with my students. Overall it can be stated that groups which have freedom to interact combined with a commitment to the final goal, who receive high-quality feedback, and whose investment in time and effort is awarded with excellent group work and a high grade have the potential to become high performance teams and thus to attain all the cognitive and interactional benefits pointed out in this article.

To end, my design attests to the importance of choosing a complex and challenging task or project for students, appealing because of its significance and authenticity. This is the key insight in Project-based learning. I have also attempted to highlight this feature and assert its pedagogical value for Team-based learning. This article has shown how both TBL and PBL can function as catalysts in the students' active process of learning, as witnesses my hybrid design and the pedagogical success I have achieved with my students using it.

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