DEVELOPMENT OF PSYCHOSOCIAL CASE STUDIES BY STUDENTS TO IMPROVE THEIR ABILITY TO UNDERSTAND AND ANALYZE HUMAN BEHAVIOR

Omar Saldaña, Álvaro Rodríguez-Carballeira, Esteve Espelt, Yirsa Jiménez, Clara Porrúa, Jordi Escartín, Ángela Castrechini, Núria Codina, José-Vicente Pestana, Tomeu Vidal

University of Barcelona (SPAIN)

Abstract

This study presents an active learning methodology based on the development and analysis of case studies by college students and explores its effects on academic performance and on students' capacity of understanding and analysing human behaviour. A group of 54 students who were taking the course Social Psychology at the University of Barcelona developed written stories where psychosocial concepts were represented. Results showed that participants, after developing their own case studies, improved their ability to identify and explain theoretical concepts included in case studies created by the teaching team. The proposed teaching methodology appears to enhance their ability to understand and analyse human behaviour, helping students to integrate theory with reality.

Keywords: Behaviour analysis skills, case method, case-based teaching, social psychology.

1   INTRODUCTION

The process of convergence towards the European Higher Education Area (EHEA) has led to the incorporation of active learning methodologies that complement more traditional methods to overcome their limitations. These teaching methodologies are aimed to promote student's engagement [1], strengths [2], and skills [3], being the latter understood as complex behaviors that mobilize resources in a relevant and contextualized way. Social psychology educators are looking for teaching strategies to foster the capacity of understanding and analyzing human behavior in their students, since it is a basic skill that all psychologist need to perform his/her professional role.

The methodology based on case studies, understood as a reflexive process around stories that represent real, detailed, complex and contextualized situations [4], has been shown to facilitate and enhance university students learning process [5, 6]. Several studies found that case-based teaching encourages the development of analytic and critical thinking skills [7], improves ability to identify relevant concepts and theories related to case situations [8], and helps understanding complex issues and interrelated processes [5], especially in the field of social sciences where human interactions play an important role [6]. It also overcomes the gap between theory and practice, providing fertile ground for the application of conceptual content to real world situations [9, 10, 11]. In addition, when cases are analyzed by students in groups, this methodology fosters skills related to teamwork, such as communication and collaborative problem solving skills, promoting exchange and collective construction of knowledge throughout the learning process [12, 13]. For all these benefits, a case based methodology seems appropriate for the teaching based on skill development, and especially for social psychology educators to promote the development of the capacity of understanding and analyzing human behavior in their students.

Case studies are written to be engaging to the reader and they can take different forms, ranging from simple situations to complex scenarios, and can be presented as multiple or single cases, as well as simulations based on real problems or based on people's own experiences [12]. In most cases, there is usually a problem to be solved, so students need to make choices they will eventually have to make in the real world [14]. Other cases do not present a problem, but a complex situation where theoretical concepts are represented and students have to detect and extract all the theoretical content [15]. This kind of case analysis may be better for first-year students, since cases with a problem to be solved may become frustrating for less prepared students [16].

Professors, seniors and juniors [17], usually write cases and then present them to students for analysis and discussion. This has been so far a positive practice. However, there are obstacles for such implementation due to the amount of resources needed to develop a case [7]. Fortunately, an

alternative that consists to ask students to write their own cases and then present them for teaching purposes has been recently growing [10]. Indeed, allowing students participate in making their own materials has been a subject less discussed in the literature and in the professional practice [18]. First of all, this activity involves more learning opportunities, since it depends not only on the knowledge of the theories and practices regarding the field of study, but also on the ability to contextualize the concepts learned in a creative and innovative way [15]. In this regard, it could facilitate the internalization of theoretical concepts, as students connect this content with close personally meaningful realities. This generative learning can be understood as an active process for students (learning relevant content, organizing it mentally, and then integrating it into their prior knowledge, etc.). It implies a constructivist learning that motivates the students´ self-regulated learning [19, 20]. That is, from a pedagogical approach, to write cases is framed as a "student-centered learning", where students are active subjects of their own development [21]. Secondly, the fact that students create cases make them feel more confident regarding how to deal with the future cases presented from their teachers, decreasing the possible anticipatory anxiety towards this event [22, 23].

This study is aimed to determine whether the development of case studies by the students themselves, in which they had to represent different psychosocial concepts, contributes to their ability to understand and analyze human behavior, and therefore, to achieve higher academic performance when confronting with case studies developed by their teachers.

Specifically, we have developed two hypotheses:

Hypothesis 1: Academic scores when solving the second case study will be higher than the academic scores achieved when solving the first case study.

Hypothesis 2: Academic scores of the second case study will be positively related to academic performance at the end of the course (but the academic scores of the first case study will not be positively related to academic performance).

2   METHOD

2.1   Participants

A group of 54 students participated in the study. They were taking the subject Social Psychology offered at the first course of the Degree of Psychology at the University of Barcelona, Spain. Of the participants, 70% were female and 30% male, which is the common percentage of gender distribution within the Psychology Degree, and their mean age was 22 years. In order to promote interdependence, collaboration and creativity in the development and analysis of case studies, participants were grouped into 13 teams composed mainly of four members. No criteria were established to group the students, leaving to them the decision.

2.2   Procedure

The development and analysis of case studies was presented as a learning activity to be carried out during the course by each team of students. In the first class session, a topic of the subject was randomly assigned to each group (i.e., conformity and compliance, aggression, interpersonal attraction, pro-social behavior), and the four main tasks in which the activity was structured were explained. These consisted in (a) the development of a glossary with the main psychosocial concepts of the assigned topic, (b) the development of a conceptual report, (c) the development of a case study, and (d) the analysis of another case developed by another team of students. Regarding motivation, 83% of the student groups attended the three optional tutoring sessions related to the development of the learning activity, and the other 17% attended two sessions. In the following, we explain the above mentioned four main tasks.

2.2.1   Glossary

The first task consisted in developing a glossary where each team of students had to list the psychosocial concepts related to their topic. Students had to do an in-depth reading of the course manual to extract the relevant information, developing a unified definition with their own words for each concept.

2.2.2 Conceptual report

The second task consisted in developing a conceptual report where the previous concepts and their possible relationships had to be explained. The main indications given to the students for carrying out this report were: (a) include all the key concepts of the psychosocial phenomenon, (b) explain concepts in an understandable way without misconceptions, (c) identify relationships between concepts and follow a suitable guiding thread, and (d) use a personal and rigorous language to explain the concepts.

2.2.3 Case development

The third task consisted in developing a case study in which a realistic, complex, detailed, contextualized social situation had to be described. Students were asked to represent in the case between 6 and 8 of the previous psychosocial concepts listed in the glossary, and their relationships (as stressed within the conceptual report). The main indications given to the students for creating the case were: (a) it should represent the selected psychosocial concepts accurately, without making conceptual errors and without specifically naming them; (b) the theme of the story need to have a clear social interest and it should be very close to the experiences of the students, and (c) the story should have a structure and a coherent sequence with beginning, middle and end. In addition to the case study, students were asked to submit a separate report that contain the correction (solution) guide for the analysis of the case, specifying the conceptual content reflected in the story (where to find it within the text, why, etc.).

2.2.4 Case analysis

The final task consisted in analyzing one case study that was created by another group of students. This task was carried out during a classroom session. The glossaries developed by all groups were available online during one week before the session, so students knew the topics and psychosocial concepts that could appear in the cases. During the session, students had not access to any supporting material. The case analysis, which was conducted in groups, consisted in the following tasks: (a) identify the text fragment where each concept is represented, (b) denominate correctly each of the detected concepts, and (3) provide a rationale for each concept that was detected.

On week after the session, the analyses done by students were revised thorough a peer review process. Each group of students evaluated the analysis of the case that they originally created. In order to do this, they had at their disposal the correction guide that they have already created and an evaluation rubric developed by the teachers' team. The rubric contained three assessing criteria, according to the tasks that students carried out when analyzing the cases: (a) identification of text fragment, (b) denomination of the concept, and (c) a justification. Students had to evaluate these criteria for each of the concepts that they represented in the case.

Students developed realistic, complex, detailed stories connected to their experiences. Among others, the stories dealt with issues as diverse as the start of an intimate relationship, the workplace harassment suffered by an employee, family conflicts related with the process of independence of Catalonia, or the efforts of a seller for some students to purchase a product. The 69% of the student groups represented 7 theoretical concepts in their stories, and the other 31% represented 8 concepts (e.g., need for affiliation, stigma, priming, hostile attribution bias, foot-in-the-door technique, principle of reciprocity, reactance, or cognitive dissonance).

2.2.5 Evaluating the methodology

In order to assess the impact of the methodology on students' capacity of understanding and analyzing human behavior, three evaluative activities were conducted. The first two activities consisted of analyzing cases developed by the teachers' team. During the second month of the course, before starting the learning activity presented above, students were asked to analyze a story where seven psychosocial concepts related to the topic of "causal attributions" were represented. During the last month of the course, after completing the learning activity, students analyzed another case developed by teachers where eight concepts related to the topic of "prejudices" were represented. In both cases, teachers explained the topic in a class session one week before and they evaluated the performed analyses using the same evaluation rubric that was provided to students. The third activity was a final exam, which was composed of 40 multiple-choice questions. Each question presented a concise social situation and students had to choose between the possible answers the one that refers to the psychosocial concept represented in the situation. Each evaluation activity was assessed using a score ranging from 0 to 10.

3 RESULTS

The scores obtained by students in the two cases developed by teachers were compared to explore if the described methodology help them to analyze realistic, complex stories were psychosocial concepts are represented. To this end, a Student t test for paired samples was conducted. Results showed that the scores in the second case analysis were statistically higher than the scores in the first case analysis (t = 5.58; p <.001). Therefore, the first hypothesis was confirmed (please see Table 1).

Table 1. Mean, standard deviation and correlations between the 3 evaluation activities.

	M	*SD*	1	2
1. First case study	5.88	2.02		
2. Second case study	7.50	1.84	,39*	
3. Exam	6,52	1,71	,25	,41*

Note: *p* < .001. Evaluation activities scores ranged from 1-10 points, where last represent the maxima punctuation.

As it can be seen in Table 1, while the scores of the first case study were not correlated with the final exam scores, a significant correlation was found between the second case study and the exam scores. Therefore, the second hypothesis was confirmed, too.

4 DISCUSSION

The main goal of the present study was to introduce case studies within the learning process of college students in an innovative way. In line with the formative assessment [24], students developed case studies themselves and also analyzed cases done by peers [25, 26]. The proposed teaching methodology implied an active role of the student in both the development and the analysis of case studies, which enhanced their ability to understand and analyze human behavior. Moreover, our results revealed that such formative assessment lead to better academic performance when using evaluative assessments [27], which has been called the "testing effect" [28]. Thus, this study added evidence to the fact that students usually achieve better performance in a given evaluative methodology if previously they have had the chance to practice with it.

Regarding the practical implications, this methodology seems easily transferrable to other subjects to enhance the development of other complex skills, especially important for third and fourth year students. From this point forward, the possibilities to enhance, modify, or reduce the course materials and the teaching tools are enormous. Thus, we recommend the present methodology to develop diagnostic skills in first year students, avoiding the use of more complex cases that requires confronting with problems and solving them, because they could become frustrating for less prepared students [16], which is important considering the motivational processes that facilitate learning on active subjects [29]. Thus, from a practical point of view, this study has implications for education since this type of activities can contribute positively to the motivation and enjoyment of students during the learning process [1, 15].

In the present study, teachers perceived that the number of students´ interventions during the theoretical sessions increased compared to previous years. In this sense, they provided more examples of personal and social situations where the theoretical concepts explained by the teacher were represented. Following several authors that have claimed that a good case study should have relevance to the reader (i.e., represent a situation that is likely to encounter in real life, foster empathy with the characters) [30, 14], the development of cases by students, where events were connected to their experiences, seemed to involve extra benefits for their learning process, in comparison to the most typical approach where students analyze cases created by their teachers.

Finally, future studies are necessary in order to go beyond the present results and to shed more light into the different topics and conceptual factors more frequently chosen by students when developing their own case studies. Teachers play a key role in providing complex educational challenges that are tailored to the abilities of their students [31]. Regarding future research in social psychology, there are some aspects that in our view should be studied:

- Are the benefits of developing a case study equal to the development of two or more case studies during a semester? In other words, is there a possible accumulative effect?

- Is gender a significant issue in the present findings? In other words, could a specific gender benefit more from the development of case studies?

- Must case studies necessarily be in a written format? Or other new approaches based on information and communication technologies, such as short films, could serve for the same purpose?

REFERENCES

[1] Escartín, J., Ceja, L., Celdrán, M., & Martín-Peña, J. (2014). Flow experiences in everyday classes of Spanish college students: The fit between challenge and skill. *Journal of Technology and Science Education, 4*, pp. 62-70.

[2] Saldaña, O., Escartín, J., Torres, L., Varela-Rey, A., Martín-Peña, J., Rodríguez-Carballeira, A., Jiménez, Y., & Vidal, T. (2014). University students´ strengths associated with an optimal academic and professional performance. *Procedia-Social and Behavioral Sciences, 141*, pp. 30-34.

[3] Martínez, M., & Viader, J. (2008). Reflexiones sobre aprendizaje y docencia en el actual contexto universitario. La promoción de equipos docentes. *Revista de Educación*, pp. 213-234.

[4] Davis, B. G. (1993). *Tools for teaching*. San Francisco: Jossey-Bass.

[5] Kunselman, J. C., & Johnson, K. A. (2004). Using the case method to facilitate learning. *College Teaching, 52*, pp. 87–92.

[6] Leonard, E. C., & Cook, R. A. (2010). Teaching with cases. *Journal of Teaching in Travel & Tourism, 10*, pp. 95-101.

[7] Popil, I. (2011). Promotion of critical thinking by using case studies as teaching method. *Nurse Education Today, 31*, pp. 204-207.

[8] Lundeberg, M. A., & Scheurman, G. (1997). Looking twice means seeing more: developing pedagogical knowledge through case analysis. *Teaching and Teacher Education, 13*, pp. 783-797.

[9] Barkley, E. F., Cross, K. P., & Major, C. H. (2005). *Collaborative learning techniques: A handbook for college faculty*. San-Francisco: Jossey-Bass.

[10] Jones, K. A., & Russell, S. (2008). Using case method teaching and student-written cases to improve students´ ability to incorporate theory into practice. *Journal of Teaching in the Addictions, 6*, pp. 35-47.

[11] Mayo, J. A. (2004). Using case-based instruction to bridge the gap between theory and practice in psychology of adjustment. *Journal of Constructivist Psychology, 17*, pp. 137-146.

[12] De Miguel, M. (2005). Modalidades de enseñanza centradas en el desarrollo de competencias. Oviedo: Ediciones Universidad de Oviedo.

[13] Piqué, B., & Forés, A. (2012). *Propuestas metodológicas para la educación superior.* Barcelona: Universitat de Barcelona.

[14] Lynn, L. (1999). *Teaching and learning with cases: A guidebook*. New York: Catham House Publishers.

[15] Escartín, J., Saldaña, O., Martín-Peña, J., Varela-Rey, A., Jiménez, Y., Vidal, T., & Rodríguez-Carballeira, A. (2015). The impact of writing case studies: Benefits for students' success and well-being. *Procedia: Social and Behavioral Sciences, 198*, pp. 47-51.

[16] Billings, D. M., & Halstead, J. A. (2005). *Teaching in nursing: A guide for faculty*. Philadelphia, PA: Saunders.

[17] Escartín, J., Ferrer, V., Pallàs, J., & Ruiz, C. (2008). *El docente novel, aprendiendo a enseñar*. Barcelona: Octaedro / ICE-UB.

[18] Papinczak, T., Peterson, R., Babri, A., Ward, K., Kippers, V., & Wilkinson, D. (2011). Using student generated questions for student centered assessment. *Assessment & Evaluation in Higher Education*, pp. 1-14.

[19] Butler, D., & Winne, P. (1995). Feedback and self-regulated learning: a theoretical synthesis. *Review of Educational Research, 65*(3), pp. 245-281.

[20] Torrano, F., & González, M. C. (2008). El aprendizaje autorregulado: Presente y futuro de la investigación. *Revista Electrónica de Investigación Psicoeducativa, 2*, pp. 1-34.

[21] Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education, 31*(2), pp. 199-218.

[22] Baerheim, A., & Meland, E. (2003). Medical students proposing questions for their own written final examination: Evaluation of an educational project. *Medical Education, 37*, pp. 734–738.

[23] Berry, J. W., & Chew, S. L. (2008). Improving learning through interventions of student-generated questions and concept maps. *Teaching of Psychology, 35*(4), pp. 305-312.

[24] Heritage, M. (2007). Formative assessment: What do teachers need to know and do? *Phi Delta Kappan, 89*(2), pp. 140-146.

[25] Falchikov, N., & Goldfinch, J. (2000). Student peer assessment in higher education: A meta-analysis comparing peer and teacher marks. *Review of Educational Research, 70*(3), pp. 287-322.

[26] Kollar, I. & Fischer, F. (2010). Peer assessment as collaborative learning: A cognitive perspective. *Learning and Instruction, 20*, pp. 344-348.

[27] McDaniel, M. A., Roediger, H. L., & McDermott, K. B. (2007). Generalizing test-enhanced learning from the laboratory to the classroom. *Psychonomic Bulletin & Review, 14*, pp. 200-206.

[28] Glover, J. A. (1989). The "testing" phenomenon: Not gone but nearly forgotten. *Journal of Educational Psychology, 81*, pp. 392-399.

[29] Nakamura, J., & Csikszentmihalyi, M. (2002). The concept of flow. In C. R. Snyder, & J. S. Lopez (Eds.), *Handbook of positve psychology* (pp. 89-105). New York, NY: Oxford University Press.

[30] Boehrer, J., & Linsky, M. (1990). Teaching with cases: Learning to question. In M. D. Svinicki (ed.), *The changing face of college teaching. New directions for teaching and learning*, no. 42. San Francisco: Jossey-Bass.

[31] Bassi, M., Steca, P., Della-Fave, A., & Caprara, G. V. (2007). Academic self-efficacy beliefs and quality of experience in learning. *Journal of Youth and Adolescence, 36*, pp. 301-312.