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The use of active learning methods in MBA marketing

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Abstract

This article reports the experience of a single embedded case study that discusses the application of active learning methods. It aims to broaden the understanding of the benefits and the operationalization of planning and applying a combination of active teaching methods in a MBA program and, consequently, offering rich information for professors and researchers. The case studied took place between the second half of 2015 and the end of 2017 in the Marketing course of an MBA program. The information was collected in fourteen classes of a subject with eight meetings. The classes involved PBL (problem-based learning), case discussion session, group project (POPBL) and individual assessment. The article presents the operationalization of the methods throughout the course and the observed results highlight their contribution to the achievement of the learning objectives, highlighting evidence of student achievement, the quality of the professorstudent relationship, the evaluation of the course, and the professor.

Keywords: Active learning. Teaching in Marketing. Teaching methodologies.

O uso de metodologias ativas de aprendizagem em MBA de marketing

Resumo

Este artigo apresenta o relato de experiência de um estudo de caso único integrado que discute a aplicação de métodos ativos de aprendizagem. Seu objetivo é aprimorar o conhecimento sobre os benefícios e a operacionalização do planejamento e a aplicação de uma combinação de métodos ativos de ensino e aprendizagem em cursos de pós-graduação lato sensu e, consequentemente, proporcionar informações úteis para docentes e pesquisadores. A experiência ocorreu entre o início do segundo semestre de 2015 e o final do segundo semestre de 2017, no âmbito de uma disciplina de Marketing em curso de pós-graduação lato sensu - Master of Business Administration (MBA). A análise foi realizada a partir das informações levantadas em 14 turmas de 1 disciplina com 8 encontros, envolvendo sessões de problem-based learning (PBL), sessão de discussão de caso, projeto em grupo (project-oriented problem-based learning - POPBL) e aplicação de prova individual. Este artigo apresenta a operacionalização dos métodos ao longo da disciplina e os resultados observados destacam sua contribuição para atingir os objetivos de aprendizagem, destacando indícios de aproveitamento dos estudantes, de qualidade da relação professor-estudante e de avaliação da disciplina e do docente.

Palavras-chave: Aprendizagem ativa. Ensino em Marketing. Metodologias de ensino.

El uso de métodos activos de aprendizaje en una disciplina de MBA de marketing

Resumen

Este artículo presenta el relato de una experiencia, fruto de un estudio de caso único integrado que discute la aplicación de métodos activos de aprendizaje. Su objetivo es ampliar el conocimiento sobre los beneficios y la operacionalización de la planificación y aplicación de una combinación de métodos activos de enseñanza y aprendizaje en cursos de postgrado lato sensu y, consecuentemente, proveer información útil a docentes e investigadores. La experiencia se llevó a cabo entre 2015 y 2017 en una asignatura de Marketing de un curso de MBA. El análisis se efectuó a partir del relevamiento de información realizado en catorce clases diferentes de una misma asignatura, con ocho encuentros que incluyeron sesiones PBL (problem based learning), sesión de discusión de caso, proyecto en grupo (POPBL- project oriented problem based learning) y aplicación de prueba individual. El artículo presenta la operacionalización de los métodos durante la asignatura y los resultados observados destacan su contribución al logro de los objetivos de aprendizaje y resaltan indicios de aprovechamiento de los estudiantes, de la calidad de la relación profesor-estudiante, y de la evaluación de la asignatura y del docente.

Palabras clave: Aprendizaje activo. Enseñanza de marketing. Metodologías de enseñanza.

Article submitted on May 10, 2017 and accepted for publication on August 08, 2018. [Translated version] Note: All quotes in English translated by this article's translator. DOI: http://dx.doi.org/10.1590/1679-395168522



129-143

INTRODUCTION

Advances in information technology have radically changed the way information is disseminated, democratizing the access to it. Having information is no longer the great differential, but knowing how to choose, access and apply the information. Economies in the Knowledge Age turn to innovation, creativity and decision-making, among the key competencies needed for management. Changes in availability and access to information have led to major structural changes in corporations; however, empirical observations suggest that such changes are still incipient in Business Administration teaching.

The current educational system is still very similar to that developed in the Industrial Economy age, with a strong focus on knowledge transfer (BITTENCOURT, 2016; ESCRIVÃO FILHO and RIBEIRO, 2008; GOMES and BRAGA, 2004; SHARP, 2009). Traditional higher education still values the teacher's previous knowledge and the curriculum at the expense of the students' knowledge construction. Thus, many universities do not fulfill their function of expanding students' knowledge, transforming themselves into "non-learning centers", in which the student assumes a passive attitude rather than an active one (KINCHIN, LYGO-BAKER and HAY, 2008). Kinchin, Lygo-Baker and Hay (2008) emphasize the importance of the student's prior knowledge as the starting point in the knowledge construction.

The academic background of the marketing professor in the postgraduate course prioritizes the formation of a researcher, valuing the technical knowledge to the detriment of the teacher academic background. Technical knowledge and research are important but insufficient for student learning. Respect, contextualization, empathy, humility, critical vision development, stimulus of reflection, as well as concern with the form, also play an important role in the incorporation of knowledge. Researchers in education reinforce the need to change the unilateral responsibility on the part of teachers in "teaching" and the passivity on the part of students in "attending classes" by the joint commitment of "producing classes", with greater participation of students and the change of the teacher's role (ANASTASIOU; ALVES, 2009; CORREA and LOURENÇO, 2015; CUNHA, 1993; DEWEY, 2009; FREIRE, 1996; MIRANDA, CASA NOVA and CORNACCHIONE, 2013; SEATON and THEILE, 2006; VELUDO-DE-OLIVEIRA, QUINTAÃO and URDAN, 2014; WOOD JUNIOR and CRUZ, 2014).

This article aims to broaden the understanding of the benefits and operationalization of the planning and application of a combination of active teaching and learning methods in *lato sensu* graduate courses and, consequently, to provide teachers and researchers with useful information for the profession. To do so, it discusses different methods, strategies and active dynamics of teaching-learning and reports a lived experience in the discipline Competitive Intelligence (CI), offered in a 480-hours *lato sensu* (MBA) postgraduate course between August 2015 and November of 2017.

THEORETICAL REFERENCE: A NEW WAY OF TEACHING AND LEARNING

To contextualize and understand the theme under study, the theoretical framework addresses the adult student and the importance of active learning, problem-based learning and case study leaning, and concludes by discussing the learning styles and the teacher's role.

The adult learner and active learning methods

The MBA student has already spent at least four years in higher education, usually has some years of professional experience, occupies a management position or is preparing to do so. For having faced dilemmas and professional difficulties, tends to value the teachers with "market experience", who are considered more qualified to discuss the real professional difficulties. However, the teacher practical experience alone does not guarantee that the student gets what he/she wants; method and didactics are also precious in producing meaningful knowledge for the adult student (FIEDLER, 2016; SCOTT and SCOTT, 2016; SEBASTIANELLI, SWIFT and TAMIMI, 2015; VARELA, BURKE and MICHEL, 2013).

The principles of Andragogy (KNOWLES, 1973; VOGT and ALVES, 2005) highlight in adult learning: (i) the importance of recognizing the need to learn; (ii) the appreciation of self-concept of being responsible for one's own life; (iii) the existence of previous experience, (iv) readiness for learning connected to the identification of their gains, (v) motivation, derived from internal and external pressures. For Knowles (1973), the teacher's role in adult education would become that of a facilitator, who produces the conditions that promote learning. Establishing an environment for learning, the diagnosing of the needs,

the programs and the content formulating to meet the learning needs, the planning and conducting the process, and the learning assessment are some of the facilitator's responsibilities in the adult learning process (CARVALHO, CARVALHO, BARRETO et al., 2010; KNOWLES, 1973; VOGT and ALVES, 2005). Thus, learning can be understood as the process in which knowledge is created through experiential transformation (KOLB and KOLB, 2010).

Learning-focused education has received attention since the early twenty-first century, with the application of different strategies, techniques and teaching dynamics (ANASTASIOU and ALVES, 2009; KOLB, KOLB, PASSARELLI et al., 2014). While the traditional method of education emphasizes the memorization by repetition, the process of "teachering" (ensinagem), a term coined by the authors to refer to the collaborative process of teaching and learning, enables more complex thought operations, such as a comparison, synthesis, observation, classification, interpretation, criticism, search for assumptions, imagination, obtaining and organizing data, hypothesis gathering, application of facts and principles to new situations, decision and planning of project and research. The development of more complex thought operations starts to demand more comprehensive strategies than the expositive and passive classes for students, requiring the application of methods, strategies and active dynamics for teaching and learning. The term active learning was proposed by Bonwell and Eison (1991) as an alternative to the traditional transmission of knowledge, highlighting the student's role as an active participant in the learning process (ANASTASIOU and ALVES, 2009; BITTENCOURT, 2016; BONWELL and EISON, 1991; ILLERIS, 2013).

The focus on learning thus assumes a greater concern with the desired objective to be achieved: the transformation of the student. Thus, the learning goal setting should be the starting point for defining the teaching strategy to be adopted (FERRAZ and BELHOT, 2010). According to Anastasiou and Alves (2009, p. 76), "strategies aim at the achievement of objectives, therefore, it is necessary to be clear about where one intends to reach at that moment with the teaching process". Considering that teachers together with students become responsible for "producing the class" requires a review of the lesson strategy.

The problem based learning (PBL), project oriented problem based learning (POPBL) and the case method were the main methods used in the reported teaching experience and will be presented in greater detail below.

Problem-based learning (PBL) and Project Oriented Problem Based Learning (POPBL)

The first uses of PBL methodology occurred in the 1960s at the McMaster Medical School in Canada. In the 1970s, schools in Europe and America began to apply this methodology, such as in Maastricht in the Netherlands, Roskilde and Aalborg in Denmark, and Harvard in USA (FURQUIM, PLUSKWIK and WIGGINS, 2015; KOLMOS, 2015).

The PBL is a circular, student-centered approach, which uses problems to start, focus and motivate the learning of socially and professionally relevant knowledge, proposing the integration between theory and practice, applying the knowledge learned in developing a workable solution to a defined problem (ESCRIVÃO FILHO and RIBEIRO, 2008; FREZATTI and MARTINS, 2015). According to Berthelsen, Illeris e Poulsen (1977 as quoted by GRAAF and KOLMOS, 2009), the principles that guide the PBL are: orientation to the problem, organization by project, interdisciplinarity, participant control, and exemplary function. It is important that the problem which must be treated is "linked to the real problem, be complex, poorly structured, interdisciplinary and allow the investigation" (SILVA and ARAÚJO, 2016).

Different application formats and methods are called PBL, since the simplest forms - such as cases based on lectures, lectures based on cases, case studies, modified case studies - up to more complete forms such as learning based on the problems themselves and learning based on reiterative problems (ESCRIVÃO FILHO and RIBEIRO, 2008; RIBEIRO, 2005). The model of the University of Maastrich resembles the model called by Ribeiro of learning based on the problem itself, in which students make contact with the problem without prior reading about it and devote themselves, in a meeting or in a few weeks, to the understanding of the problem and to the elaboration of the solution (FURQUIM, PLUSKWIK and WIGGINS, 2015; RIBEIRO, 2005). Learning based on reiterative problems resembles the project oriented problem-based learning (POPBL) presented by the University of Aalborg, Denmark (FURQUIM, PLUSKWIK and WIGGINS, 2015; GRAAF and KOLMOS, 2009). According to Graaf and Kolmos (2009), a problem could evolve into a project to be worked on in several classes and, in some schools, there is differentiation of this practice in PBL (problem based learning) and POPBL (project oriented problem-based learning).

Different PBL models could also be classified according to five dimensions: (i) the number of exercises planned and performed in the discipline, (ii) the integration of concepts among exercises and among disciplines, (iii) work in team or individual, (iv) approach to problem solving and (v) autonomy for learning (RIBEIRO, 2005).

Besides the contact with the specific content of the discipline, the student's valorization as protagonist of his learning process would bring as benefits: (i) development of holistic vision; (ii) development of the critical thinking and the competence in problem-solving; (iii) improving peer communication and exposure of ideas (*brainstorming*); (iv) improvement of social skills through teamwork and (v) increased satisfaction with the learning process (FREZATTI and MARTINS, 2015; FURQUIM, PLUSKWIK and WIGGINS, 2015; GRAAF and KOLMOS, 2009; KOLMOS, 2015; SILVA and ARAÚJO, 2016).

The use of cases as a didactic tool

The modern version of the case method has existed for over a hundred years. The method, first developed by Christopher Langdell at Harvard Law School in the 1880s, at the beginning of the twentieth century was adapted to the Harvard Business School at the request of the school Principal Edwin Francis Gay, dissatisfied with the applied expository method used until then. Cases are real-life business problems that confronted managers at a given time and are offered later to students with open solution problems (ANDERSEN and SCHIANO, 2014; GREENHALGH, 2007). The case method is "the thoroughly and objective analysis of a real situation that needs to be investigated and is challenging for those involved" (ANASTASIOU and ALVES, 2009, p. 98), in which participants have room to demonstrate their expertise, experience, observations and analyzes (ANDERSEN and SCHIANO, 2014; COREY, 1980; HAMMOND, 2002).

The Harvard cases, also known as classic cases, are abundant in terms of volume of information, structured in a moderately and with a high level of complexity. The application of the cases could vary according to the size of the group, the characteristic of the subject (compulsory or elective), the period of the course (full or partial), the structure (weekly or modular)), level (undergraduate or graduate) and place of application (at school or in closed company courses) (ANDERSEN and SCHIANO, 2014; IKEDA, VELUDO-DE-OLIVEIRA and CAMPOMAR, 2005). The literature cites as benefits of the method application the increase of the vision on the part of the students, with the increase of their critical vision; increase of the students' motivation, with the increase of their participation in the discussions; development of managerial skills; development of interpersonal skills through group activities; and development of problem-solving skills (ANASTASIOU and ALVES, 2009; HAMMOND, 2002; IKEDA, VELUDO-DE-OLIVEIRA and CAMPOMAR, 2005). Success in conducting a case discussion would depend on the teacher's ability to stimulate discovery by probing, put concepts into practice, work the comparison and contrast, and engage students in the discussion (ANDERSEN and SCHIANO, 2014; COREY, 1980).

The strategic choice of the teaching method to be adopted should derive not from the teacher's preference, but from the learning objective of the subject, the class and the learning style to be stimulated.

Learning styles, the learning cycle and the teacher role

The four main learning styles presented by David Kolb were defined by two axes: the first, the learning axis based on concrete experience (CE) or on the abstract conceptualization (AC); the other, the learning axis based on reflective observation (RO) or on active experimentation (AE). In 2014, Alice Kolb and other researchers reviewed the previous model and proposed nine learning styles derived from the combination of the initial learning forms: initiating, experiencing, imagining, reflecting, analyzing, thinking, decising, acting and balancing (KOLB, KOLB, PASSARELLI et al., 2014). While lectures stimulate theoretical learning, problems (PBL) stimulate learning by reflection, projects (POPBL) and cases are ways to implement and stimulate experiential learning (CANHOTO and MURPHY, 2016; FURQUIM, PLUSKWIK and WIGGINS, 2015).

Considering the process centered on the student and on the learning, once the learning objective to be achieved has been defined and the learning style to be worked out has already been identified, the teacher should define his/her way of acting (modus operandi). The educator role profile (ERP), as illustrated in Figure 1, would be, for achieving the objective, to flexibilize his/her main style, varying it: coach, facilitator, specialist and evaluator (KOLB, KOLB, PASSARELLI et al., 2014).

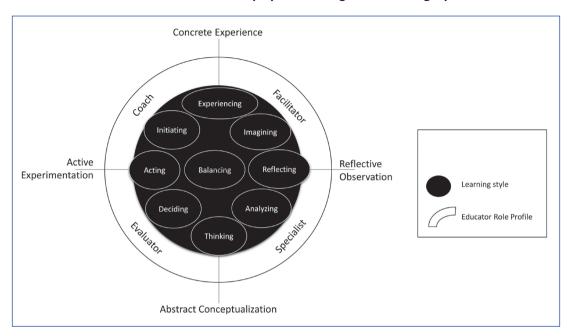


Figure 1

Role of the teacher to be played according to the learning style

Source: Adapted from Kolb, Kolb, Passarelli et al. (2014).

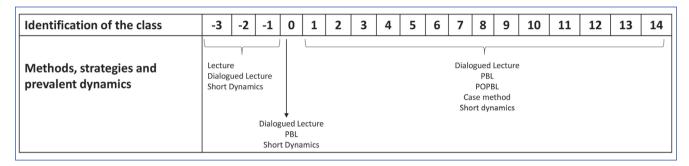
METHODOLOGICAL PROCEDURES

This paper is an exploratory study whose research was inspired on Yin's single case study model, considering each class as an integrated unit of analysis (YIN, 2009, 2015). The sources of evidence considered for each unit of analysis were the reports of the teacher evaluations carried out by the institution and the evaluations of the students of each class (test scores and group work). Also considered was the report of a focus group conducted by the institution's pedagogical department and the informal and spontaneous statements made by the students throughout the experience.

For the results' analysis and presentation, it was considered three classes before the application of the structured method as presented in the article, a class of the beginning of the application, but with many learning and adjustments, and ten classes with application of the presented method. To present the results, the 18 classes were numbered from minus three (-3) to ten (10). Pre-experience classes are identified by the numbers "-3, -2, and -1"; the class of the beginning of the active methodologies structuring was numbered with "0"; and the classes of the structured method application described in the case, were numbered with "1 to 14" (Figure 2). Due to the reformulation of the teacher evaluation instrument, the teacher evaluation counted on only one class measured before the application of the active methodologies in the adopted design (-1).

Figure 2

Identification of the classes in the experiment results assessment



Source: Elaborated by the authors.

Given the heterogeneity of the classes (size of the groups, willingness to participate actively, moment in which the course entered the course) and the increase of the rigor of the teacher (in the evaluation of the group tasks in group and in the individual assessment) to the In the present study, the quantitative data were analyzed as a source of qualitative evidence, reinforcing the exploratory nature of the study (BACON, 2016; YIN, 2009, 2015; ZHAO, LEI, YAN, et al., 2005).

THE OPERATIONALIZATION IN THE DISCIPLINE COMPETITIVE INTELLIGENCE

The discipline Competitive Intelligence (CI) consisted of eight weekly face-to-face meetings, one of which dedicated to individual assessment. The discipline had a transversal character, since, much more than familiarizing the students with the concepts, it was intended to expose them to the discussion and to the integrated application of the concepts, mobilizing the knowledge acquired in the previous disciplines. Considering the congnitives learning objectives, structured based on Bloom taxonomy (FERRAZ and BELHOT, 2010), students were expected to be able to understand and relate the main concepts, to criticize the results coherence of the analyzes carried out and to design a strategic map that translated the strategic definitions into tactical activities, by stimulating their development through the usage of different learning styles.

The discipline was designed in a way that met the initial goal through active learning, using different teaching and learning methods (Figure 3). In the first module, composed of two classes, the main concepts of competitive intelligence, use of information for decision making and coherence in the analysis, strategy, tools for strategy formulation, analysis integration and decision coherence were presented and discussed, through dialogued expositive classes and PBL. The second module developed the concepts of marketing information system and decision making at the functional level, using PBL and dialogued expositive classes. In the third module, the concepts of *Business Intelligence* (BI) and *Balanced Scorecard* (BSC), with dialogued expositive classes and application of a case from the Harvard database. At the seventh meeting an individual test without consultation was applied. In the eighth meeting, the optional seminars were presented, and the group and individual assessments were discussed. Throughout all the meetings, the students dedicated themselves to reading the bibliographical references and, in groups of up to six participants, to a project (POPBL) presented at the first meeting.

Module I Module III Module II Class 7 - Individual Evaluation Class 1- Pedagogic Contract Class8 - Seminar & feedback Class 4 - Dialogic lecture Class 5 - Dialogic Lecture Class 6 - Harvard Case Dialogic Lecture Class 2 - PBL Learning objective definition **POPBL** Reading activity

Figure 3
Structure of the discipline Competitive Intelligence

Source: Elaborated by the authors.

The objectives per class and the adoption of different methods required different approaches from the teacher throughout the eighth meetings (Figure 4). In classes one, four and five, it predominated the dialogued exposures with short exercises intercalation. In these sessions, the teacher's attitude alternated between Specialist and Facilitator. The eighth session began with the presentation of seminars. After the papers presentation, the topics discussed were integrated and the teacher encouraged a discussion about factors that could facilitate or hinder the new knowledge application in the students' routine in their executive roles. Continuing, the correction of the test and works was debated. In the end, the teacher made himself available for individual *feedback*. In this class, the teacher dominant approach was that of Facilitator and *Coach*.

Classes two, three and six, in which case method and PBL were applied, will be deeper detailed in the next topic.

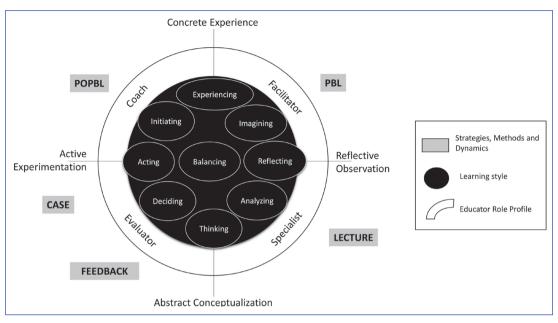


Figure 4
Learning styles, teacher role and active methods

Source: Adapted from Kolb, Kolb, Passarelli et al. (2014).

Considerations about the PBL and POPBL experience

In the IC discipline, the PBL method was applied as a "one day, one problem" in the classroom and as a project (POPBL) in extra class groups.

The PBL method, "one day, one problem", was applied in two of the eight meetings, in independent exercises, coming near to the Maastrich University application: a problem placed before the theory is presented to students in small groups, who begin to explore it and to raise hypotheses, effectively facilitated by a tutor who activates its previous knowledge (FURQUIM, PLUSKWIK and WIGGINS, 2015; RIBEIRO, 2005).

At the beginning of the classroom, the PBL was presented as a teaching and learning method aligned with active learning, and aroused students' interest and curiosity in doing something different. The groups formed ranged from four to six participants, according to the size of the classes, and the exercise was applied in rooms with two to six groups. Initially, for about ten minutes, they read the exercise in plenary and reflected individually on the pre-established questions. Then, they organized themselves to carry out the group work, discussing for another twenty minutes. At the end of the group activity, they held a plenary discussion. During the session, the teacher assumed the role of facilitator, mediating the discussion: he/she encouraged participation, organized the ideas presented by the students on the board and appreciated the contributions of the class when they were rescued at the close of the discussion. The described process involved half of a three-hour meeting. After the break, the teacher made use of resources typical of an expository dialogued class to deepen the concepts worked, appropriating the collaborations derived from the group work and the discussion in plenary. The room armchairs were initially organized in "U" for the discussions. When the groups were formed, the armchairs were rearranged by the students themselves.

The project (POPBL) that permeates the entire discipline had the objective of integrating, deepening and systematizing the knowledge obtained in the classroom. The groups were consisted of four to six members and separated by the students' convenience. The project had a central theme (the opening of a new business), with partial deliveries at the end of each module. For these deliveries, the groups made use of the recommended basic bibliography and deepened their own researches. Each stage of the project started with conceptual issues and finished with the knowledge application in the project. Partial deliveries were performed in classes three and five. In classes four and six, the groups received personalized feedback in writing, and verbally when necessary or requested, with the teacher assuming the role of *coach*. The *feedback* was done through questions that stimulated the deepening of research and the reflection about it. In the final delivery, the groups had

the opportunity to redo all the work in the light of the *feedback* provided. In the eighth class, the students received the final *feedback* of the case, with the teacher's assessment and considerations.

Thus, it is sought to increase the meaning of concepts for students, using their previous knowledge as a starting point and later integrating and systematizing the new knowledge through exposure, exemplification and application.

Considerations on the Case Method application

The case of the Harvard database was distributed printed and handed out to the students, in the first meeting, during the establishment of the pedagogical contract. At that time, the *link* to the video "Inside the Case Method" from Harvard was made available to students to guide them to prepare themselves for case discussions. Whenever possible, the case discussion was conducted in a Harvard model room, with benches distributed at different levels, rotating chairs, plenty of moving whiteboards, more than a projection screen and identification of students' names in trihedrons. The students were distributed in alphabetical order in the room, so that they were taken out of the comfort zone, that is, to always work with the groups already established.

The first ten minutes of the class were devoted to the opening and organization of individual notes. In the next fifteen minutes the students checked their understanding by discussing in group with their closest colleagues. The next hour the discussion took place in plenary, in which the teacher's role was alternated mainly between evaluator and *coach*. Students were warned that the case was a simulation game and that roles would be experienced throughout the exercise, and the exercise tone was that of a meeting of the steering committee of the company under study. The positive reinforcement to the best observations was made through affirmative statements about the quality of the comment, request for clapping and even distribution of chocolates. It was also clearly stated dissatisfaction with superficial or disconnected opinions about the case. At the end of the exercise, considerations were made about the difficulties and doubts presented, as well as about the application of the knowledge discussed in the previous class and reinforced by the reading of the base book. After the break, the class returned as a dialogued exposure, connecting the exposure with the experience of the exercise, other possible solutions and the reality in the students' companies. In the last ten minutes of the sixth class an integration of previous classes was done, which reinforced the relation and coherence among the themes discussed throughout the three modules.

According to the typology of the presented case method, the test can be classified as an assessment case, with moderate information availability, structuring level and complexity. The individual test without consultation was applied at the seventh meeting. The subject of the test was a case according to the project models developed throughout the course, but with less demand for depth in the answers. The test *feedback* was given in the eighth class, with assessment and written considerations of the teacher.

RESULTS ACHIEVED WITH THE EXPERIENCE

The qualitatively positive, although from a perspective of perceived learning (BACON, 2016), result encouraged the sharing of experience through this report.

Even considering that the adoption of active teaching and learning strategies requires changes in the teachers' and students' performance and this requires the students' qualified participation, the experience allows to draw attention to some aspects considered positive:

- The good performance of students in the discipline;
- The positive assessment that the students registered in relation to the discipline and the work carried out by the teacher, even with more rigorous assessments;
- Approval declared by the students and the quality increase of the teacher-student relationship.

The performance of students in the discipline

The learning evolution was verified by the scores evolution assessment of individual tests and group work. Figure 5 illustrates the maintenance of good scores in tests and work assignments, even with the rigor increase in the assessments as the teacher's dedication to the discipline increased (BHATTACHERJEC and RAVISHANKAR, 2016; MIRANDA, CASA NOVA and CORNACCHIONE JÚNIOR, 2012; STROEBE, 2016).

Evolution of the scores averages in formal assessments

Evolution of the scores averages of the group work

7,8

7,8

7,8

7,8

9,3

8,4

8,9

9,3

9,5

9,2

8,6

9,4

8,8

8,7

9,1

8,1

8,4

9,1

1

1

Evolution of the scores averages of the individual test

Figure 5
Evolution of the students' scores averages in formal assessments

Source: Elaborated by the authors.

The teacher and the discipline assessment

The student's assessment on the subject and on the teacher was carried out by the school's standard research tool – a questionnaire with closed questions, using a 4-point scale (1 being "totally disagree" and 4 "totally agree"), applied on the last day of each discipline. Figure 6 shows the cumulative frequency of assessments between points 3 and 4, per class. The objective of the institution is to have at least 80% of the assessments between scales 3 and 4.

Figure 6
Assessments of the teacher, the discipline and the class from the students' perspective

GPOURS															44	
GROUPS	-1	0	1	2	3	4	5	6	/	8	9	10	11	12	13	14
TEACHER	Sum of the frequencyof the grades 3 and 4															
Plans classes and activities	100	84	100	100	95	100	100	100	96	100	100	100	90	100	100	100
Makes materials available	100	90	100	100	100	96	100	96	100	100	100	100	90	100	100	92
Explains contents	100	74	100	94	79	100	100	93	96	100	100	100	100	100	100	92
Adopts different teaching strategies	100	84	90	100	95	100	100	100	100	100	100	100	100	100	100	100
Mobilizes student experiences	100	89	80	94	90	100	100	96	96	100	100	100	100	100	100	92
Explains assessment	100	89	90	100	89	100	100	100	100	100	100	100	100	100	100	100
Offers feedback of activities	100	90	100	100	73	100	100	96	100	100	100	93	100	100	100	100
Is a good teacher	100	84	100	100	90	100	100	96	96	100	100	100	100	100	100	100
SUBJECT	100	90	100	94	100	100	100	100	100	100	100	100	100	100	100	92
CLASS	100	85	80	94	95	96	100	100	100	100	100	100	90	100	100	100
STUDENT	100	90	90	88	95	92	94	93	96	100	100	96	100	100	100	100
	BELLOW 80%					BETWEEN 80% AND 90%							ABOVE 90%			
		'														

Source: Elaborated by the authors.

The result suggests that even with increasing rigor in assessments and workload for students, teacher satisfaction, discipline, and performance have remained high. However, the positive evolution of the results reinforces the teacher's perception of the existence of a learning curve with the adoption of the active teaching strategy. The indicators "content explanation" and "activities feedback" would deserve a special attention, once they are slightly below the institution's goal (black *box*) in the first classes who were exposed to active learning.

The declared approval

According to the report of the group interview, the adopted teaching-learning strategy was approved by the students mainly for balancing moments of exposure, reflection and application of the concepts discussed in an orderly and communicative way. The use of active methodologies also stimulated the connection between the discipline Competitive Intelligence, the other disciplines of the course and the real challenges of professional life. The PBL problematization, the need for the project evolution and the indication of complementary references in the virtual library encouraged the reading of the compulsory and complementary references. The *feedback* to the individual and group activities was recognized as being of great importance for the learning process, when confirming or making possible the adjustment of the understanding and the meaning of the concepts. *Feedback* is also perceived as a teacher's concern for the class, reinforcing the meaning, mobilization, and motivation of the students (ACKERMAN, DOMMEYER and GROSS, 2017). The students also highlighted as fundamental: the activities presentation, their relationship with the learning objectives and the closure done by the teacher for the systematization and meaning of the learning.

The modular model with programmed activities and partial deliveries of the group work also allowed to observe, through the spontaneous statements of the students, a greater distribution of the study throughout the two months, followed by an increase of the satisfaction in the accomplishment of activities with greater meaning, as suggested in the *working paper* of Alcalde and Nagel, Universidad de los Andes in Chile (ALCALDE and NAGEL, 2016).

LEARNING AND FINAL CONSIDERATIONS

This report of experience was prepared aiming to broaden the understanding of the benefits and operationalization of the planning and application of a combination of active teaching and learning methods in *lato sensu* graduate courses and, consequently, to provide teachers and researchers with useful information for the profession. The use of active methods, strategies and dynamics in fouteen classes of the discipline of Competitive Intelligence, over a period of two years and six months, allowed to broaden the understanding of active learning and the learning organization, considering: (i) the development of students' maturity and their increased participation in the construction of knowledge, (ii) the change in the student's role and the need for updating and development, (iii) the need for coherence in the assessment process, and (iv) the role of changes in the physical environment.

The development of maturity and the increase of students' participation

Although several reflections can be made on the adoption of an active teaching-learning strategy, it is worth mentioning the well noticed growth in maturity of the students since the increase of the stimulus up to the reflection and exposure of the ideas, which made possible a greater exchange between teachers and students and enabled the knowledge construction from the students' previous experiences. According to the theory of identity, treating students as executives through experiential learning and active teaching-learning methodologies "experiential learning may provide an opening as a base from which to begin to implement wider changes toward producing "work-ready" graduates" (EWING and EWING, 2017, p. 143).

As advocated by Paulo Freire's pedagogy of autonomy (1996) and by the principles of Andragogy of Knowles (1973), from the epistemological point of view new abstractions began to make sense from the initial concrete knowledge, thus creating a new and more elaborated abstract knowledge. The contact with the initial knowledge was only possible by valuing the students' experience through the transferring of part of the responsibility in the "to produce classes", which resulted in their greater participation in the classes.

Apparently, after a little initial discomfort, most students agreed to assume the position of responsible for their own learning. The relationship with the teacher improved every class because the students saw him/her as a facilitator of the process for which they were then responsible.

The change in the role of the student and the need for updating and development

The experience obtained with the application of the discipline Competitive Intelligence enabled the practice of active teaching-learning strategy together with a combination of different methods, strategies and dynamics. If the choice of strategy and method derives from the learning objective defined for the discipline and for the specific class, the teacher's requalification with an increase in his/her repertoire becomes a fundamental part for this adoption.

From the teacher's perspective, the growing interest of institutions by active methodologies indicates the need for constant updating, not only referring to specific scientific knowledge, but also referring to didactic knowledge. As an autonomous researcher, the teacher interested in the adoption of active methods, strategies and dynamics is capable of seeking additional knowledge, and the experiences reports greatly contribute to this self-development.

From the perspective of the material development and adjustment of the pedagogical contract, the increase in the exchange among teachers and students in the "to produce classes" also provide a process of continuous improvement in the stimuli development, besides the material constant revision based on the learning obyained by the teacher from the classroom discussions, from the students' performance assessment and from student evaluation of teaching performance. The teaching activity of preparing classes gains importance and begin to demand more teaching time, since each participant in the class and each class has a different history and development, turning unique the discipline evolution. The greater amount of time spent by the teacher is an issue that needs to be considered by the institutions.

From the perspective of the institution, change can be stimulated with initiatives aiming at the faculty qualification and awareness of the importance of adopting the active methodologies. From the perspective of the students, taking responsibility for their development is not yet obvious and needs to be built together from the teacher's stimuli, from the "sale" of the benefits of the method and its result in the formation of more complete professionals.

It was also found that the adoption of books and articles available in the digital library increased the quality of the group work, due to the increase in the reading and enrichment of the students' repertoire. The teacher has turned into one of the references for choosing books, reinforcing his/her role as a content curator, but this has not excluded the student's role in choosing the material to be used. The reduction of barriers to access the books, such as the purchase price and displacements seems to have been of great importance to the acceptance of the teacher's role as a tutor in the appointment of new materials and for the increased interest in further reading.

The need for coherence in the assessment process

Assessment based on group work and individual test follows the institution's pattern, recognizes individual dedication and encourages the development of interpersonal skills. However, it still prioritizes the assessment by product, which is not coherent with the proposal of a class developed jointly by teachers and students: the "to produce classes" together

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presupposes the joint work between teacher and students, and the assessment by process is more coherent with the sharing of responsibility in classes.

For the following classes of the discipline, there is the possibility of negotiation with the Coordination for the merging of the assessment by product with the assessment by process, individual and in group. Process assessment also requires more teaching time for the individual feedback, which needs to be planned between activities. The adoption of a shared assessment protocol with students could, at the same time, increase the process' transparency and to structure and streamline the correction and feedback process.

The discussion on the assessment puts a focus on the restrictions to a greater adoption of innovation: the need for some standardization among teachers of the same discipline and longer time for teachers in the preparation of assessments, correction and feedback. Innovation in education depends on the working together of teachers, coordinators and principals. In an institution with an academic master plan that stimulates innovation the alignments are easier than in those that are not yet mobilized for the education upgrading.

The role of changes in the physical environment

An environment conducive to learning is important, and even with the possibility of rooms changing and desks changing, it is necessary to develop an even more flexible learning spaces.

The change in the physical structure of queuing desks, in a "U" layout and Harvard model room (with more than one projection screen, floor at different levels, tables with student name identification and swivel chairs) not only facilitated the application of different methods but also brought curiosity, helping to stimulate the mobilization of the students.

The physical structure and the flexibility offered facilitated the application of the active strategy, but its absence would not make unfeasible the execution. In some classes the case was applied in a traditional classroom with armchair, and the PBL was initially applied with queued desks. A conducive environment is important for learning. Even with the possibility of changing rooms and changing the portfolios, it is necessary to develop even more flexible learning spaces to improve the application of active methods.

The limitations of this study involve the limitations inherent to the method, a case study based on participatory real-life observation, with heterogeneous groups, without control in the choice of participants and based on spontaneous student statements (BACON, 2016; ZHAO, LEI, YAN, et al. 2005), and should be considered for its exploratory value.

This is a journey of change that can positively affect educational institutions, teachers and students, taking into consideration behavioral factors (such as aversion to change), cultural factors (such as the need to accept mistakes and valuing learning with them), and procedural factors (such as setting objectives, goals, plans, activities, actions and budget). As academic implications, the article highlights evidence of increased learning with the combination of active methods aligned to the learning objectives, and can be used as a stimulus for conducting conclusive experiments. To improve learning, it is necessary to increase research in the area, considering educational institutions, coordinators, teachers, students and the effects on management practice.

From a practical point of view for teachers, the article describes the planning and operationalization of a discipline using active methods from the learning objectives, including considerations about the definition of strategies and methods, time management, physical environment management, relationship with students, assessments, definition of references and the importance of feedback, aiming to contribute to teaching practice and learning.

As a social implication, advances in the adoption of more efficient methods of learning mean a great social economy, with better use of time and investments, increased satisfaction with the process by teachers and students, and the training of more complete professionals in terms of technical skills and behavioral.

The discipline of Competitive Intelligence was revised with the learning of this study, with greater integration between the PBL and the POPBL (problems evolve into the project). The final test was replaced by three extra-class individual assignments to be delivered on alternate days in relation to group tasks. The individual tasks started to have the function of encouraging the mandatory (indicated) and complementary (individual research) readings for the elaboration of a critical review guided by a guiding question. A Whatsapp discussion group was created among teachers of the same discipline to exchange learning during the implementation of the improvements. It is still not possible to evaluate the results of the changes made, but it is possible to affirm that a change in the structure of the discipline generates a new learning curve for teachers and students.

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