Developing Professional Competencies in Higher Education: Classroom Practices in a Brazilian Setting

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Abstract
This article reports on results from a qualitative study that sought to explore the teaching and learning of professional competencies in undergraduate international business management courses in Brazil. When synthesized as the mobilization of knowledge, skills, attitudes, and other cognitive resources (personal values, beliefs, personal characteristics, etc.), competencies are an important link between education and the labor market. Using a case study methodology, this paper considers the relationship between educational theories that sustain competencies and classroom activities that support the development of certain professional competencies in higher education classroom settings. Findings highlight the need for higher education students to take a central role in their learning and stress the value of training for professors to shift beyond transmissive teaching approaches towards structured activities that promote student engagement and learning.

Keywords: Pedagogy, teaching methods, professional competencies, and skills.

Introduction

Our society is going through fast-paced changes and ruptures arising from technological advances like artificial intelligence, predictive algorithms and robotics, which will increasingly impact our lives and ways of working. With robots replacing human workers, algorithms influencing personal decisions, exponential spread of information and knowledge, there is room to discuss the role of education in this fast-paced environment.

In this time of change, competency-based education (CBE) offers an educational framework that can prepare both our faculty and our students to face the newer ways of knowing and working, particularly in current economic business fields. Competency-based education encourages students to build on their practical knowledge (repertoire of personal experiences), acquired knowledge (what was

learned), and cognitive resources (personal values, beliefs, and characteristics) to problem-solving situations (Perrenoud, 2000; Zarifian, 2001). The teaching of competencies may be a necessity in this period of social and economic change. Teaching and learning can no longer be conceived as a one-way process in which the teacher transmits and the student receives knowledge and "stores" it in her/his brain. It is necessary to use techniques and tools to motivate the student to play an active role in this process.

This article focuses on the development of a competency-based strategy for students in higher education through varied educational activities that cause students to reflect upon their own work. The article provides examples of these types of educational competency-based activities and discusses the activities currently used by undergraduate professors in a Brazilian higher education setting.

In the Brazilian educational context, CBE has been largely discussed since 1996, with the implementation of the Law of Directives and Bases of National Education. The orientation for the development of minimum competencies and skills requirements involve undergraduate programs, especially technologist programs, which are fast-term, more focused higher education programs (Pereira, 2014).

This article is divided into the following two sections: Methodology and Theory & Practice (using professors' differing activities as examples of theories related to: *reflection*; *technologies*; *problem situations*; and *educational goals)*. Note that a discussion follows each activity in relationship to the sustaining of student competencies.

Methodology

This is a qualitative study (Marconi and Lakatos, 2010) conducted using the method of case study (Yin, 2005) in which we present and discuss practical activities used by professors of undergraduate courses in Brazil. Since our objective is to present and discuss activities that facilitate the development of professional competencies, a qualitative approach is well suited to our study. Case studies in particular allow us to effectively describe the complexity of behaviours and provide a more detailed analysis or discussion of habits and attitudes that inform educational activities. As for the case study, the technical procedure opted for this paper, because it is an investigation of an abstract phenomenon (teaching of competences), in a certain setting (a higher education program in Brazil), we understand it was the most suitable technique to investigate a contemporary situation in a real-life setting.

We collected data using individual open-ended semi-structured interviews with five professors of undergraduate business courses at a higher education institution (HEI) in Brazil. From previous conversations with students who mentioned professors who had used what they had considered competency-based activities in their courses, we followed through with asking for the availability of the professors to be participants to our study. The authors discussed with the program chair of the university research institution about allowing the business professors to be able to participate in our study. The

program chair indicated who among the institution staff we could ask for an interview and obtain access to their teaching activities.

The five professors willing to participate were all business professors. Professor 1 teaches International Business, International Relations and Contemporary Topics in International Business. Professor 2 teaches Statistics Applied to Administration, Fundamental Mathematics, Statistics and Probability, and Fundamental Statistics. Professor 3 teaches Tax Planning, Costs and Prices, Negotiation, and Leadership Management. Professor 4 teaches Import & Export Procedures, Quality Indicators, International Logistics, Supply Chain Management, Transport and Distribution, and Distribution Channels. Professor 5 teaches Financial Administration, Communication, and Political Sciences.

Each participant signed a consent form, and neither their names nor that of the HEI is disclosed in order to follow research ethics guidelines on confidentiality and anonymity. The study was approved by the ethics committee at the University in Brazil. The interviews were recorded, with written consent of the participant subjects, and the professors answered questions about the development of professional competencies.

For this study, we utilize only one of the questions that was asked in the interview. In this study, each of the professors gave an example of a classroom activity where they believe they taught competencies to students. These activities, which are our sole findings for this particular article, will be discussed at the end of each theoretical section. The participants will be referred to by their numbers as Professors 1, 2, 3, 4 and 5.

Theory and Practice

Perrenoud (2000) proposes an inventory of competencies to reshape teaching. He says that the theoretical and methodological knowledge mobilized in a competent action should be carefully analyzed, and each resource should be related to a set of problems and tasks related to the necessary cognitive resources, such as knowledge, techniques, abilities, attitudes and more specific competencies.

The researchers identified examples of teaching which are in line with the competency teaching and learning process. Sacristán (2011) says the concept of competencies has some common features: the consolidation of what was learned aims to enable some kind of functionality (what one can do with the knowledge); and competency learning therefore has a utilitarian nature (for labor market insertion), in which education is conceived to achieve performance at work, to attach effectiveness and integrated topics among curricula.

Several possibilities for the competency teaching and learning process can be found in Perrenoud's (2000) work: the setting of learning goals; an essentially student-oriented educational process; research as a knowledge appropriation factor; the use of problem situations; the use of information and communication technology (ICT); and an education process that includes reflection and awareness about one's actions and their implications.

Rasco (2011) makes an important observation about how work performance is used to found and reaffirm the usefulness of competencies. He suggests that competence is built not in the university setting but through practical work experiences. The unexpected challenges one may face at work are not delimited or structured. Therefore, formal, previously learned models (abstractions, theories, or uncontextualized knowledge) would be of little use when tackling these problems, as situations are uncertain and problems are not structured. Rather than affirming that compentence cannot be built in the university setting, we take on Rasco's suggestion that tackling these problems requires situational understanding, i.e., an experienced professional's knowledge. We believe, after completing this study, such action is reflective as it intertwines knowledge and practice to transform professional understanding and can be done within the confines of a higher education classroom.

Considering the above, we found through our research a few tools that foster the teaching and learning of competencies, and we present them below. They are: *reflection*; *technologies*; *problem situations*; and *educational goals*. These tools were used by professors to develop the following competencies expected in the undergraduate program of International Business: use of language to access other cultures and international business; interact, in English, in various settings; use pricing methods for decision making situations; compare proposals to negotiate solutions; recognize and analyze data within a pricing structure.

Reflection

An important requisite for the competency teaching and learning process is reflection. Both the professor and the student must become reflective practitioners in order to see the teaching activities as Rasco's (2011) recommendation for situational understandings of practical work experiences. Because experience is a component of competency as it encompasses mental procedures and operations, it goes through a reflection process that shakes the traditional one-way process in which the teacher transmits and the student receives knowledge and "stores" it in her/his brain. The student is able to utilize instituted knowledge and actions; question established structures, and then those parts of the experience that yield similar results are reinforced, while those that do not work so well, according to the competent individual's evaluation, are modified to improve her/his competent action. We thus discuss the concept of reflexive teacher/practitioner, which is the professional who reflects upon their own pedagogical practice (Cornish, 2015; Perrenoud, 2000; Pimenta, 2008; Schön, 2000) making better decisions about learning activites for their students.

Donald Schön (2000) deconstructs the theory-practice separation and shows that professional problems do not emerge in a linear way, but in a chaotic, undetermined way. Schön (2000) says that universities are based on technical rationality, whose knowledge is systematized in normative curriculums of a predominantly scientific nature, according to a hierarchy of knowledge, and there has been growing criticism of this pillar of education in view of the complex problems facing practitioners nowadays. This imposes the discussion about the relationship between professional knowledge and

competencies, in a time when systematic knowledge begins to coexist with what the author calls artistic knowledge, i.e., those types of competencies emerging in unique, uncertain, and conflictive situations. Schön (2000) proposes the concept of practical reflective teaching, which aims to help students acquire artistic talents to perform in undetermined zones of practice. These talents are related with skills, which are difficult to express, like the feelings and specifics that lead one to do a particular activity in a particular way.

Pimenta (2008) points out that every teacher also reflects, hence the term "reflexive teacher". These practitioners create and build new educational solutions in a process of reflection about action. Based on these solutions, the practitioner begins to build a repertoire of experiences they mobilize in similar situations, thus constituting new practical knowledge. These new, unexpected situations within the undetermined zone of practice have a changing nature and drive new reflections and new repertoires, in a continuous process of analysis, contextualization, explanation, understanding, dialogue, etc. The mobilization within this process of reflection occurs in an environment of unique, unstable situations, with uncertainties, dilemmas and conflicts, which shows an apparent connection with competent action, which occurs in a singular, uncertain, changing context that requires a differentiated response (Pimenta, 2008; Schön, 2000).

The student as the center of learning, which is assumed in competent action, is not often a concern of beginning teachers/professsors, who focus on learning the mechanisms of teaching. Only as the professor/teacher gain more experience in teaching do they begin to think deeply and to question whether their students are actually learning (Cornish, 2015). As referred in the methodology section, we aim to integrate theory and practice (the findings from our research). In what follows, we present the related practice to reflection in the next subsection by reviewing a professors' assigned educational activities that build student competencies.

Reflection – Student activity assignment

The fifth professor in the study created an assignment to help the students demonstrate competency with the use of language to access other cultures and international business. The following was the assigned activity:

> **Activity description:** At the beginning of the semester, students are asked to write a presentation to "sell" a fictitious project or product at their company. The professor evaluates it and keeps it until the end of the semester. During the term, the professor provides students with tools and knowledge, and at the end of the semester she/he returns the projects to the students and has them evaluate their own presentations based on what was developed over the semester and say whether they would approve their own projects or not, in view of the amount of mistakes they found.

Professor 5 described an activity directly related with reflection as it induces retrospective reflection about the material produced at the beginning of the semester; it goes into the step-by-step of

knowledge in action and allows reflection about what was done. The activity seems in line with Schön (2000) in that: knowledge is applied; students' responses surprise them and lead them to consciously reflect; their thought addresses an unexpected phenomenon; their reflection questions the bases of knowledge in action and allows them to devise new action strategies; finally, such reflection about past actions allows students to evaluate and correct mistakes, thereby changing their understanding.

Technologies

Given how rapidly the world has been assimilating new technologies, education cannot ignore their influences on actors in the educational context. The transformations arising from information and communication technologies (ICTs) have changed our ways of communicating, working, deciding, and thinking, with all the facilities provided by the internet.

This context encompasses computers and smartphones, which intervene in education, particularly regarding the availability of contents and knowledge, which soon become obsolete. Another important point concerns the profile of today's students, who are now digital natives (Behar, et al. 2013a). There are other important aspects to the relationship between education and technology: the use of computerized means and environments combined with communication technologies; the need to know a priori students' probable behavior so that educational actions can be conceived in terms of outcomes as a process; and the setting of goals and systematized routines (Bertrand, 2001).

Business students need to learn to be reflective in order to have successful outcomes in the labor market. Thus, in order to become relective, the business professors must teach in a way that promotes reflextivity in their students throughout the learning activities that are tied to practical work experiences. Students need to feel engaged and challenged through practical work experiences in the classroom. Technology is a tool and the environment we are all in because we have incorporated technology into our lives so deeply. It seems that as students become more relective as they analyze their own performance but only when they have been taught reflective strategies within their assigned learning activities.

Two major tendencies can be seen in the technological movement: systemic and hyper-mediatic. The former is related with a more procedural educational view that emphasizes the transmission and evaluation of learning in a process of: analysis of purposes and of students' characteristics; experimentation in the system; and evaluation of, and the necessary changes in, the process. The latter tendency is related with cybernetics, artificial intelligence and cognitive sciences, as well as with a concern with making systems more interactive (Bertrand, 2001).

The former tendency is connected with aspects we approach later in this work, in the section about Educational Goals. Such connection is pertinent considering the current efforts to organize the teaching process with a view to its effectiveness and rationality, thus enhancing the internal processes of learning. Masetto (2010) points out that school education failed to address technologies with a view to more effective and efficient teaching and learning processes. He says that teacher education programs

emphasize mastering contents to the detriment of pedagogical subjects, which hinders the addition of competencies in teaching. This study was designed to understand how teachers/professors create learning activities that are not about mastery but rather competencies.

Four elements stand out in technology-mediated teaching and learning processes: the concept of learning; the student's role; the teacher's role; and the use of technology. The first element regards the student and her/his relationship with information acquisition, reflections, research, the development of personal and professional competencies, etc. The student's role is active as she/he acts and changes her/his behavior through learning by herself/himself, from teachers and from peers. In turn, the teacher becomes a supervisor of the student's activities, a consultant, a learning facilitator, thus taking on a pedagogical mediation role. As for the use of technologies, it must be in line with the educational intentionality, i.e., with what students are expected to learn. Technologies should encourage student participation, with interactions, debates, research and dialogue, thus allowing the exercise of human skills and profession-specific skills.

Another important aspect related with technologies and education is the belief that technologies can be employed with both in-person and distance learning (DL). DL actions are planned and monitored by institutions, and are mediated by various means of communication (internet, mail, radio, television, telephone, and other technologies), and carried out at various places and times (Maia and Mattar, 2007). None of the professors in the study were actively using DL since the assignments were given the year prior to the pandemic, but it seems possible that the same competencies could be measured. Distance Learning is included in this paper to demonstrated that technology competencies may be required in order for a student to demonstrate other competencies if the only form of reflection or review comes to the professor from the student via a technological component.

Besides the concepts and actors involved in DL, different tools can be used in Virtual learning environments (VLEs), Learning Objects (LO), and Authoring tools. These tools can be used and adapted by the teacher to motivate students, thus allowing significant and interactive knowledge building (Behar, 2013a). Behar et al. (2013b) point out that using technology and developing students' competencies in the educational process require technological mastery, which comprises: digital literacy, which regards the critical use of digital technologies; cooperation via social interaction at VLEs; a social presence, in the way one perceives oneself in the virtual environment; and technology-mediated communication. This technology mastery that Behar et al., (2013b) suggests may very well be a need for technology competency, but that is something their study may need to address in future work.

Finally, we note that the DL student should be emotionally engaged in the virtual sphere, so as to be "really" present, i.e., actively participating in virtual learning environments by relating to and interacting with contents, activities, and the other actors in this environment (Behar et al, 2013b; Mattar, 2013). In the next subsection, we present the related practice to technologies, according to our approach previously presented in the methodology section.

Technologies – student activity assignment

The first professor in the study created an assignment to help the students demonstrate competency with negotiation by comparing proposals to negotiate solutions and the use of language to access other cultures and international business. The following was the assigned activity:

Activity description: The professor organized a debate activity in which groups of students elect a negotiator who must interact with another group. Each party received instructions about what they could and could not give in; however, this is an unfeasible negotiation involving a deal that could not be reached because the parties have goals that opposed each other. The idea was to promote debate and see how the negotiators would behave within the 15 minutes of negotiation. The whole activity was recorded on video, and after the negotiation the students watched the video for self-analysis.

This activity uses different tools, such as reflection, as students analyze and reflect about their actions. It even uses problem situations, which are dealt with in the next section; however, we focused this activity on the use of technology, with the recording of images to be subsequently watched by students.

The use of technology, if incidental, already yields some interesting analyses, if it does not yet infer the need for technological competency. The first is that students end up making an LO by recording the negotiation on video, and technology helps with the mediation between the object (the video) and the learning activity (later discussions and debates). The second is the intentionality of the professor, who encourages students' participation for evaluation of the skills developed or necessary to the activity.

Problem situations

According to Perrenoud (2000), a problem situation forces students to overcome a problem by means of new learning, which can be a transfer, a generalization or new knowledge integrated into their cognitive structures, based on students' representations. These representations interact with one's goals and generate a process of discoveries and learning. And these interactions pose a challenge to teaching in that teaching must consider the student, their own representations and their current history with the world. In reference to the act of teaching considering the students, this article suggests that there is a need to also reflect upon the students representations and history as well as that of the one who is teaching. A suitable teaching tool, according to Meirieu (1998) is problem situations. According to him:

> The problem situation, simply, puts the individual in action, it puts her/him in an active interaction between reality and her/his plans, an interaction that, due to the variations introduced by the educator, destabilizes and re-stabilizes her/his successive representations; and it is in this interaction that, often irrationally, rationality is built (Meirieu, 1998, p. 63).
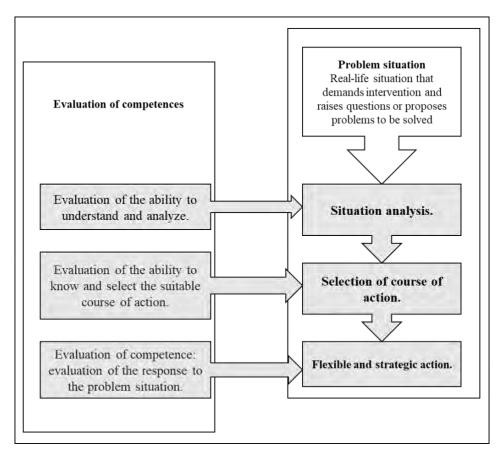
Such work requires the teacher to: previously prepare materials, goals, and instructions; get students to express their representations in order to work on them; and propose a problem situation that mobilizes them. The teacher must also identify students' difficulties and obstacles, since each learning process is differentiated, and so are the resources (Meirieu, 1998).

For Zabala and Arnau (2010), being competent is being able to efficiently respond to a real situation via questions that somehow exemplify real-life questions. The authors thus recommend problem situations, i.e., "events, journalistic or scientific texts, tragedies, conflicts, etc., which, by showing all of reality's complexity, force students to intervene in order to reach knowledge or a solution for the problem" (p. 175).

Zabala and Arnau (2010) say that an evaluation of competencies aims to determine how much was learned about each content corresponding to a competency, so as to make sense of the functionalities of these contents in the evaluation activities. Figure 1 describes this process.

Figure 1

Evaluation in the competent action process

Source: Zabala & Arnau, 2010, p. 176

According to these authors, the problem situation is the key to evaluation in a competent process. By means of this type of question, the student should intervene in the problem, mobilizing a set of different resources: starting with the evaluation of the abilities to understand and analyze, when the student analyzes the situation and identifies the problem; then the student evaluates the ability to know and select the course of action, when she/he, having analyzed the situations, searches her/his resources

and experiences for a course of action that can be adapted to the problem; finally, the student's response to the situation is evaluated to determine whether it is suitable for the problem situation.

Silva and Felicetti (2014) conclude that problem situations are a challenge in the development of competencies and skills, since designing them requires considerable work. The teacher should therefore think about each plan, estimate the time, observe and evaluate in a differentiated manner, recognizing the connections between contents, whether in a single or an integrated aspect. The teacher should also identify the knowledge and competencies the student already possesses. The student, in turn, should transcend memorization so as to connect the problem to the contents, analyze contexts and combine knowledge and resources in the search for new solutions.

Perrenoud (2000) explains the difference between different learning stages as regards students' curiosity. Thus, it might be best to have students be part of the process in proposing problems to solve. In initial stages, students are more curious, and during their teenage period, not any riddle or problem catches their attention. Educational actions for adults should motivate them so as to constantly motivate and develop their active learning. The teacher should therefore be able to establish a relationship of solidarity in the search for knowledge, putting herself/himself at the student's level, accepting and showing her/his own digressions and ignorance. This teacher-student relationship, however, is set by the intersubjectivity of both parties, which can hinder the course of the interest in learning. In this relational path, research activities can be added to problem situations, which also means additional time and complexity.

A double competency is thus required of the teacher: to conceive situations that contain real values and problems from the student's perspective; and to act as a mediator, which may include improvising and guiding students in solving the problem.

A good problem situation requires forming a system that is both closed and open. A closed system invites the student to follow a path comprising the following stages: alteration, in which a modification in the context is presented in the question's statement and requires analysis; disturbance, when the alteration is perceived as a problem, and what resources are mobilized to close this disturbance; and, finally, regulation, when the situation is balanced by means of the previous action. An open system requires more subject aspects from students, like the necessity for reflection and discussion, and to surpass formal limits of the situation (Macedo, 2005; Silva and Felicetti, 2014). In the next subsection, we present the related practice to problem-situations, according to our approach previously presented in the methodology section.

Problem situations – student activity assignments

The second professor in the study created an assignment to help the students demonstrate competency with statistics applied to business administration by having the students recognize and analyze data within a pricing structure. The following was the assigned activity:

Activity description: The professor asked each student to collect relevant quantitative data about some situation they consider important in their professional field. Based on these initial data, whose activity started in the first day of the course, the professor adds new elements and knowledge during the term, which allowed designing questionnaires and analyzing, tabulating, and organizing the data.

This activity fits into a student-centered approach. The professor mentioned as an example a student who owns a store in a shopping center; he wrote about his customers' favorite items, the profile of his customers, etc. Based on this information, the student was able to realize who his target market was, thus generating relevant information for managing his business.

Moreover, the activity's focus is relevant for the students, with components of a problem situation, since students' representations go through a transformation and reorganization process, in which new elements are added, including technological ones, such as spreadsheet applications. This activity causes an imbalance in students' representations and allows them to reshape new representations, i.e., new readings of the data at the end of the process. The professor, however did not supply the researchers with the students' answers and representations.

The third professor in the study created an assignment to help the students demonstrate competency with the pricing and how to recognize and analyze data within a pricing structure using pricing methods for decision making situations. The following was the assigned activity:

Activity description: The professor divides the students into small groups and asks them to research and analyze the pricing of the items sold at the institution's cafeteria, focusing on costs and profit margin. After that, the students discuss their findings.

This activity, which uses as an example a representation the students are familiar with (pricing at the institution's dining hall) to understand the profit margin and other cost-related aspects, adds important components to competencies, such as attitudinal aspects and student integration involving debate, which helps with the knowledge appropriation process.

The activity fits into a problem-situation, since besides approaching a familiar situation, it also has characteristics that show the problem's complexity, forcing students to intervene in the situation, which poses an identified and concrete obstacle, thus becoming an enigma for students and showing resistance, so that students can apply their representations, question their own ideas and act in a flexible and strategic manner.

Educational Goals

Perrenoud (2013) says that knowing the contents that will be taught is the minimum desirable when one wants to share knowledge with others. He stresses that the true pedagogical competency lies in the fact of relating such knowledge to goals attached to learning situations. And the goals are implicitly connected to the contents. This approach began to be criticized and changed in the 1960s, when the domain pedagogy was introduced, given that the studies conducted by the psychologist

Benjamin Samuel Bloom and his collaborators culminated in Bloom's cognitive domain taxonomy (Bloom et al., 1972; Ferraz and Belhot, 2010).

This form of classification derived from a series of studies that resulted in a tool (Bloom Taxonomy) that can help educators define what they want students to do, by means of a hierarchy from less to more complex or from real to abstract. Many educators and institutions use the taxonomy to define and plan educational and evaluation goals, strategies and systems. For Luckesi (2015), one of the main contributions of Bloom's Taxonomy is the conscious planning, execution, and evaluation, i.e., the teacher sets goals by planning, and she/he executes, analyzes, and evaluates her/his practice and the student's learning in a critical way. Bloom's Taxonomy was updated in 2001; this article uses the updated version (Ferraz & Belhot, 2010).

The clear definition of the instructional structure and goals afforded by the competencies, knowledge, skills, and attitudes in each educational action helps with choosing the most suitable teaching strategies, evaluation instruments, and contents, thus making learning more effective and lasting. Bloom's Taxonomy focused on cognitive domains, which are related with learning, with mastering knowledge. This involves acquiring new knowledge, as well as intellectual development and the development of skills and attitudes (Ferraz & Belhot, 2010). Although the other domains (i.e., affective and psychomotor) are also discussed, the cognitive domain is the best known and most used; educators use it as a tool for defining educational planning and goals.

The Bloom Taxonomy of the Cognitive Domains is divided into six categories: Remembering, related with recognizing and reproducing ideas and contents; understanding, related with establishing a connection between new and previously acquired knowledge; applying, related with executing or using a procedure in a particular situation; analyzing, related with dividing and understanding the interrelation between information; evaluating, related with judgment of data, based on criteria and standards; and creating, related with putting elements in order to create something new (Ferraz & Belhot, 2010).

Bringing these categories to more practical concepts, each of them is related with the conceptually accepted competency dimensions (knowledge, skills, and attitudes), which can be seen in the examples below:

- Remembering and understanding are related with Knowledge, i.e., these verbs connect with knowledge in an educational action;
- Applying is related with Competency, i.e., the verbs connect with execution or performance. Competency is also related with *doing*.
- Evaluating is related with the Skills that are used as a complement to describe the competencies.

Perrenoud (2013) stresses that translating a program into learning goals, and these into possible classroom situations and activities, is not something linear, i.e., something that can set a particular goal to be fulfilled in isolation. According to him, high-level knowledge types and know-how are developed in situations that are "multiple, complex, each regarding various goals, sometimes in various disciplines"

(2000, p. 25). These situations he refers to denote the interdisciplinary and integrated nature of competency-oriented educational actions. In this final subsection, we present the related practice to educational goals, according to our approach previously presented in the methodology section.

Educational Goals – Student activity assignment

The fourth professor in the study created an assignment to help the students demonstrate competency with the use of contract analysis to interact, in English, in various settings and to compare proposals to negotiate solutions. The following was the assigned activity:

Activity description: In an international law discipline, the professor showed students a contract written in English (the students speak Portuguese). This document had mistakes that would cause damage to the parties if they were to close the deal. Various players were involved: the supplier, the carrier, the freight forwarder and the international law attorney. The students then took on different roles in the contract and had to negotiate in English (not their native language), based on a script they had prepared.

This activity engages students as it requires them to discuss the contract in a foreign language. And there is a goal, an intentionality behind the case: having students critically analyze the documents. It also assumes intensive planning, given the several variables and problems involved. By analyzing it from the perspectives developed by Luckesi (2015), the targets in the international contract activity possibly required Professor 4 to plan, analyze, and evaluate her own practice so that students might critically learn the contents, which shows the connection of this perception with Bloom's Taxonomy.

Some taxonomic categories can also be identified, such as: remembering, in that students must recall contents they learned about international contracts; understanding, as contents must be understood in their implications for the parties; applying and finding ways to argue and set clauses that suit both parties; analyzing, abstracting and recognizing the implications and obligations the contract may entail; and finally, maybe the 'creating' category, since from the negotiation of a contract with mistakes a new contract may emerge, with clauses that underwent an intensive cognitive process arising from the interrelation between the previous taxonomic categories (Ferraz & Belhot, 2010).

Final Considerations

In this article, we aimed to present and discuss activities that facilitate the development of a set of professional competencies. To that end, we presented the theoretical framework that bases educational activities, in addition to examples of practical activities used by undergraduate professors in Brazilian higher education. The findings highlight the need for higher education students to take a central role in their learning and stress the value of training for professors to shift beyond transmissive teaching approaches towards structured activities that promote student engagement and learning. Professors need to set up useful problem situations that require reflection, including students taking a centrol role in their learning.

We presented the following theoretical tools: reflection, which shakes students' cognitive structures and leads them to question their own actions; technologies, which are transforming the roles traditionally assigned to the teacher and the student; problem situations, which require of the teacher sensitivity to plan possible challenges within the student's reality; and finally, educational goals, related with a scale of thought that is expressed by means of Bloom's Taxonomy of cognitive domains.

Regarding the professors' activities, we found these features:

- the use of contexts that are close to students' reality or based on their interests;
- reflection as an instrument for students to reflect about their own actions in this process and generate new learning;
- the emphasis on activities that use communication between students;
- the incidental use of technologies, by means of video recording and spreadsheets;
- finally, explicit or implicit intentionality, which is linked to Bloom's taxonomic categories and to the planning of educational actions.

The tools and techniques presented here are applicable in Higher Education, in Corporate Education and Training and in other contexts that require greater student engagement in the learning process. Competencies prepare individuals not only for the work force and for a global world, but also for life, with the challenges posed by modernity.

References

Behar, P. A., Ribeiro, A. C., Schneider D., Silva, K. K. A. S., Machado, L. R., & Longhi, M. T. (2013a). Educação a distância e competências: uma articulação necessária [Distance learning and competencies: a necessary articulation], In: Behar, A. et al. (eds.) *Competências em Educação a Distância*, [Competencies in Distance Learning], (pp 42– 55). Penso.

Behar, P. A., Machado, L. R., & Longhi, M. T. (2013b). Domínio tecnológico: saberes e fazeres na educação a distância [Technological domain: knowings and practices in distance learning], In: Behar, A., et al. (eds.) *Competências em Educação a Distância*, [Competencies in Distance Learning] (pp. 56–80). Penso.

Bertrand, Y. (2001). *Teorias contemporâneas da educação* [Contemporary theories in Education] (2nd. ed.). Instituto Piaget.

Bloom, B. S., Krathwohl, D. R., & Masia, B. B. (1972). *Taxonomia de objetivos educacionais: domínio cognitivo* [Taxonomy of educational objectives: the cognitive domain]. Globo.

Cornish, L. (2015). The challenge of developing reflective practitioners. *In:* Engers, M. L. and Morosini M. C. and Felicetti V. L., *Higher Education and Learning* (pp. 51–64). EDIPUCRS.

Ferraz, A. P. C. M. and Belhot, R. V. (2010), "Bloom's taxonomy and its adequacy to define instructional objective in order to obtain excellence in teaching", *Gestão & Produção* 17(2): 421–431. https://doi.org/10.1590/S0104-530X2010000200015.

Luckesi, C. (2015). Taxonomia dos objetivos educacionais: sessenta anos depois [Taxonomy of educational objectices: sixty years later], *Educatrix* (1): 39–45. http://www.issuu.com/ed_moderna/docs/educatrix_ed_01/38?mode=window

Macedo, L. (2005). A situação-problema como avaliação e como aprendizagem [The problem-situation as evaluation and as learning], *Exame Nacional do Ensino Médio (Enem): fundamentação teórico-metodológica / Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira.* https://download.inep.gov.br/publicacoes/institucionais/avaliacoes_e_exames_da_educacao_basica/enem_exame_nacional_do_ensino_medio_fundamentacao_teorico_metodologica.pdf

Maia, C. and Mattar, J. (2007). *ABC da EaD: a educação a distância hoje* [Distance Learning ABC: distance learning today]. Pearson Prentice Hall.

Marconi, M. A. and Lakatos, E. M. (2010). *Fundamentos de Metodologia científica* [Foundations of Scientific Methodology] (5th ed.). Editora Atlas.

Masetto, M. T. (2010). Mediação pedagógica e o uso da tecnologia [Pedagogical mediation and the use of technology]. In: Moran, J. M. and Masetto, M. T. and Behrens, M. A. *Novas tecnologias e mediação pedagógica* [New Technologies and pedagogical medidation] (pp. 133–173) (17th. ed). Papirus.

Mattar, J. (2013). *Web 2.0 e redes sociais na educação* [Web 2.0 and social networks in education]. Artesanato Educacional.

Meirieu, P. (1998). *Aprender... Sim, mas como?* [Learning... Yes, but how?]. Martins Fontes.

Pereira, M. A. C. (2014). Learning of competencies noted by students of the Technologist Program of International Business. [Master's thesis, La Salle University]. La Salle University Repository. http://hdl.handle.net/11690/917.

Perrenoud, P. (2013). *Desenvolver competências ou ensinar saberes? A escola que prepara para a vida* [Develop competencies or teach contents? A school that prepares for life]. Penso.

Perrenoud, P. (2000). *10 novas competências para ensinar* [10 new competencies to teach]. Artmed Editora.

Pimenta, S. G. (2008). Professor reflexivo: construindo uma crítica [Reflective practitioner: building a critique]. In: Pimenta, S. G. and Guedin, E. (eds.), *Professor reflexivo no Brasil. Gênese e crítica de um conceito* [Reflective practitioner in Brazil. Genesis and critique of a concept]. Cortez Editora.

Rasco, F. Â. (2011). O desejo de separação: as competências nas universidades [The desire for separation: competencies in universities]. In: SACRISTÁN, José Gimeno et al., *Educar por competências. O que há de novo?* [Teaching by competencies. What's new?] (pp. 198–232). Artmed Editora.

Sacristán, J. G. (2011). Dez teses sobre a aparente utilidade das competências em educação [Ten aparent reasons for the utilities of competencies in education]. In: José Gimeno et al*., Educar por competências. O que há de novo?* [Teaching by competencies. What's new?] (pp. 13–63). Artmed Editora.

Schön, D. A. (2000). *Educando o profissional reflexivo: um novo design para o ensino e a aprendizagem* [Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions]. Artmed Editora.

Silva, G. B. and Felicetti, V. L. (2014). *Habilidades e competências na prática docente: perspectivas a partir de situações-problema* [Skills and competencies in the teaching practice: perspectives from problem situations], *Educação por Escrito* (5)1: 17–29. http://dx.doi.org/10.15448/2179-8435.2014.1.14919

Yin, R. K. (2005). *Estudo de caso: planejamento e métodos* [Case study: research design and methods] (3rd ed.). Bookman.

Zabala, A. and Arnau, L. (2010). *Como aprender e ensinar competências* [How to teach and learn competencies]. Artmed Editora.

Zarifian, P. (2001). *Objetivo competência: por uma nova lógica* [Competency objective: for a new logic]. Atlas.

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