The reciprocity in teacher-student's relationship in a medical course with active methods

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Abstract
Learning in active methods, as Problem-Based Learning (PBL) and Problem-Solving, depends essentially on the link teachers-students. This research sought to understand the experiential process of medical teachers with students' training of 1st, 2nd, 5th and 6th grade of the medical course of a Faculty in São Paulo’s interior. Semi-structured interviews were carried out and the methodological framework of Grounded Theory and the theoretical framework of Symbolic Interactionism were used. Sample was constituted by theoretical saturation, occurred in the 19th interview. The theoretical reference for the discussion of the results was Symbolic Interactionism. Article focuses on the 'Finding: Empowerment, Experience and Motivation as Permanent Enablers of Active Methods' category, specifically the sub-category 'Experiencing reciprocity in operationalizing the active method'. The study enabled to deepen the knowledge about the theoretical-practical presuppositions underlying teaching, essentially on the aspect of the teacher-student’s relationship. It is discussed how much the teacher can provide greater security to the student and, simultaneously, to have his practice strengthened. Thus, it contributes to the process of ongoing training of medical teachers and other professional categories in active methods.

Keywords: Medical education, Teacher student interaction, Teaching methods.

Introduction
In order to meet the demands for a more comprehensive and humanized care in the Unified Health System (UHS) and the National Curricular Guidelines (NCG) for the medical course, Higher Education Institutions (HEI) have been seeking new methodologies and teaching-learning strategies to form a professional with a generalist, humanist, critical, reflective and capable profile.
to act in a perspective of assistance consistent with these assumptions (FRANCISCO, TONHOM, 2012).

Among the active methods adopted, Problem Based Learning (PBL) and problematization stand out in order to contribute to meaningful learning and facilitate the process of developing students’ professional competence. In these methods, students’ prior knowledge is valued, concepts are constructed in a contextualized way, articulating theory and practice and there is the stimulus to active search of students and cooperation in small groups, aiming at meaningful learning (CHIRELLI; PIO; SOARES, 2016).

Learning situations demand a climate of reciprocity, connection, authorship, creation and respect (BATISTA; VILELA; BATISTA, 2015). There is no knowledge outside a connection that can be processed by the mind. It is important, in this conception, that teacher be able, as a constant exercise, to come into contact with his subjectivity and, joins him, with otherness. There is no good communication without involvement with the other. For this, commitment and active listening are necessary. Involvement must be the driving force behind educational success. Another significant component is the trust established during the communication, which originates from mutual support, which is so important for the construction of effective feedback for evaluation processes (AGUILAR-DA-SILVA, 2014).

If we consider that subjectivity is built in relation to the other and feeds it throughout life, coexistence with the teacher can provide the student with skills to establish intersubjective relationships and sustain them. Rios and Schraiber (2012), when discussing humanization and humanities in medicine, establish the link between teaching practices and the development of intersubjective care. They refer to the attitudes being learned in school by professional models and by the way in which the learning process is developed. The teacher-student relationship is thought, in this sense, as the pedagogical meeting that allows the intersubjective experience necessary to the learning of relational competence, including moral formation (FREIRE, 1996).

A positive factor in medical education lies in the recognition of the complexity of human relationships. Training institutions should encourage and promote excellence in the relationships between teachers and students, since they are lifelong relationships between peers and can be established as a model of citizenship (VIEIRA, TAMOUSAUSKAS, 2013).

The constant rethinking about the act of educating is on the rise in current reality. Delors (2010) presents the concept of lifelong education as the key that opens the 21st century’s doors. It converges towards another frequently proposed concept: about “educational society”, in which everything can be an opportunity to learn and develop the talents. It discusses the four fundamental learning in this sense: learn to know, learn to do, learn to live together and learn to be. Learning to know, or learning to learn, contemplates benefits from the opportunities offered by lifelong education; Learning to do, providing competence that makes the person capable of facing many situations and working as a team; Learning to live together, developing the understanding of the other, respect and perception of interdependencies; Learning to be, developing, in the best possible way, the personality and to be able to act with an increasing capacity for autonomy, discernment and personal responsibility (DELORS, 2010).
In order for education to be structured according to these four pillars of knowledge, the aims of the educational system and teachers’ competences cannot be dissociated, so teaching practice needs to be consistent with the objectives of the school (ARRUDA et al., 2008).

There is no way to think about changes and didactic-pedagogical innovations dissociated from the teacher, as it is not possible to disaggregate their professional identity from the perspective of teachers’ training, since there is interdependence between both factors. It is also recognized there is a need for a didactic-pedagogical training that is unrelated to a relationship of knowledge and power, experiences of loss of autonomy and specialisms in relation to the contents (ALMEIDA; BATISTA, 2011).

This requires a new conception of the teaching being: facilitator, mediator and guiding the learning of each student and their own learning (KOMATSU et al., 2003). Aguilar-da-Silva (2014) adds the necessary change of posture, with a change in the way of being a teacher.

Teaching-learning process is a transformation that combines knowledge of pedagogical aspects, such as cognitive process and the contributions of evaluation. Specific pedagogical training is necessary, in this sense, to alleviate weaknesses that reside in teachers’ training. Good technicians are not necessarily good teachers and what is noticed is that often these are devoid of training (BATISTA et al., 2015).

According to Batista, Vilela and Batista (2015), medical teaching seems to emerge amidst a network of constraints, with strong links to the field of practice. In medical schools, the continuity of a traditional model in training is related to the individualistic character of the labor market.

Transformations in teaching will only occur if teachers broaden their awareness of the historical, social, cultural, and organizational contexts of educational practice itself. The good professor of medicine in today's society includes in his professional profile not only scientific and methodological competences, but also all the particularities of his teaching work, such as psych pedagogical, communicational, investigative, academic-administrative and humanistic, which, as a whole, provides an integral formation (BATISTA; VILELA; BATISTA, 2015).

Rêgo and Batista (2012) carried out bibliographic research in national and international databases and pointed out the scarcity of studies exploring the experience of medical professor with medical student's training, specifically in curricula that use PBL. Considering the need to expand studies of this nature, this study intends to understand the experience of reciprocity between student and teacher when operating active methods.

**Method**

It was a qualitative research, with the methodological reference based on the Grounded Theory (GT), a method whose purpose is to know the phenomenon in the context where it occurs, observing the interrelation between meanings and action. The term GT means the theory was derived from the data, systematically collected and analyzed through research (STRAUSS; CORBIN, 2008).

Coding procedures involve identifying, developing, and relating concepts, which are the building blocks of theory. The categories (sub processes) are abstractions of the phenomenon observed in the data and form
the main unit of analysis in GT. The theory develops through working with categories, from which emerges the central category, a process, as a consequence of the analysis (STRAUSS; CORBIN, 2008).

This study was conducted in a Higher Education Institution (HEI) with medical teachers from the medical course. This faculty adopts the PBL methods and problematization since end of the 1990s, undergoing several curricular changes during this period, in order to adapt them to the demands of the UHS and the NCG. Participants in the study were medical teachers from the 1st, 2nd, 5th and 6th Grades of Practice (using problematization) and from the Systematized Units (using Problem Based Learning) from the 1st and 2nd grades.

The sample was intentional, consisting of theoretical saturation, that is, the participants were invited by educational scenario and grades until: (a) no new or relevant data emerged in relation to a category, (b) the category was well developed in terms of properties and dimensions, showing variation, and (c) relationships between categories were well established and validated (STRAUSS; CORBIN, 2008). The analysis took place concomitantly with the collection, finished with the construction of the theoretical model with the data themselves and with the participants.

After an opinion of the Research Ethics Committee (REC) under number 259.123, teachers were invited and informed about the research’s purpose, by reading the Informed Consent Form (ICF) of participation.

The data were collected during 2014, by the researchers themselves. There were semi-structured interviews with the request: "Tell me about your experiential process and the pedagogical practice linked to the formation of a medical student." The interviews were audiotaped, with an average duration of 40 minutes. Each teacher was identified with a letter, in parentheses, at the end of the interview excerpts, illustrating the presentation of the results ("T" for the tutors of the Systematized Units and "F" for the Facilitators of the Practice Units). After the letters T and F were added letters in the order of the alphabet to identify in coding each participant. There were teachers who played roles as tutors and facilitators in the same grades or in different ones. Therefore, after the letter (s), the grade (s) was/were differentiated. "TA1st2nd", for example, identifies that interviewed teacher, in this case, is tutor, called A, first and second grade. Likewise, "TI2ndF5th" means to be this teacher, second grade’s tutor and fifth grade’s Professional Practice Unit (PPU) facilitator.

The theoretical saturation was configured in the 19th interview.

The audiotaped interviews were transcribed in full. The analysis followed the steps of GT methodological framework: 1. Microanalysis: detailed analysis, line by line of the teacher's experience, generating initial elements about the teacher-student relationship; 2. Open Encoding: held an analytical process through which concepts were identified that represented the action/interaction of the teacher with the student and the methodology; 3. Axial coding: from the concepts were generated initial subcategories and categories, linking them, according to their properties and dimensions, to build the theory; 4. Selective encoding: a process of integration and refinement of the theory in which the categories are organized around a central concept of the justification (main category) was performed.
The present article is part of a larger study that generated as results four subcategories of medical teacher's experience: Approaching: becoming a teacher in active methods with different previous experiences and the challenges of the need for pedagogical training to perform teaching role; Finding: the training, experience and motivation as permanent facilitators of active methods - the construction of teaching role associated with learning by doing and the relationship with the student; Disconcerting: lack of interest, training, experience and heterogeneity in driving as difficulties of teaching-learning process; Finding again: educational management as a potential alignment of teacher's education. The central category was called: Among approaches, meetings, disagreements and reunions of medical teacher with teaching and learning active methods: ongoing qualification and management as mediators of teacher's development.

This study focuses on the teacher's encounter with the method and relationship with the student, which corresponds to the category Finding: empowerment, experience and motivation as permanent enablers of active methods', specifically the subcategory' Experiencing reciprocity by operating the method active'.

Results

From 19 teachers participating in this study, nine were tutors, five were also facilitators of other grades (55%), three of whom were included in the two final grades. From the 10 facilitators, six worked in other grades (60%), two in the first and the last grades. One tutor was exclusively in the first and two in the second grades. Two facilitators were only in the second grade and four were only in the last years (47.4%). Eleven women (57.9%) and eight men (42.1%), with a mean age of 48 years, with ages ranging from 36 to 64 years. 10.5% were graduated in the 1970s; 26.3% in the 1980s; 26.3% in the 1990s and 36.8% in the 2000s. Four teachers were graduated in courses with active methodologies. They held the highest academic qualifications of PhD (15.8%), masters (36.8%) or with professional qualification degree/ medical residency (47.4%).

Among the categories, subcategories and elements found, the present article presents and discusses a specific subcategory "Experiencing teacher-student reciprocity when operating the active method" and its elements. Table 1 summarizes these results.
Table 1 - Category, subcategory and elements

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<tr>
<th>CATEGORY</th>
<th>SUBCATEGORY</th>
<th>ELEMENTS</th>
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<td>Finding: empowerment, experience and motivation as permanent enablers of active methods - building the teaching role associated with learning, doing, and the relationship with the student</td>
<td>Experiencing reciprocity by operating the active method</td>
<td>1 Modeling in the experience of practice: flexibility and openness of the teacher awakened by the process of learning in the relationship with the student</td>
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<td>2 Feeling the positive repercussions of teacher's abilities and attitudes in relation to the student</td>
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<td>3 Realizing the growth of the student and his qualification from the curricular proposal</td>
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Source: Prepared by the authors.

This subcategory is about the conception that method favors the student-teacher relationship. Teacher can strengthen the student's certainty and have his practice intensified in view of the active student's role. The experience in active method mobilizes teacher's perception about the necessity of a permanent learning. Teachers have the possibility to review their role by analyzing the relationship with knowledge and about the student inserted in the process.

Some teachers establish comparisons based on the operationalization and the teacher-student relationship between the different methodological proposals, traditional and active. They identify that, in addition to the student's contact with teacher in traditional methodology being guided by the transmission of knowledge through disciplines, made by the teacher, there is no possibility for teacher to identify student's personal questions due to the position occupied and also by the quantity of students.

In some types of active methodologies, such as in PBL and in problematization, teachers identify a greater approximation with the student, with possibilities of greater connection, due to the expected curricular organization, which includes a small number of students for each teacher. Teachers remain in education motivated by the relationship with the student, with an interest in accompanying him in his training; feel the positive repercussions of the affective skills undertaken in this relationship, with a formative character in personal and professional aspects. They cognize the growth of the students and their qualification evaluated by other schools. Thus, they experience reciprocity by operating active methods.

The amplitude of the knowledge's guiding problems used in mentoring, the changes between the generations and the different group compositions are seen as stimulus for teacher to seek continuous knowledge. They feel that work in small groups and the operationalization of activities require themselves other dynamics and attention, leading to the development of other skills, reflections on their experiences and ideas, professional and personal changes.
Element 1 Modeling in the experience of practice: flexibility and openness of the teacher awakened by the process of learning in the relationship with the student

This element demonstrates the conceptions of teaching and learning in the perspective of the teacher before the experience in method. Teacher evaluates the proximity provided by the method, narrowing the teacher-student link. In this sense, it makes comparative evaluations between active and traditional methodologies in what concerns the knowledge acquired by teacher and the approach with the student. Teacher realizes his own growth in practice by becoming more available to learning and in relationship with the student, teaching-learning process is both dynamic and with the possibility to rotate roles of those who teaches and learns. As his readiness for process and change increases, he better identifies students and their needs. In this relationship, he can also identify his own learning gaps, which encourages him to seek other references and new knowledge. The students’ needs and their differences mobilize teacher in his experience with the realization that teaching and learning process in active methods is dynamic and generates new discoveries. Thus, the practice mobilizes learning on a permanent basis.

So I think it creates a bigger connection, right? Here the link is generalized, there in the traditional method, you have affinity with one, you connect with that one, and the others ... There is a teacher who sometimes asks me: "You know so-and-so, from there (the hospital)". I mean, I had a lesson with the person, but since I did not create a connection, I did not remember who taught me [...]. Damn, after we had already gone from a certain subject, that we did not have anymore, they only knew the person was a student by the badge, because I do not think there's time to create a connection because I guess there are 180 students a year (TD25th.10).

[...] then I think what aroused the most was this and even in this methodology itself, of course, you can participate in this process and not only pass information and, yes, learning together with them, you are guiding, but at the same time you are also part of the learning (process) and I think that is what propels there a greater interest [...] (FS5th.8).

Because in traditional method, for example, you have eighty students and teacher is in the front he will not know if student is doubtful or not [...]. Here we know, we can get easy, right? [...] is every week, twice a week, we can, if the person has a little sensitivity and desire to get, she can. That's why we stayed here, that's why I stayed, because I like it and I dedicate myself [...], but it's that thing, you learn and you're modeling and that's very important [...] (TG25th, 16).

Element 2 Realizing the positive repercussions of teacher's abilities and attitudes in relation to the student
This element encompasses perceptions that teacher’s organization, based on professional practice, is appreciated by students and, consequently, evaluated. Teacher realizes there is a need to find strategies to rescue, motivate and work with student’s resistances for some situations, especially in the last years of the course. They feel that teacher’s involvement facilitates a relationship of trust, producing formative changes in personal and professional aspects.

[…] I used WhatsApp a lot to call a student who was late and to communicate what time the tutoring begins, to clarify some queries that were not clear or the deepening they should have, so it was an interesting conversation and this group still kept the Facebook group and used it for something else, so, after the question answered, a person had an interesting document, so he posted on Facebook, or a movie, a link from a movie, so we used it as a resource as a kind of library and to exchange documents (TB1st.13).

[…] so is that, in the sixth year, so it is a short space, a lot for us to discuss. […] then sometimes I say this: things are all in our head, in a sequence, and in the middle of the way there’s something that will not come out like that and we have to find a strategy for that there, right, I’ll do it, I do not know, I’ll invent, a venous access in the arm, but there you have the patient that you cannot get the vein for, but then you have to, so you have to have alternatives, so we’re going to work it out and they like it a lot. (TI5ndF5th.6th.7).

Element 3 Realizing the growth of the student and his qualification from the curricular proposal

It refers to teacher’s evaluation of the student’s development by following the curricular proposal. Also describes a proactive, responsible and independent student and the development of attitudinal / affective aspects. In this movement, it is noticed that students’ fragilities are overcome with the use of active methods.

So I guess, I think, no, I’m sure it’s a very well-accepted method, so, as much as some schools might say, it has the discourse over protecting the traditional method, I understand that when you get these places they have a very good vision, vision that was built exactly by the professionals who are coming out of the method and are showing that they are really capable professionals (TE2ndF6th.13).

[…] can get out of situations much easier, understood? Because he knows how to get it, knows how to look, knows how to think better, […] (TF2nd.23).

What I think is cool about the PBL is that it gives opportunity, it gives the opportunity of this, a person to grow, right, grow as a
person, grow as a human, grow as a professional (TE2ndF6th.10).

[...] in the fourth grade that I have participated in practical evaluations of the fourth year and he does that unscheduled anamnesis, just looking into the patient's eye and talking, we almost explode with pride, you know? So, this is very gratifying for us, man, looking at that guy and how did it goes, huh? Look what turned up the one who came here as a kid, playful, even messy, sometimes, look at that guy, man, he's almost done, he's going for a fifth year. Then, it is very fulfilling (FK1st.18).

Discussion

It is understood that weaknesses and strengths discussed in this research are from students, teachers and curriculum and involve personal and professional subjects in the experience.

Teacher refers to his learning in relationships, in student and teacher exchanges, that is, in the discussion spaces of practices or in the powerful spaces where there is communication. In this, the exploration translates into the experience of reciprocity when operating the active method.

It is observed that PBL, as a method, by its form of operationalization, has been seen as important to produce the pedagogy of interaction, that is, the conformation of the group itself implies communication, necessitating proximity and linkage (TEÓFILO; SANTOS; BADUY, 2017).

The discourses of teachers that generated the subcategory 'Modeling in the experience of practice: flexibility and openness of the teacher awakened by the process of learning in the relationship with the student' indicate how much the teacher feels motivated to operationalize the method. One of the elements that provide this feeling is the experience time undergone in the relationship with the student, in the teaching-learning process. In his interactional experience, whether in the group with teachers or with other students, he interprets these experiences as learning, which has as answer the perception of reciprocity.

Gomes e Rego (2014) support the need for a paradigm shift in thinking and practice. They refer to the need, on one hand, for the learner to abandon his passive condition and to commit himself to his learning, and on the other, the teacher should be open to changes in his way of working, being attentive to the active methodologies and the new strategies of learning (ARRUDA et al., 2008).

Returning to teachers' discourse, their group experiences make them rethink their actions, with power to open up to practice. This flexibility in learning from experience is a kind of capacity to deal with not knowing, not a rigid and closed possession of knowledge. The development of the capacity for observation and listening involves the observation of one's limits and a certain degree of maturity (DUPAS, 2008).

The subcategory 'Feeling the positive repercussions of teacher's abilities and attitudes in relation to the student' indicates that teacher-student relationship is a pedagogical meeting that allows the intersubjective experience necessary to learn relational competence. Students value the connection with the teacher, especially when they feel welcomed by him, and feel these
experiences as fundamental to the educational development (RIOS, SCHRAIBER, 2012).

The need for time, from experience to adaptation to fit the changes is symbolic. Since we were born, we are exposed to social relationships. The individual constructs his identity in his relation with the other. This is explained by Charon (2004), the formation, initiated in childhood, of the *self* concept of Symbolic Interactionism, built under the logic of the processes of interaction. From the perspective of an intersubjective and symbolic matrix, self is defined by individuation, accomplished through socialization. The interaction is formed by actors involved in a mutual social action; are dialectical processes in which individuals construct groups and collectivities and, at the same time, suffer the interference of this group / collective involvement (CHARON, 2004).

The long path of formation is the production of subjectivities or, according to Charon's theoretical conception (2004), from definition and redefinition of the *self*. It is discussed on an educational phenomenon that requires personal development rather than transmission and memory. In this sense, it is necessary to cross the profession's technical and human interfaces (RIOS, SCHRAIBER, 2012).

For proper development, people need to feel loved and maintain interpersonal contact, forming a secure basis that would sustain the impetus of exploitation for individuals at any stage of life. Works involving teacher-student interaction confirm the relevance of promoting a secure relationship context, in which the teacher would demonstrate interest and availability to meet the needs and perspectives of the students. The social contexts that facilitate intrinsic motivation have in common interactions that consider the needs of its members and are zealous in supporting them (RIOS, SCHRAIBER, 2012).

Lima et al. (2015) emphasize working in small groups, added to respect for diversity, knowing how to listen and include the opinion of the other, as facilitating elements of link building.

In this sense, as Aguilar-da-Silva (2014) points out, small groups refer to the need to understand group dynamics, in the sense of relationships and teaching posture. Each group has its peculiarities and the teaching role is to identify the roles played by group members, the relations established in the context of the dynamics of an operative group, as described by Pichon-Rivière (2009).

The possibility of learning through the teacher-student relationship can stimulate both. Leadership involving changes and resistances (PICHON-RIVIÈRE, 2009) may cohabit in the same group, since each brings a definition of *self* in the meeting. However, group work can favor change by enabling the group to construct and define new identities, redefining their *self* (CHARON, 2004).

According to Pichon-Rivière (2009), learning and communication have a motivational substructure. Recreation or learning depends on motivational behavior, since motivation is capable of recreating the object. Motivation begins in an individual perspective and the secondary directional aspect occurs in the group's perspective. From the point of view of social interaction, individuals suffer the interference of group / collective involvement, determining or directing their actions (CHARON, 2004).

The subcategory 'Realizing the growth of the student from the curricular proposal' indicates how much the development of the student can
affect the teacher. Berbel (2011) refers to the teacher as a great intermediary of work processes, which can contribute to the promotion of student’s autonomy as well as to the maintenance of control over their behavior. Noting their students become more autonomous and building knowledge, teachers have reported being motivated in relation to their own teaching practice.

It is noticed that the expected teacher’s training is based on processes of reflection and motivation to search for information, propitiating the construction of knowledge compatible with the solution of problems, in an extended perspective, with the students. Making the student mediation with his objects of knowledge becomes a gain for the teacher and for the student by the acceptance (RIOS; SCHRAIBER, 2012) and for the significant exchanges. Both change; transform themselves (BATISTA, VILELA, BATISTA, 2015).

Conclusions

The learning process in PBL and in problematization depends essentially on the connection established between teachers and students. The results indicated the importance attributed by teachers to the experience of reciprocity when operating the active method. The teacher-student relationship enabled the experiences in student groups to bring learning for both.

They reported that in the interaction with students, the perception of their own pedagogical actions, through the appreciation of their work is visible in students’ feedbacks, was important, as well as the effective results of this pedagogical practice, when observing the students’ behaviors, seeking, learning and developing. Recognizing the success of their students, teachers demonstrated satisfaction.

Teaching activity in active methods became significant, as teachers actively lived the pedagogical process, they were open to bonding and attentive to the mutual learning relationship with their students.

We hope this work contributes to the process of ongoing pedagogical training of medical teachers and other professional categories in active methods, in order to stimulate an investment beyond technical and theoretical aspects, in human interactions present in pedagogical processes that have been necessary for teacher development.

References


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