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Silent student: negligent or shy?

Estudante silencioso: tímido ou negligente?

Bárbara Barros de Figueiredo[1,2] figueiredobbarbara@gmail.com
Gilliatt Hanois Falbo Neto[3] falbo@fps.edu.br
Paula Ferdinanda Conceição de Mascena Diniz Maia[3,4] paula.diniz.maia@gmail.com

ABSTRACT

Background: The Problem-Based Learning (PBL) method has been established worldwide over the last decades. The student´s knowledge and their participation have become central parts of the whole process of learning, with active participation being expected of them. Some individuals might feel uncomfortable and present with difficulties to speak and participate when confronted with this situation, therefore being defined as "silent students". In the literature, there are no specific definitions of the term "silent student". The silent student may be seen as negligent and dysfunctional. Nevertheless, the studies about silence and communication tools are showing different conclusions.

Objectives: To evaluate the global achievement of the silent student compared to their peers.

Methods: Observational, cross-sectional study with an analytic component, developed at Faculdade Pernambucana de Saúde. Tutors with more than one year of experience in the PBL method and students studying for more than one semester using the PBL method participated in the study. Students transferred to other institutions, or on medical/maternal leave, or the ones that had their course interrupted did not take part of the study. We developed a checklist and a tutorial video, sent via institutional e-mail, to all tutors of the first to the fourth years of the medical course at the institution; through this checklist and video they were able to identify all the silent students in their groups. After receiving the tutors' answers, sociodemographic data and the scores of all the students were requested, separating them into silent and non-silent students. This information was analyzed and compared aiming to evaluate the global achievement of the silent student and their peers. This study followed Resolution n. 510/2016 and was submitted to the Research Ethics Committee and approved under CAAE number 47885021.0.0000.5569.

Results: When comparing silent students with their peers, it was observed that the mean scores were similar, with no statistical significance.

Conclusion: It seems that silent students are as qualified as their peers, learning and being qualified throughout medical formation.

Keywords: problem-based learning; students; communication barriers.

RESUMO

Introdução: *Nas últimas décadas, o método de Aprendizagem Baseada em Problemas (ABP) vem se consolidando no cenário educacional mundial e brasileiro. O conhecimento do estudante e sua participação passam a ser peças centrais no processo de aprendizado, tornando a fala e a escuta relevantes na aprendizagem. Alguns indivíduos demonstram dificuldades no processo de fala e participação, sendo, genericamente, definidos como "estudantes silenciosos". Na literatura, entretanto, ainda não existe uma definição clara da expressão. O estudante silencioso passa então a ser definido como negligente e pouco dedicado aos estudos, sendo visto como objeto de disfuncionalidade do grupo tutorial. Contudo, o estudo do silêncio e das ferramentas de comunicação tem apontado outros caminhos.*

Objetivo: *Este estudo teve como objetivo avaliar a média do desempenho global do estudante silencioso em comparação com a média de desempenho de seus pares.*

Método: *Trata-se de um estudo de corte transversal com componente analítico, realizado na Faculdade Pernambucana de Saúde. Participaram do estudo tutores com um ano ou mais de experiência na metodologia ABP e discentes com um semestre ou mais de estudo na metodologia. Excluíram-se os alunos transferidos durante o período de estudo, em licença médica/licença-maternidade e os afastados por interrupção do curso. Elaboraram-se um checklist e um vídeo tutorial que foram enviados, por meio de e-mail institucional, a todos os tutores do primeiro ao quarto ano de Medicina para a identificação dos estudantes silenciosos de seus respectivos grupos. Após recebimento das respostas dos tutores, solicitaram-se os dados sociodemográficos e as notas das avaliações do grupo tutorial (presencial e fórum), da avaliação cognitiva e do Teste de Habilidades e Competências de todos os estudantes do período definido. Os dados obtidos foram analisados com enfoque comparativo no desempenho global do estudante silencioso em relação a seus pares. O estudo seguiu a Resolução nº 510/2016 e foi submetido ao Comitê de Ética em Pesquisa da instituição e devidamente aprovado sob CAAE nº 47885021.0.0000.5569.*

Resultado: *Quando comparamos o estudante silencioso com seus pares, identificarmos que a média das notas foram similares, não havendo significância estatística relacionada à diferença entre os dois grupos.*

Conclusão: *Do ponto de vista teórico, o estudante silencioso acompanha as tendências de seus pares, aparentemente se capacitando e se qualificando ao longo da faculdade.*

Palavras-chave: *Aprendizagem Baseada em Problemas; Estudantes; Barreiras de Comunicação.*

[1] Hospital das Clínicas da Universidade Federal de Pernambuco, Recife, Pernambuco, Brazil.
[2] Faculdade Pernambucana de Saúde, Postgraduate Program in Education for the Health Area, Recife, Pernambuco, Brazil.
[3] Faculdade Pernambucana de Saúde, Recife, Pernambuco, Brazil
[4] Universidade Federal de Pernambuco, Recife, Pernambuco, Brazil.

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INTRODUCTION

In recent decades, there have been changes in teaching methodologies and methods with an emphasis on the distancing from the student-centered learning and the learning process, with the Problem-Based Learning (PBL) method being a highlight in this scenario. This method has the tutorial group as support for the studies and dialogue and the sharing of ideas as the anchorage of the process[1,2]. Participation, especially verbal participation, would be this time, the north, the beacon, the key element[2,3].

Studies such as the literature review by Li et al.[4] bring information and relevant content about the tutoring groups and their impact on the learning dynamics, demonstrating the range of publications on this topic in the scope of PBL teaching. However, the number of publications regarding the actors involved in the process and the specific functions of silence and the silent student is more limited[3,5].

Verbal communication, configured as a founding element, leads to the question of what determinants would lead a student to be defined as silent[6]. Factors such as the individual's personality, cultural and linguistic limitations, and the attitude of the tutor and the other students in the tutorial group are problematized[4,7,8].

The silent student and silence can be understood as a burden to the members or even dysfunction of the tutorial group, with these students being seen as passive or as failing in the learning process in some contexts[6,8].

The understanding of the role of silence in the tutorial group has become the object of study in some investigations, although in a limited number. The conception of silence as dysfunctionality or something undesirable has gradually been replaced by the idea of silence as a component of thinking and learning[7].

From the conceptual point of view, the silent student is defined as one who, in general and in most of the meetings of the tutorial group, would have an average participation of less than five times per meeting (compared to an average participation of a typical student of 45 or more times), with fast, directed speeches and with little engagement in problematizations and discussions[9,10]. The scarcity of more robust and structured definitions about this character and individual in a tutorial group is noteworthy, even leaving open the need for a clearer conceptualization for better identification of this student.

It is important to evaluate how the dynamics of the group itself would define, on the other hand, each student's interest in participation, in a dynamic, reciprocal and two-way process[4,6]. Introspective people, with characteristics that tend to be self-centered and focused on thoughts, tend to reflect and contemplate their ideas before exposing and sharing them, causing them to generally remain silent for longer[11]. This characteristic can be seen both as a quality/characteristic inherent to the individual, as well as negligence and lack of study and knowledge. The evaluation requirements of the tutorial group take into account challenging actions and characteristics for individuals with this personality type, without providing them, on the other hand, with basic tools to face this type of challenge and develop their communication skills[11]. The idea of silence and the meaning of the silent student are then put to the test, highlighting the need to modify the concepts of passive, dysfunctional, incapable or mentally inferior student[9,10,12,13,14].

On the other hand, studies indicate that students with diverse personalities, including extroverts, may feel cornered and undervalued when presenting ideas in a tutorial group, leading to a lesser participation, as they feel they have little to contribute to the group[6,14]. Some students may also believe that the environment of the tutorial group is configured as a race aimed to speak, which can lead to situations in which the quantity/volume of speech and verbal participation obscure the quality of these participations[10].

In general, several factors are observed that can interfere with the students' speech and active participation in a tutorial group[11]. In a complementary way, we understand that students remain silent for multiple and diverse reasons, and it is extremely simplistic to think about this entire dynamic from a single point of view[4,6,9,11,15]. The silent student would then be seen as a reflection of an intricate relationship between personal and personality factors with cultural and contextual factors, which also include the relationships established within the tutorial group itself[4,6,10,11,15].

The present study evaluated the silent student's global performance, raising as a hypothesis their capacities and consolidation of knowledge measured through the different forms of evaluation proposed in the context of the present study. Their performance was compared to the other students' overall performance, putting into perspective these individuals' capacities and skills in order to assess whether their silence is reflected in low academic performance in the proposed assessments, when compared to their peers.

METHOD

This was a cross-sectional study with an analytical component carried out at Faculdade Pernambucana de Saúde (FPS), located in the city of Recife, state of Pernambuco, Brazil. The study was carried out from May 2021 to March 2023, and was approved by the Research Ethics Committee (REC) of the Institution under CAAE number 47885021.0.0000.5569.

The study population consisted of students attending the 1st to the 4th years of medical school of FPS, identified as

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silent students and the other students attending the 1st to the 4th years of the same academic period and by tutors from the 1st to the 4th years of medical school of FPS, who identified the silent students in their respective tutorial groups.

We defined as inclusion criteria: 1) Tutors with 1 year or more of experience teaching the PBL methodology; 2) Students with 1 semester or more of study in the PBL methodology; 3) Students who had taken at least one Skills and Competencies Test. The exclusion criteria included: 1) Students transferred to other institutions during the study period; 2) Students on medical or maternity leave; and 3) Students away from academic activities due to course interruption.

Tutors from the 1st to the 4th year of medical school at FPS were invited, through an Invitation Letter sent to the institutional e-mail, to participate in the research, and to sign the Free and Informed Consent Form and the Confidentiality Term, which was requested only from the tutors. In the invitation letter, we presented the meaning of the term 'silent student', its characteristics and three criteria for its identification, namely: 1.The student who had an average participation of less than five times per meeting, in most of the tutorial group meetings; 2. The student who communicated through quick and well-directed speeches, most of the time; 3.The student who showed little engagement in problematizations and discussions during most of the tutorial group meetings. In addition, we invited the tutor to bring elements pertinent to the identification of this student according to these professionals' observation. After acceptance, the tutors received, also via institutional e-mail, a checklist containing the three criteria described above for a yes (present) or no (absent) response, in addition to presenting a space for the identification of the class and the student (who would have their name changed into a code before the researchers had access to the information, for confidentiality purposes). The checklist was prepared via online survey, with the behavioral profile of the silent student being based on data from the literature[9], and a video tutorial containing the necessary guidelines for using the checklist. The checklist was filled in with the student's enrollment number, without their nominal identification and subsequent coding.

The checklist was prepared based on the work of Remedios et al.[9], "The silent participant in small group collaborative learning contexts", in which the authors bring in some criteria for defining the silent student, namely: the student who had an average participation of less than five times per meeting, in most of the tutorial group meetings; the student who communicated through quick and well-directed speeches, most of the time; The student who showed little engagement in problematizations and discussions, during most of the tutorial group meetings. If the student scored in any of the criteria in the majority (> 50%) of the meetings in the tutorial group, after 40% of the total meetings, they might be considered a silent student.

After being filled out by the tutor, the checklist was sent back to the researcher responsible for the project, who later requested from the FPS academic secretariat the performance scores of the identified silent students and the other students from the 1st to the 4th years of medical school in the following evaluations: tutorial group, forum, cognitive and Skills and Competencies Test (THC). The tutorial group evaluation instrument is applied at each meeting and consists of 6 items, namely, punctuality, prior knowledge, participation in the forum, clear exposition of ideas, function performance in the tutorial group and harmonious interaction as a group. Each item varies in score from 1 to 5 and an average is given to the final score of the given tutorial meeting, which is the score considered in the present study.

For the statistical analysis, the SPSS 25.0 *(*Statistical Package for the Social Sciences) software for Windows and Excel 365 were used; in addition to the Kolmogorov-Smirnov Normality Test for quantitative variables; and the Mann-Whitney Test (Non-Normal) for comparison with two groups. All tests were applied with 95% confidence and the results were calculated taking into account valid answers, that is, the ignored answers were not considered.

RESULTS

A total of 827 students and 11 tutors participated in the study, which identified 13 students as silent, of whom only 9 students met the inclusion criteria (70%). Among these, 4 were identified due to the presence of fast speech in most of the tutorial group meetings, one was identified as speaking less than 5 times in most of the tutorial group meetings, and 4 were identified in more than one of the presented checklist criteria.

Of the total number of students, 487 were female (58.9%) and 340 were male (41.1%). As for the age group up to 20 years old there were 138 students (16.7%); between 21 and 30 years old, 648 students (78.4%); between 31 and 40 years old, there were 34 students (4.1%); and over 40 years of age, 7 students (0.8%), as shown in Table 1. It was observed that 13.6% of all the scores described were invalid (scores defined as zero), not being considered for the study analysis. Of the silent students, all were aged between 21 and 30 years old.

The overall average of the scores remained above 80% in the four evaluations, being 8.02 for cognitive test/summative test – AC1 – (standard deviation 1.27); 8.24 for the Skills and Competencies Test – THC – (standard deviation 1.86); 9.23 for the score related to participation in the tutorial group – ATT – (standard deviation 0.81); and 4.0 for the score related to

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participation in the forum – EQ – (standard deviation 1.47), as described in Table 2. It is important to note that the Cognitive Test, the Skills and Competencies Test and the Participation in the tutorial group consist of values on a scale of zero to ten and the Participation in the forum varies on a scale of zero to five.

When analyzing the scores distributed by period, little variability was identified between the periods, with the scores related to participation in the forum being the ones that fluctuated the most throughout the classes. As shown in Table 3, the sixth period was the one with the worst performance in the cognitive assessments, participation in the tutorial group and participation in the forum; regarding the skills and competencies test, the lowest score was observed for the second period. It is worth noting a trend towards improvement in the scores of the skills and competencies test over the periods, with lower performance in the first four periods.

Finally, when comparing the silent student with their peers, it was possible to identify that the mean scores were similar, with no statistical significance related to the difference between the two groups, as shown in Table 4.

Table 1. Distribution of sociodemographic variables of the students who participated in the study.

Variables	N	%
Sex		
Female	487	58.9
Male	340	41.1
Age group		
Up to 20 years	138	16.7
From 21 to 30 years	648	78.4
From 31 to 40 years	34	4.1
From 41 to 50 years	7	0.8

Source: Prepared by the authors.

Table 2. Distribution of scores by type of assessment

Variables	Average ± SD	Median (P25; P75)	Minimum – Maximum
AC1[a]	8.02 ± 1.27	8.00 (7.20; 9.00)	1.00 – 10.0
THC[b]	8.24± 1.86	9.14 (7.14; 9.69)	1.43 –10.00
ATT[c]	9.23 ± 0.81	9.46 (8.84; 9.85)	0.33 – 10.00
EQ[d]	4.01 ± 1.47	5.00 (4.00; 5.00)	0.33 – 5.00

AC1 = Cognitive test/Summative test;
THC = Skills and Competencies Test;
ATT = Score of participation in the tutorial group;
EQ = Score of forum participation;
Source: Prepared by the authors.

Table 3. Distribution of grades by type of evaluation and period.

Variables	Average ± SD	Median (P25; P75)	Minimum – Maximum
1st Period			
AC1[a]	8.21 ±1.20	8.25 (7.37; 9.12)	1.00 – 10.00
THC[b]	7.44 ±1.65	7.14 (7.14; 8.57)	1.43 – 10.00
ATT[c]	9.30 ±0.93	9.56 (9.06; 9.83)	0.33 – 10.00
EQ[d]	4.58 ±0.94	5.00 (4.66; 5.00)	1.00 – 5.00
2nd Period			
AC1	8.21 ±1.16	8.33 (7.67; 9.00)	3.00 – 10.00
THC	5.50 ±1.58	5.71 (4.29; 7.14)	2.00 – 8.57
ATT	9.71 ±0.43	9.86 (9.64; 10.00)	7.20 – 10.00
EQ	4.66 ±0.83	5.00 (4.66; 5.00)	1.00 – 5.00
3rd Period			
AC1	7.68 ±1.28	7.90 (6.85; 8.60)	3.85 – 10.00
THC	7.33 ±1.57	7.14 (5.71; 8.57)	4.29 – 10.00
ATT	9.37 ±0.56	9.49 (9.10; 9.82)	6.95 – 10.00
EQ	4.06 ±1.25	4.66 (3.66; 5.00)	0.67 – 5.00
4th Period			
AC1	7.91 ±1.18	7.94 (7.05; 8.85)	4.30 – 10.00
THC	7.19 ±1.84	7.14 (5.71; 8.57)	2.86 – 10.00
ATT	9.14 ±0.95	9.42 (8.74; 9.79)	0.33 – 10.00
EQ	3.91 ±1.45	4.66 (3.66; 5.00)	0.66 – 5.00
5th Period			
AC1	8.36 ±1.27	8.60 (7.55; 9.30)	3.00 – 10.00
THC	9.49 ±0.34	9.57 (9.32; 9.74)	8.07 – 9.95
ATT	9.31 ±0.61	9.44 (8.98; 9.83)	6.00 – 10.00
EQ	3.85 ±1.52	4.66 (3.33; 5.00)	0.66 – 5.00
6th Period			
AC1	7.75 ±1.45	8.00 (7.00; 8.92)	2.25 – 10.00
THC	9.50 ±0.28	9.50 (9.29; 9.71)	8.71 – 10.00
ATT	8.28 ±0.91	8.36 (7.56; 8.92)	6.01 – 10.00
EQ	3.03 ±1.89	4.00 (1.00; 5.00)	0.33 – 5.00
7th Period			
AC1	7.79 ±1.23	7.90 (7.14; 8.62)	2.06 – 10.00
THC	9.56 ±0.43	9.64 (9.46; 9.78)	4.08 – 9.97
ATT	9.07 ±0.66	9.11 (8.66; 9.58)	5.99 – 10.00
EQ	3.46 ±1.68	4.00 (1.00; 5.00)	0.66 – 5.00
8th Period			
AC1	8.01 ±1.25	8.25 (7.37; 8.75)	3.00 –10.00
THC	9.71 ±0.22	9.78 (9.59; 9.87)	8.96 –10.00
ATT	9.22 ±0.85	9.55 (8.62; 10.00)	6.70 –10.00
EQ	4.25 ±1.42	5.00 (4.33; 5.00)	0.66 –5.00

AC1 = Cognitive test/Summative test;
THC = Skills and Competencies Test;
ATT = Score of participation in the tutorial group;
EQ = Score of forum participation.
Source: prepared by the authors.

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Table 4. Comparative values of the average scores of the silent student and their peers according to the type of assessment

Variables	Silent		p-value[e]
	Yes	No	
	Average ± SD	Average ± SD	
AC1[a]	7.88 ±1.14	8.03±1.27	0.471
THC[b]	8.47±1.44	8.23±1.87	0.744
ATT[c]	9.13±0.89	9.23±0.81	0.854
EQ[d]	3.81±1.66	4.01±1.47	0.291

AC1 = Cognitive test/Summative test;
THC = Skills and Competencies Test;
ATT = Score of participation in the tutorial group;
EQ = Score of forum participation;
Mann-Whitney test.
Source: Prepared by the authors.

DISCUSSION

It is perceived that silence is still seen as an obstacle to the development of the tutorial group and the silent student should be more engaged in the learning process, without an effective analysis of these individuals and their learning processes[10]. Studies on the definition and identification of silent students are still limited in number, as well as guidelines regarding the approach to these students[9,10]. The shift in the role of tutor teaching for the construction of students' collective and dialogued learning can be obscured in the dysfunctionality of tutorial groups, in which a few students are protagonists in the process, while marginalizing and silencing the others, aggravating the cycle of obstacles to speech and active participation in debates[4,6]. The literature shows us that there is an average number of silent students estimated at 50%, reaching 70% in some studies, differing from our findings in which 1.1% of the population was characterized as silent, based on the submitted criteria (defined through the checklist)[10].

The small number of silent students raises the question of our qualification to identify these students, reinforcing the need for training and discussions on the subject, as well as presenting us with possible cultural nuances, since the research took place in a capital city in the Brazilian Northeast, where there are profound differences in relation to the assessed scenarios in most studies[9, 10,13,17]. We have shown that it is important to implement the PBL method in different ways in different sociocultural contexts[4,6,10].

In the present study, we observed the silent student showed a performance that was similar to that of their peers, reinforcing the thesis that silence would be more related to the absence or limitations of communication tools than to the lack of knowledge and cognitive skills, in line with the literature findings, which corroborate the thesis that most silent students have the required theoretical knowledge[4,6,9,10].

It is noteworthy that the silent student followed a behavior compatible with that of their peers in relation to the four evaluations, maintaining scores that show commitment to the development of cognitive skills, especially regarding the scores related to the cognitive test and forum participation, situations in which it is possible to infer that there was an investment of study and time in researching the proposed subjects. It is interesting to note that the variations presented by the classes with the lowest or highest scores were also observed in the group of silent students.

It is noteworthy that the silent students had high scores similar to those of their peers in terms of participation in the tutorial group. The score in the tutorial group consists of six items, namely punctuality, prior knowledge (mobilized at the opening of the cases), participation in the forum, participation as a member of the group (in which they are evaluated in relation to the assessed knowledge at the closing of the case), participation in the performed functions (member, secretary or coordinator), and harmony.

The score of participation in the tutorial group is a combination of several elements and its final result does not only concern the student's speech. Additionally, harmony, representative of the student's behavior in the group, can be evaluated in certain tutorial groups only by taking into account the absence of rude, unfriendly, aggressive and violent behavior (even verbal violence) among the members. Although silence is brought up in the tutors' discourse and in the investigations as seen through the dysfunctionality bias, we think that did not translate into a decrease in the concept and score in the evaluation of this student regarding the group harmony.

The subjectivity inherent to the evaluation process, especially in the tutorial group activity, cannot be neglected either; The tutor can, instilled with the bond and the relationship with their students, evaluate participation in a given context in the light of their understanding of the student's capacities and skills constructed during other meetings and/or activities of the tutorial groups[18].

Moreover, one can reflect on the way in which speech has been evaluated from the point of view of quantity and quality of interventions in the tutorial group, and it is important to highlight the fact that the silent student had an evaluation score compatible with that of their peers regarding the participation in the tutorial group[10,19].

It is evidenced in the literature that some authors have raised the presence of dissatisfaction by some students regarding the need for the spoken word and the valorization

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of how much is said to the detriment of what is said as a contribution to the construction of knowledge[4,6,20]. It would be interesting if new studies brought greater knowledge related to the evaluation process and perception of evaluations by students, especially silent ones.

Silencing can be self-determined by several factors or inflicted by group dynamics, in which the concept of dissonance, dialogue, and knowledge as something multiple is not allowed to be put into effect[4,11,18]. In any case, situations like these do not allow the development of the global skills of all students or even lead the PBL method to be performed in all its transformative power. Therefore, the present study helps and reinforces the need to modify the prism through which we interpret and approach silence, since the silent student's commitment and effort are evident, despite their limitations and speech difficulties in that specific scenario.

In addition, some authors convey the school as the space for the reproduction of social inequalities, and it is therefore necessary to change the position of all spheres so that this situation is modified and learning spaces do not constitute places of marginalization and silencing[4,9,10,11]. Students must be heard in their demands and they must be allowed flexibility to move in different, complementary and even sometimes paradoxical spaces of speech and identity[1]. The use of technologies, student-guided whiteboard discussions, and tutors' critical and flexible posture can contribute to a constructive polysomnia in the space of tutorial groups[10,18]. Thus, it is interesting to diversify the educational spaces and tools used with students.

Overall, silence can be seen as a space for the construction, negotiation and reconstruction of multiple identities in the space of tutorial groups[2]. The silent student may not be a silent person, since each individual can present themselves in different ways in different contexts[4,6]. Thinking from the perspective of participatory and collaborative methodologies and not just active ones[3,5,7] is interesting and fundamental. From this perspective, we identified as one of the weaknesses of the present study the fact that it is a cross-sectional study, and it is relevant to consider new studies that follow this silent student throughout the course, making it possible to evaluate the impact that pedagogical approaches have on these individuals' formation.

In fact, the success of teaching and learning is also related to the participation of all students and the interaction established between the members of the group, in a process of cooperation, questioning and continuous learning, progressively encompassing levels of greater complexity of knowledge and skills[4]. The global gain by focusing on communication tools and social skills concomitant with technical development is evident and reaches all students.

The differences between the thoughts and theories about the PBL method and the adjustments and constructions developed in the practice of doing and performing the method come to light in the present study, in which a regional trend different from that shown in the literature is perceived and in which the silent student stood out in performance to the same extent as their peers. In fact, the theoretical frameworks are deepened in the practice of the daily construction of knowledge and learning and are transformed as they are implemented[4,6,9,10].

FINAL CONSIDERATIONS

The silent student is a component part of the tutorial groups and understood as the student with communication difficulties, needing tools that help in this process. From a theoretical viewpoint, the silent student follows the trends of their peers, apparently training and qualifying themselves throughout college.

Further studies need to be carried out to understand which students could be defined as silent, as well as what the main causes are to determine a student as silent in that specific context.

Finally, it is necessary to qualify tutors in the identification and approach of this silent student, understanding that the tutorial group and training in PBL are not limited to offering technical knowledge tools only, proposing to train the student, helping them to move in a world that demands and requires research, communication, self-knowledge and interpersonal relationships based on ethics and respect.

AUTHORS' CONTRIBUTIONS

Bárbara Barros de Figueiredo: Corresponding author; Gilliatt Hanois Falbo Neto: Supervision (leadership); Paula Ferdinanda Conceição de Mascena Diniz Maia: Supervision (support).

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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