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SECTION: ARTICLES

Teacher's experience with the use of active methodologies for learning in paediatric semiology[1]

La experiencia docente con el uso de metodologías activas de aprendizaje en la semiología pediátrica

Experiência docente com o uso de metodologias ativas de aprendizagem na semiologia pediátrica

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ABSTRACT

The study of paediatric semiology presents challenges in the learning process when limited to traditional teaching methodologies. The objective of this experience report is to share the gains for the study of semiology and for teacher professionalisation with the use of active methodologies in real practice contexts, in addition to the difficulties and challenges encountered in introducing this form of teaching. The study describes teaching practice in paediatric semiology since 2019, with the use of active methodologies for attending to children in nurseries and preschools, with a focus on meaningful and collaborative learning. Students from different semesters make up the teams that work together. The teacher monitors the sessions, discusses the cases and carries out formative assessments. As a result, it is observed that the theoretical and practical content learnt is re-signified through the experience; teamwork brings students closer together, increases confidence and autonomy, as well as stimulating the learning to learn; knowledge of the reality of the lives of children living in diverse social contexts makes students more critical and reflective about attitudes and ethical conduct. Leaving the controlled environment, such as the classroom,

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for exposure to a real environment allows the student to get closer to knowing how to do things, how to live together and how to act, as they experience the peculiarities of childcare that a simulated environment does not offer. Real-life scenarios allow teachers to be bold in applying different active methodologies and contribute to breaking away from traditional teaching methods.

Keywords: teaching methods; collaborative learning; health education, child health.

RESUMEN

El estudio de la semiología infantil presenta retos en el proceso de aprendizaje cuando se limita a las metodologías tradicionales de enseñanza. El objetivo de este informe de experiencia es compartir los beneficios para el estudio de la semiología y para la profesionalización docente con el uso de metodologías activas en contextos reales de prácticas, además de las dificultades y retos encontrados en la introducción de esta forma de enseñanza. El estudio describe la práctica docente en semiología pediátrica desde 2019, utilizando metodologías activas en la atención a niños en guarderías y preescolares, con un enfoque en el aprendizaje significativo y colaborativo. Estudiantes de diferentes semestres conforman los equipos que trabajan en conjunto. El profesor monitorea las sesiones, discute los casos y realiza evaluaciones formativas. Como resultado, se observa que los contenidos teóricos y prácticos aprendidos se resignifican a través de la experiencia; el trabajo en equipo acerca a los alumnos; aumenta la confianza y la autonomía, además de estimular el aprender a aprender; el conocimiento de la realidad de la vida cotidiana de niños que viven en contextos sociales diversos hace que los alumnos sean más críticos y reflexivos sobre actitudes y conductas éticas. Salir del entorno controlado, como es el salón de aulas, para exponerse a un entorno real permite al alumno acercarse a saber cómo hacer las cosas, cómo convivir y cómo actuar, ya que experimenta las peculiaridades del cuidado de los niños que un entorno simulado no ofrece. Los escenarios reales permiten a los profesores arriesgarse a aplicar diferentes metodologías activas y contribuyen a romper con los métodos de enseñanza tradicionales.

Palabras clave: métodos de enseñanza; aprendizaje colaborativo; educación en salud; salud infantil.

RESUMO

O estudo da semiologia da criança apresenta desafios no processo de aprendizagem quando limitado às metodologias tradicionais de ensino. O objetivo deste relato de experiência é compartilhar os ganhos para o estudo da semiologia e para a profissionalização docente com o uso de metodologias ativas em contextos reais de práticas, além das dificuldades e desafios encontrados na introdução dessa forma de ensino. O estudo descreve a prática

docente na semiologia pediátrica desde 2019, utilizando metodologias ativas em atendimentos a crianças em creches e pré-escolas, com enfoque na aprendizagem significativa e colaborativa. Estudantes de diferentes semestres compõem as equipes que trabalham juntas. A docente acompanha os atendimentos, discute os casos e faz a avaliação formativa. Como resultado, observa-se que o conteúdo teórico e prático apreendido é ressignificado com a experiência; o trabalho em equipe oferece maior aproximação dos estudantes, aumenta a confiança e autonomia, além de estimular o aprender a aprender. O conhecimento da realidade do cotidiano de crianças que vivem em contextos sociais diversos torna o estudante mais crítico e reflexivo sobre atitudes e conduta ética. A saída do ambiente controlado, como a sala de aula, para exposição a um ambiente real permite ao estudante maior aproximação do saber fazer, do saber conviver e do saber agir, pois ele vivencia as peculiaridades do atendimento à criança que um ambiente simulado não oferece. Os cenários reais permitem ao docente ousar na aplicação de diferentes metodologias ativas e contribuem para a ruptura com os métodos tradicionais de ensino.

Palavras-chave: métodos de ensino; aprendizagem colaborativa; educação em saúde; saúde da criança.

INTRODUCTION

The nuances of pediatric semiology across the various stages of childhood blend art and science – sometimes leaning more toward one, sometimes the other – with the exact boundary between them perhaps never clearly defined (Costa; Freitas; Grisi, 2014). In this context, studying pediatric semiology presents challenges that can escalate significantly if the learning process is confined to traditional teaching methodologies.

Addressing these challenges requires transformations and innovations in the teaching-learning process, engaging faculty in a shift away from traditional teaching models and methods – which, in many higher education institutions, remain limited to lectures.

The term "ensinagem" (a combination of ensino [teaching] and aprendizagem [learning]), coined by Anastasiou and Alves (2004), refers to a teaching situation that necessarily results in learning, where the teacher-student partnership is fundamental to mastering the knowledge required for the student's professional development. This teaching-learning process shifts the focus from merely "giving classes" to "creating classes", devising strategies to bring content closer to the social reality (Anastasiou; Alves, 2004).

The National Curriculum Guidelines (DCN) for undergraduate Medicine programs, in effect since 2014, emphasize that graduates will receive a generalist, humanistic, critical, reflective, and ethical education, enabling them to work across various levels of healthcare – at both individual and collective levels. The DCN highlight that the course structure must "employ

methodologies that prioritize active student participation in knowledge construction and integration among the contents, ensuring the inseparability of teaching, research, and extension" (Brazil, 2014, p. 12).

According to Souza, Iglesias, and Pazin-Filho (2014), in the teacher-centered teaching model – where lectures and fragmented practical activities are the norm – the student becomes an inert element in the teaching-learning process due to the intellectual and affective dependency fostered by this method. In this context, for students to perform well in an educational setting that employs active methodologies, the role of the teacher/facilitator is crucial, given the need for the methodology to be well-conceived and effectively implemented (Farias; Martin; Cristo, 2015).

However, when facing these challenges, teachers may encounter limitations – including personal ones – in altering their teaching practice, primarily due to difficulty grasping the need to break away from traditional teaching methods (Anastasiou, 2005). When working with active methodologies, the model in which the teacher is the center of attention gives way to a learning-centered model, where the student is the primary agent of the process (Oliveira, 2013).

In a study on teachers' experiences implementing active methodologies, Mesquita, Meneses, and Ramos (2016) identified the main difficulties as curricular issues, teacher resistance, and challenges in understanding the practical application of active methodologies in teaching. The authors noted reports indicating that teaching practices were so deeply rooted in traditional models that this negatively impacted the adoption of innovative practices.

Conversely, a study by Oliveira et al. (2018) – which analyzed the contributions and challenges of active methodologies regarding teaching practice – found that the vast majority of teachers are familiar with and receptive to the approach, recognizing the importance of continuing professional development focused on these new teaching strategies.

It is worth noting, as Oliveira (2013) points out, that implementing a curriculum guided by active methodologies fully aligns with an interdisciplinary approach – as advocated by the National Curriculum Guidelines (DCN) – since methodologies such as problematization, case studies, problem- or project-based learning, and simulation are inherently interdisciplinary. In a simulation scenario, for instance, drawing upon knowledge from various fields is essential to ensure the situation is as realistic as possible (Oliveira, 2013).

Simulation-based learning has shown to be an effective method for assessing clinical performance and skills, as it offers benefits such as the repetition of techniques and skills,

the opportunity to correct errors, discussions regarding challenges encountered, and the chance to foster ethical and professional practice (Domingues et al., 2021).

However, although learning in a simulated environment can enable students to build competencies and engage in reflective practice, providing care in a real-world setting can add knowledge and experiences that simulated environments cannot provide – particularly in the context of child health.

In real-world practice scenarios, meaningful learning plays a prominent role, as it requires students to be actively involved in the learning process; that is, they must be able to form new concepts and ideas, and to analyze and synthesize them based on new information in order to make meaningful connections (Costa Júnior et al., 2023).

Meanwhile, in the collaborative learning methodology – which is based on group work – the main objectives are to shift the teacher's role to that of a facilitator, develop metacognitive skills, and expand learning through collaboration, where students teach one another through peer exchange (Torres; Irala, 2014).

Regarding active teaching methods, Oliveira (2013) highlights that:

> Although various pedagogical techniques fit the format of an active teaching method, certain characteristics are important for identifying a good teaching-learning method: being constructivist (meaningful learning); collaborative (group-based); interdisciplinary (integrated); contextualized (grounded in reality); reflective (ethics and values); critical; investigative ("learning to learn"); humanistic (social); motivating (emotion); and challenging (Oliveira, 2013, p. 25).

It is important to remember that any active method employed must equip students to meet the population's current needs, going beyond mere cognitive knowledge and emphasizing the acquisition of knowledge grounded in reality. In this context, it is possible to bridge the gap between theory and practice and to require future professionals to adopt a critical perspective regarding the real-world problems encountered in healthcare services (Mesquita; Meneses; Ramos, 2016).

Active teaching-learning methodologies represent a powerful avenue for driving change and challenging paradigms in traditional education, while also aligning with the guidelines set forth by the DCN. Newly established medical schools could foster these changes by incorporating more discussions on this educational approach early in the faculty's pedagogical training.

At Universidade Federal do Sul da Bahia (UFSB), the medical program is less than a decade old and employs a hybrid pedagogical design, ranging from standalone curricular

components to modules that implement problem-based learning. The program features a novice faculty – most of whom graduated from schools using traditional teaching methods and have fewer than five years of teaching experience – with limited experience in active methodologies and who are in the early stages of their professional development as educators (Universidade Federal do Sul da Bahia, 2024).

UFSB encourages university extension activities across all its undergraduate programs. Within the Medicine program, academic leagues – which feature students as key protagonists, are formally registered, and are required to have faculty supervision – stand out. These leagues are tasked with promoting teaching, research, and extension activities within specific medical specialties (Universidade Federal do Sul da Bahia, 2024).

This experience report stems from faculty engagement with medical students in pediatric semiology teaching activities, integrated practice sessions within health services and communities, and extension projects conducted by the Academic Pediatrics League in daycares and preschools. The aim is to share the benefits – both for the study of semiology and for faculty professional development – gained through the use of active learning methodologies in real-world practice settings, as well as to discuss the difficulties and challenges encountered when introducing this teaching approach.

MÉTODOS

This is a descriptive, qualitative account of an experience based on teaching the "Child and Adolescent Semiology" course and working with active learning teams. The report aims to describe the process of conducting classes based on real-life situations in daycare centers and preschools.

The study of pediatric semiology in the UFSB medical program begins in the fourth semester. The course is designed to enable students to acquire the knowledge, skills, and attitudes necessary to develop the critical, reflective, humanistic, and ethical competencies fundamental to their professional training and the care of children (Universidade Federal do Sul da Bahia, 2024).

To practice taking patient histories (anamnesis), the course employs a problem-based simulation methodology, primarily aimed at allowing students to practice clinical interviewing in a safe, controlled environment.

The problem scenarios are created by the instructor and focus on common clinical conditions across pediatric age groups. Each scenario establishes a context that encourages students to practice the sequence of topics involved in taking a patient history. The instructor discusses the scenario with teaching assistants beforehand and provides a

synopsis containing all possible answers to students' questions. The assistants must study and memorize the scenario, though they may use the synopsis as a guide during the simulation. If a question arises that is not covered in the synopsis, the assistant is free to formulate a response that is consistent with the patient's history. During the initial classes, students rely on a history-taking guide to conduct the interview

Examples of problem situations include: an exclusively breastfed infant whose mother is returning to work; a preschooler with abdominal pain and diarrhea; a school-aged child with a recurrent cough; and an adolescent girl with menstrual irregularities. Each problem situation has its own specific objectives. Chart 1 presents a complete example.

Chart 1 – Example of a problem situation used in the simulation methodology for clinical interview practice.

Problem scenario: Exclusively breastfed infant: mother is returning to work.
Context: A first-time mother brings her baby in for a consultation because her maternity leave is ending. She states that she is returning to work and needs guidance on feeding, as she will be working full-time.
Objectives: - Raise the student's awareness of the difference between a biological complaint and other health needs. - Demonstrate the importance of breastfeeding and complementary feeding. - Address maternity leave, labor rights, and methods for storing breast milk.
Synopsis content: - Describes the reason the infant was taken to the doctor. - Presents comprehensive information about the infant: prenatal conditions, birth, feeding, immunization, development, illnesses, and lifestyle habits. - Presents comprehensive information regarding the parents, housing, family composition, and social and economic circumstances.
Teaching assistant's role: To simulate the role of the mother, state the reason for the consultation, and then allow the students to ask questions. They are instructed not to answer questions posed using technical terms.
Students' role: Conduct the simulated clinical interview

Source: prepared by the author, 2025.

For physical examination practice, the skills laboratory features study stations equipped with simulators representing various body systems – such as simulators for examining the thorax, abdomen, ears, and genitalia, among others. In accordance with the teaching schedule, small groups (5 to 6 students) are formed to rotate through the stations, which range in number from two to four. Students switch stations every 15 to 30 minutes, depending on

the body systems being studied. Each teaching assistant is responsible for one station, while the faculty member circulates among them all.

Most of the simulators are adult-sized. To make the scenario more representative of the pediatric population, dolls representing newborns, infants, and older children are voluntarily brought in by students and teaching assistants. This representation is important for helping students better understand different body proportions and the factors that can either complicate or facilitate the examination.

These controlled environments allow for the integration of key theoretical and practical concepts regarding pediatric semiology and examination techniques. They also enable students to receive feedback on errors through corrections and by linking their actions to previously acquired theoretical knowledge.

This course component has always been structured around theoretical lectures and practical sessions in the skills laboratory, grounded in active learning methodologies. However, it previously lacked visits to institutions that would expose students to real-world practice. This experience offers them a preview of the pediatric care they will encounter during the clinical phase of their training.

Real-world practice settings – the starting point of the experience

Through the Pediatric Academic League's outreach project – coordinated by the faculty member – students from various semesters have the opportunity to practice providing care at public daycares and preschools. In 2019, the teacher recognized the need to offer this experience to students enrolled in the "Child and Adolescent Semiology" course. In 2022, following the end of the pandemic, this activity resumed; since then, a class of students from this course has participated in the experience each semester. Thus, around the eighth week of classes – and having accumulated both theoretical and practical knowledge – the students are prepared to practice semiology in a real-world setting.

On days when the institutions are visited, the site is prepared to simulate a care delivery area within an open space – usually the recreation court or the cafeteria. On average, ten stations (or spaces) are set up for consultations. One or two rooms are also reserved to complement the setup, serving as spaces for the children's physical examinations. Students remain at the same station throughout the visit; once a consultation concludes, a new child is seen in that same space. Most public daycares and preschools are located in areas of high social vulnerability and serve children aged 1-3 and 4-5 years, respectively.

Formation of active learning teams and consultation workflow

Participants in these sessions include students and teaching assistants from the course, members of the academic league, and students in later semesters who are already engaged in community-based practice. This mix of students at different stages of their education facilitates the formation of active learning teams for collaborative work. Table 2 illustrates how students are assigned based on the activities performed during consultations at the daycares and preschools.

Chart 2 – Students' background and semester in the program, and activities carried out in daycares and preschools.

Students' background and current semester	Activities
Course Component: Semiology of the Child and Adolescent (4th semester)	Conducting patient history and physical examination under the supervision of teaching assistants.
Teaching Assistants for the "Child and Adolescent Semiology" Course (> 4th semester)	Observation of the medical history taking and physical examination. Case discussions.
Course Component: Child and Adolescent Health Practices (>6th semester)	Conducting patient history and physical examination tion. Discussion of cases with students and teaching assistants.
Students from the Academic League of Pediatrics (>4th semester)	Conducting the medical history and physical examination. Following the case discussions.
All students	Participation in the general discussion. Case wrap-up with the instructor.

Source: prepared by the author, 2025.

Typically, one or two classes are seen during each visit, depending on the number of children per room. Around ten to fifteen children are examined per session. For students taking the "Child and Adolescent Semiology" course who are visiting the institution for the first time, priority is given to examining preschoolers (aged 4 and 5), as they tend to be more cooperative, thereby facilitating the clinical examination. This fosters comfort and confidence among students new to clinical practice, who have the opportunity to participate in at least two visits to daycares and preschools throughout the semester.

The instructor circulates among the examination stations and, at the end, discusses and provides guidance on each case. Her intervention during the examination is intentionally minimal, allowing the active learning team to progress according to the learning level expected for each student. If difficulties arise in the flow of the examination or if the active learning team struggles with interaction, the instructor intervenes to ensure the session proceeds smoothly. Feedback is provided either in a group setting or individually, depending on the specific challenges encountered.

Student and teaching-learning process assessment methods

In laboratory sessions, students undergo summative assessment via two oral practical exams conducted at the established stations. The topics which have been studied beforehand, are selected by drawing lots at the time of the exam.

For the real-world practice setting, the instructor opted for formative assessment only; this avoids adding further stressors – such as grading – that could hinder performance during a time that is already challenging for the student.

This approach allows the instructor to observe and evaluate various aspects of the teaching-learning process, such as the development of critical, reflective, humanistic, and ethical competencies, as well as to assess the progression of meaningful learning and the students' teamwork performance.

While carrying out these activities, it is possible to identify the consolidation of theoretical and practical concepts acquired throughout the course, as well as the students' progress in collaborative work. This assessment occurs through the observation of students regarding how they communicate, ask or answer questions posed by supervisors, document findings in medical records, conduct examinations of the children, discuss cases, and interact as a team. All these elements are part of the formative assessment process and make up the rubric the instructor uses to evaluate them.

At the end of the semester, students in the "Child and Adolescent Semiology" course are invited to provide a written, anonymous, and open-ended account of their experience with the course, the methods employed, and the care provided to children during visits to daycares and preschools.

To report the instructor's observations regarding student progress using the methodologies presented here, the study drew upon Oliveira's (2013) insights on the characteristics of active methodologies, identifying these traits in the students during their experience in real-world practice settings.

RESULTS

The visits to daycares and preschools brought new meaning to the "Child and Adolescent Semiology" curriculum component. These spaces are adapted environments, marking a shift from a safe, simulated setting to a realistic scenario defined by the actual presence of children and their caregivers – groups that employ diverse forms of communication.

For students, both when taking a medical history and performing a physical examination, the difference becomes evident between simulated encounters and dealing with the varied

reactions children have to the approach and physical contact required by a clinical exam – particularly with very young children, for whom wariness and crying remain common reactions.

Putting the acquired theoretical and practical content into practice gives new meaning to the student's experience. When encountering practical application for the first time, students often exhibit anxiety, apprehension, and a fear of being unable to complete the proposed activities in real-time. The presence of the active learning team fosters closer engagement with students, boosts confidence, and encourages "learning how to learn". At this stage, the development of autonomy and greater engagement in the learning process become evident.

Gaining insight into the daily realities of children living in diverse social contexts makes students more reflective and motivated to consider how their knowledge can assist these families. In this context, the development of skills in oral communication, critical analysis, and reflection on attitudes and ethical conduct stands out.

Chart 3 summarizes the instructor's perceptions regarding student learning over years of experience with the "Child and Adolescent Semiology" course and the use of active learning methodologies. Informal feedback provided by students at the end of the course also contributed to these findings.

Chart 3 – Characteristics of active learning methodologies and aspects observed in students of the "Child and Adolescent Semiology" course, according to the instructor's perception.

Method characteristic	Objectives	Aspects observed in students
Constructivist	Foster meaningful learning.	They are able to make meaningful connections between new information and the knowledge previously acquired throughout the course and during simulated consultations.
Collaborative	Foster the construction of knowledge in a group setting.	They improve engagement among colleagues. They seek assistance from the active learning team regarding difficulties encountered during care delivery and recognize the differences in learning levels fostered by interaction, participation, and dialogue.
Interdisciplinary	Provide activities integrated with other disciplines or areas of professional practice.	They identify the integration of the "Child and Adolescent Semiology" course component with the "Child and Adolescent Health Practices" component and extension activities. They perceive the closer ties between institutions, services, and other sectors involved in comprehensive care and the promotion of child health.
Contextualized	To enable the learner to understand the application	They engage with real-life situations, valuing the concerns, expectations, beliefs, and values

	of knowledge to the reality they will face during professional practice.	related to the health-disease process within the context of daycares and preschools.
Reflective	Strengthen attitudes, moral values, and the principles of ethics and reflection on professional practice.	They reflect on situations and begin to apply ethics to the problems identified, exercise critical and reflective thinking, and analyze their own attitudes.
Critical	Encourage the non-passive acceptance of information, seeking to deepen the new knowledge reaching the learner.	They indicate a need for further study to better translate theoretical knowledge into practice. They recognize the challenges involved in oral communication and in shifting between colloquial and technical language. They learn to construct arguments and question established practices.
Investigative	Sparking curiosity and autonomy, enabling the learner to acquire the ability to learn how to learn.	They want to "see patients on their own" to better practice taking clinical histories and performing physical examinations on children. They recognize the need for further study in order to "move beyond" the guidelines.
Humanist	To be concerned with and integrated into the social context.	They become more sensitive to the social difficulties faced by families and are able to correlate family contexts with the repercussions on the childs health.
Motivator	Engaging with and valuing emotion.	It improves engagement among colleagues. They complete the activity motivated to repeat the experience and refine what they have learned.
Challenging	Encourage the student to seek new information and construct new knowledge.	They expand knowledge in clinical reasoning, problem-solving, and the promotion of child health.

Source: prepared by the author, adapted from Oliveira (2013).

DISCUSSION

This account presents the instructor's experience with the "Child and Adolescent Semiology" course and the challenge of "conducting class" outside the traditional classroom setting. With the completion of each semester, new knowledge is gained, along with the conviction that traditional teaching methods are being abandoned in favor of more innovative approaches that yield better results throughout the teaching-learning process.

Within this innovative teaching framework, the instructor shifts into the role of tutor or facilitator, requiring the development of new skills – specifically, the willingness and ability to allow students to actively participate in the learning process (Mitre et al., 2008).

Moving from a controlled environment (the classroom) to real-world settings allows students to get closer to the practical aspects of "knowing how to do", "knowing how to coexist", and "knowing how to act", as they experience the unique nuances of pediatric care in ways a simulated environment cannot replicate.

According to Costa Júnior et al. (2023), an effective learning environment is one that enhances students' acquisition of knowledge, skills, and competencies while fostering autonomy, critical reflection, and problem-solving abilities.

Studies indicate a need to integrate active learning methodologies with local realities and curricular content (Moraes; Rocha, 2022; Massote; Belisário; Gontijo, 2011).

Learning experiences in daycares and preschools immerse students in areas of high social vulnerability, adding a unique dimension to the application of knowledge and fostering awareness of local realities. A stimulating learning environment can add value to educational practices and promote student autonomy (Farias; Martin; Cristo, 2015).

The use of simulation methods to study Child and Adolescent Semiology has introduced innovations into the learning process. However, the experience in daycares and preschools made it possible to introduce other active teaching methods, highlighting meaningful and collaborative learning. It is known that using a variety of methods can yield superior results compared to relying on a single teaching methodology (Farias; Martin; Cristo, 2015).

When comparing traditional methods with active methodologies, Limberger (2013) notes that the knowledge acquired by students is similar. However, the author emphasizes that active methodologies foster better performance regarding skills and attitudes and reinforces the importance of the critical-reflective perspective that the method provides.

Torres and Irala (2014, p. 75) state that, for students, "this involvement in the educational process—with the freedom to speak, argue, and disagree with their peers as well as the teacher—makes them co-responsible for their own teaching-learning process".

A relevant factor worth mentioning is the time required to prepare for classes held in daycares and preschools. The logistics of accessing these settings involve making prior contact with the institution, scheduling with those in charge, ensuring all students are available at the same times, and transporting equipment from the university to set up the real-world environment, in addition to the logistical arrangements for students and the instructor to travel to the activity site.

In an analysis of the introduction of active learning methodologies into a formal curriculum, some authors (Souza; Iglesias; Pazin-Filho, 2014) found a considerable difference in the estimated time required to carry out the activities. While the traditional method required approximately 8 hours, the active methodologies required 30 hours to complete the activities.

This is corroborated by the study by Mesquita, Meneses and Ramos (2016), in which the need for more time to apply active methodologies also emerges as a challenge for their implementation in curricula.

Real-world settings add new meaning to learning, as these spaces allow the development of a wider range of competencies. The collaborative approach to discussing cases engages students in a process of construction that is dialogic and contextualized within the children's actual lives. Through the sharing of ideas, learning and perceptions naturally take shape, alongside the development of critical, reflective, humanistic, and ethical competencies.

Oliveira (2013) argues that certain active methodologies naturally facilitate collaborative learning. She highlights the difference in knowledge retention: while traditional lecture-based methods yield a retention rate of no more than 15%, group learning activities – provided they are properly planned – result in retention rates exceeding 50%.

A study (Borssoi; Silva; Ferruzzi, 2021) examined aspects of collaborative learning among student groups during a mathematical modeling activity. The study concluded that working collaboratively – learning together, making oneself understood, listening to other voices, and negotiating approaches – fosters collaborative learning.

Meaningful learning, in turn, enables students to connect new information or study materials with prior knowledge already well-established in their long-term memory (Costa Júnior et al., 2023).

According to Sousa et al. (2015), achieving meaningful learning requires breaking down the dichotomy between theory and practice and promoting the integration of content with action, viewing the student as the author of their own knowledge. It is a moment when the student exercises autonomy and learns how to learn.

The presence of the active learning team proved important in this experience within daycares and preschools. Students recognize the need to take an active role and to interact and share knowledge with their peers so that everyone can learn together. They also acknowledge the importance of respecting individual paces and addressing situations as they arise in real time. Thus, they assume their roles in constructing knowledge, while the educator acts as a mediator and facilitator of the process (Farias; Martin; Cristo, 2015).

Furthermore, when working with an active learning team, it is necessary to consider student diversity and varying learning paces. According to Neves (2020), it is up to the teacher to observe these individual characteristics without making performance comparisons, given that each student has a specific learning style and a unique, individual way of processing knowledge.

In this learning context, the assessment process should be primarily formative. Thus, educators are expected to continuously observe student performance, identify difficulties hindering learning, provide immediate feedback, and agree upon differentiated educational strategies to overcome weaknesses (Neves, 2020).

Unfortunately, traditional methodologies still predominate in the training of health professionals at many higher education institutions, maintaining a model based on the transmission of content by the teacher and its subsequent retention and repetition by students. Contemporary education presupposes a student capable of self-managing or self-directing their own training process (Mitre et al., 2008).

According to Freire (2016), mechanical memorization does not constitute true learning, as the learner merely receives knowledge transmitted by the educator rather than acting as a critical, naturally curious subject who constructs knowledge or participates in its construction.

In the view of Farias, Martin, and Cristo (2015), some active methodologies may require financial investment and curricular reform, complicating their implementation. However, the authors believe that such investments of time and money can be worthwhile, yielding direct benefits for the student and, consequently, for the population.

In this regard, there is an urgent need to shift the emphasis from teaching to learning; the process must become one of "teaching-learning" so that the student becomes more autonomous and a producer of meaningful knowledge rooted in their own reality, thereby acquiring competencies fundamental to their training as a health professional.

Finally, it is necessary to mention the evolution of the educator's role throughout this experience. With the completion of each semester, there was a growing sense of empowerment and belonging to the process of continuous professionalization – a concept which, according to Anastasiou:

> ...embodies the movement toward continuous professional development – essential to the teaching profession. Because teaching involves working with individuals who are constantly changing and with knowledge that is in constant flux, the profession is full of unpredictability, change, uniqueness, uncertainty, novelty, dilemmas, conflict, and instability, thereby requiring mental flexibility as a fundamental element (Anastasiou, 2005, p. 12).

While the core content for the study of Child and Adolescent Semiology remains unchanged, the actual practice of teaching – and working beyond the mere subject matter – continues to be inspired by Anastasiou's (2005) approach each time the course is offered. The author argues that the teacher must act as a strategist, creatively leveraging the means and

favorable conditions of the real-world context to ensure that the content is grasped and grounded in relevant values and specificities.

Thus, the teaching process is refined as the educator increases the level of challenge, fueled by student feedback – which acts as the engine driving this mechanism. According to Freire (2016), another fundamental aspect of the educational experience is the educator's need to navigate their practice with clarity, understand the various dimensions defining the essence of that practice, and gain confidence in their own performance.

In this context, the use of active methodologies fosters a relationship of closeness, sharing, and a shift in mindset between teacher and learner. For the educator, this approach enables activities to be carried out with careful planning and a clear understanding of objectives; it redefines their practice and fosters new skills, thereby generating fresh possibilities and strategies for teaching (Oliveira et al., 2018).

More than a decade after the publication of the new National Curriculum Guidelines (DCN) for medical education, their implementation remains a major challenge, particularly regarding curricular integration and the diversification of learning environments. Furthermore, there is insufficient focus on developing ethical, humanistic, and critical-reflective dimensions, which perpetuates a traditional model of knowledge – one based on the teacher transmitting content and students passively receiving it.

In this sense, it is evident that institutions must provide support to educators, enabling them to rethink and modify their educational practices. This is essential for training teachers capable of fostering critical, reflective, and inquisitive individuals who can respond to society's needs (Oliveira et al., 2018). As Anastasiou (2005, p. 19) notes, "becoming a teacher within the processes of professional development requires intentionality, engagement, a willingness to change, institutional space, courage, a readiness to take risks and show mental flexibility, and the ability to face both predictable and unpredictable changes".

FINAL CONSIDERATIONS

The active learning methodologies employed in the "Child and Adolescent Semiology" course constantly challenge students to learn how to learn, while demonstrating their capacity to develop autonomy, analytical and critical skills, ethical awareness, reflective thinking, motivation, and teamwork abilities to address the diverse challenges inherent in caring for children.

Certainly, conducting classes in real-world practice settings requires adjustments each time the course is offered in order to improve the teaching-learning process. Yet, for the instructor, it is always rewarding, as she also views herself as a "learner" – seeking further

insight within this challenging and motivating process of professional development in teaching.

This account aims to encourage fellow educators to incorporate active learning methodologies into their lesson planning. In doing so, it is possible to help break away from traditional teaching methods and, above all, contribute to the much-needed continuous professional development of teachers.

DECLARATION ON THE USE OF GENERATIVE AI

Generative artificial intelligence tools were not used at any stage of the development of this work.

REFERENCES

ANASTASIOU, Lea das Graças Camargo; ALVES, Leonir Pessate (org.). *Processos de ensinagem na universidade*: pressupostos para as estratégias de trabalho em aula. 5. ed. Joinville: Univille, 2004.

ANASTASIOU, Lea das Graças Camargo. Profissionalização continuada do docente da educação superior: desafios e possibilidades. *Olhar de Professor*, Ponta Grossa, v. 8, n. 1, p. 9-22, 2005. Disponível em: https://revistas.uepg.br/index.php/olhardeprofessor/article/view/1424. Acesso em: 11 jan. 2025.

BORSSOI, Adriana Helena; SILVA, Karina Alessandra Pessoa; FERRUZZI, Elaine Cristina. Aprendizagem colaborativa no contexto de uma atividade de modelagem matemática. *Bolema: Boletim de Educação Matemática*, Rio Claro, v. 35, n. 70, p. 937-958, ago. 2021. DOI: https://doi.org/10.1590/1980-4415v35n70a17. Disponível em: https://www.scielo.br/j/bolema/a/Ch9T8t3G4CdKBhLKRY3PHbF/?lang=pt. Acesso em: 19 fev. 2025.

BRASIL. Resolução n° 3, de 20 de junho de 2014. Institui Diretrizes Curriculares Nacionais do Curso de Graduação em Medicina e dá outras providências. *Diário Oficial da União*: seção 1, Brasília, DF, p. 8-11, 23 jun. 2014. Disponível em: https://www.gov.br/saude/pt-br/acesso-a-informacao/acoes-e-programas/pnsp/legislacao/resolucoes/rces003_14.pdf/view. Acesso em: 21 maio 2026.

COSTA, Paulo Sérgio Sucasas; FREITAS, Johnathan Santana; GRISI, Sandra Josefina Ferraz Ellero. Semiologia da criança. In: PORTO, Celmo Celeno; PORTO, Arnaldo Lemos (org.). *Semiologia médica*. Rio de Janeiro: Guanabara Koogan, 2014. p. 130-145.

COSTA JÚNIOR, João Fernando; LIMA, Presleyson Plínio de; ARCANJO, Cláudio Firmino; SOUSA, Fabrícia Fátima de; SANTOS, Márcia Maria de Oliveira; LEME, Mário; GOMES, Neirivaldo Caetano. Um olhar pedagógico sobre a aprendizagem significativa de David

Ausubel. *Revista Brasileira de Ensino e Aprendizagem*, Rio Largo, v. 5, jan. 2023, p. 51-68. Disponível em: https://rebena.emnuvens.com.br/revista/article/view/70. Acesso em: 10 maio 2025.

DOMINGUES, Isabella; MARTINS, Eleine; ALMEIDA, Caroline Lourenço de; SILVA, Daniel Augusto. Contribuições da simulação realística no ensino-aprendizagem da enfermagem: revisão integrativa. *Research, Society and Development*, Vargem Grande Paulista, v. 10, n. 2, p. 1-9, fev. 2021. DOI: https://doi.org/10.33448/rsd-v10i2.12841. Disponível em: https://rsdjournal.org/index.php/rsd/article/view/12841. Acesso em: 12 fev. 2025.

FARIAS, Pablo Antônio Maia de; MARTIN, Ana Luiza de Aguiar Rocha; CRISTO, Cinthia Sampaio. Aprendizagem ativa na educação em saúde: percurso histórico e aplicações. *Revista Brasileira de Educação Médica*, Brasília, v. 39, n. 1, p. 143-150, jan./mar. 2015. DOI: https://doi.org/10.1590/1981-52712015v39n1e00602014. Disponível em: https://www.scielo.br/j/rbem/a/MkJ5fd68dYhJYJdBRRHjfrp/. Acesso em: 25 mar. 2025.

FREIRE, Paulo. *Pedagogia da autonomia*: saberes necessários à prática educativa. 53. ed. Rio de Janeiro: Paz e Terra, 2016.

LIMBERGER, Jane Beatriz. Metodologias ativas de ensino-aprendizagem para educação farmacêutica: um relato de experiência. *Interface*, Botucatu, v. 17, n. 47, p. 969-975, out./dez. 2013. DOI: https://doi.org/10.1590/1807-57622013.3683. Disponível em: https://www.scielo.br/j/icse/a/PFVrRFtRtnCYJR4SDW3vSTx/. Acesso em: 25 jan. 2025.

MASSOTE, Alice Werneck; BELISÁRIO, Soraya Almeida; GONTIJO, Eliane Dias. Atenção primária como cenário de prática na percepção de estudantes de medicina. *Revista Brasileira de Educação Médica*, Brasília, v. 35, n. 4, p. 445-453, dez. 2011. DOI: https://doi.org/10.1590/S0100-55022011000400002. Disponível em: https://www.scielo.br/j/rbem/a/XVLL8ZMtGGMPX35znWfQfMQ/. Acesso em: 12 fev. 2025.

MESQUITA, Simone Karine da Costa; MENESES, Rejane Millions Viana; RAMOS, Déborah Karollyne Ribeiro. Metodologias ativas de ensino/aprendizagem: dificuldades de docentes de um curso de enfermagem. *Trabalho, Educação e Saúde*, Rio de janeiro, v. 14, n. 2, p. 473-486, maio/ago. 2016. DOI: https://doi.org/10.1590/1981-7746-sip00114. Disponível em: www.scielo.br/j/tes/a/67fhD4dQWCTWVPqYqBQxtQj/. Acesso em: 12 fev. 2025.

MITRE, Sandra Minardi; SIQUEIRA-BATISTA, Rodrigo; GIRARDI-DE-MENDONÇA, José Márcio; MORAIS-PINTO, Neila Maria de; MEIRELLES, Cynthia de Almeida Brandão; PINTO-PORTO, Cláudia; MOREIRA, Tânia; HOFFMANN, Leandro Marcial Amaral. Metodologias ativas de ensino-aprendizagem na formação profissional em saúde: debates atuais. *Ciências e Saúde Coletiva*, Rio de Janeiro, v. 13, n. 2, p. 2133-2144, dez. 2008. DOI: https://doi.org/10.1590/S1413-81232008000900018. Disponível em: www.scielo.br/j/csc/a/9M86Ktp3vpHgMxWTZXScRKS/. Acesso em: 25 mar. 2025.

MORAES, Márcia Maria dos Santos de; ROCHA, Erika Maria Sampaio. Visita puerperal virtual: estratégia educacional em tempos de pandemia de covid-19. *Revista Docência do Ensino Superior*, Belo Horizonte, v. 12, e036307, p. 1-20, abr. 2022. DOI:

https://doi.org/10.35699/2237-5864.2022.36307. Disponível em: https://periodicos.ufmg.br/index.php/rdes/article/view/36307. Acesso em: 11 abr. 2025.

NEVES, Rinaldo de Souza. Avaliação em metodologias ativas de ensino e aprendizagem. *In*: COSTA, Gercimar Martins Cabral (org.). *Metodologias ativas*: métodos e práticas para o século XXI. Quirinópolis: IGM, 2020. p. 523-535.

OLIVEIRA, Geraldo Alécio. Uso de metodologias ativas em educação superior. In: CECY, Carlos; OLIVEIRA, Geraldo Alécio; COSTA, Eula Maria de Melo Barcelos. *Metodologias ativas*: aplicações e vivências em educação farmacêutica. Brasília: Associação Brasileira de Ensino Farmacêutico e Bioquímico, 2013. p. 15-40.

OLIVEIRA, Sibele Ribeiro; ANDRADE, Ana Paula Cavalcante Luna de; BARBOZA, Roberta de Granville; OLIVEIRA, Belisa Duarte Ribeiro de; SANTANA, Walkyria Almeida. Metodologias ativas de ensino-aprendizagem na atuação docente em saúde: vivências em uma instituição de ensino superior. *Revista Espaço para a Saúde*, Curitiba, v. 19, n. 1 Sup., p. 205-210, dez. 2018. DOI: https://doi.org/10.22421/1517-7130.2018v19n1p1. Disponível em: https://espacoparasaude.fpp.edu.br/index.php/espacosaude/issue/view/ANAIS%20DO%20IX%20F%C3%93RUM%20NACIONAL%20DE%20METODOLOGIAS%20ATIVAS%20DE%20ENSINO-APRE. Acesso em: 25 jan. 2025.

SOUSA, Alana Tamar Oliveira; FORMIGA, Nilton Soares; OLIVEIRA, Simone Helena dos Santos; COSTA, Marta Miriam Lopes; SOARES, Maria Júlia Guimarães Oliveira. A utilização da teoria da aprendizagem significativa no ensino da enfermagem. *Revista Brasileira de Enfermagem*, Brasília, v. 68, n. 4, p. 713-722, jul./ago. 2015. DOI: https://doi.org/10.1590/0034-7167.2015680420i. Disponível em: https://www.scielo.br/j/reben/a/kTwtbYttbRcLp45mBCHFsFv/. Acesso em: 25 jan. 2025.

SOUZA, Cacilda da Silva; IGLESIAS, Alessandro Giraldes; PAZIN-FILHO, Antônio. Estratégias inovadoras para métodos de ensino tradicionais – aspectos gerais. *Medicina*, Ribeirão Preto, v. 47, n. 3, p. 284-292, nov. 2014. DOI: https://doi.org/10.11606/issn.2176-7262.v47i3p284-292. Disponível em: https://www.revistas.usp.br/rmrp/article/view/86617. Acesso em: 25 jan. 2025.

TORRES, Patrícia Lupion; IRALA, Esrom Adriano Freitas. Aprendizagem colaborativa: teoria e prática. In: TORRES, Patrícia Lupion; IRALA, Esrom Adriano Freitas (org.). *Complexidade*: redes e conexões na produção do conhecimento. Curitiba: Senar, 2014. p. 61-93.

UNIVERSIDADE FEDERAL DO SUL DA BAHIA. Projeto Político Pedagógico do Curso de Medicina. Teixeira de Freitas: Centro de Formação em Ciências da Saúde/Universidade Federal do Sul da Bahia, 2024.

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