


AFFECTIVE RELATIONSHIPS IN THE CLASSROOM AS MOTIVATIONAL FACTORS FOR LEARNING BIOLOGY CONTENT <https://doi.org/10.63330/aurumpub.010-006>**Jamira Camanda Ribeiro Carvalho¹, Maria do Socorro Silva Carvalho² and Maria Gardênia Sousa Batista³****ABSTRACT**

Affection is an indispensable element in human relationships and plays a decisive role in the teaching-learning process. Research shows that the affective aspect directly influences students' intellectual and emotional development, impacting their motivation, interest, and academic performance. Emotions, interpersonal bonds, and the school environment play a fundamental role in the development of individuals. Thus, the relationship between teacher and student, based on respect, dialogue, and empathy, contributes to a more welcoming and meaningful educational environment. This work argues that integrating the affective dimension into the school environment is essential for building a more humane and effective pedagogical practice, promoting the integral development of students.

Keywords: Affection; Teaching-learning; Interpersonal relationships; Emotions; Humanized education.

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INTRODUCTION

Affection is indispensable in human relationships, and the teaching-learning process is no exception. According to Oliveira (1998), the affective aspect profoundly influences intellectual development, potentially accelerating or slowing it down, and determining which content the intellectual activity will focus on. Based on this, affection acts as a facilitating and influencing element in the student's learning process within the classroom. Thus, "the affection between educator and learner is like a seed sown in fertile soil: it germinates with surprising speed and produces quality fruits" (BONFIM, 2011, p. 9). In other words, the way the teacher teaches, behaves, and works greatly impacts the evolutionary process and outcomes of their students. "One sees clearly only with the heart. What is essential is invisible to the eye." This quote from *The Little Prince* by Antoine de Saint-Exupéry, although not directly about education, highlights the importance of sensitivity and affection, which are essential to the educational process.

According to Paulo Freire (1987), education is not a purely cognitive process but one that involves the whole person, including emotions, feelings, and values. He argued that education should be a liberating practice, enabling students to develop their creativity and critical capacity, and helping to build a more just and egalitarian society. From this perspective, a fundamental aspect that has gained prominence in the educational landscape is the role of affective relationships in the classroom. These relationships, which encompass positive and constructive interactions between teachers and students, as well as among students themselves, are crucial for creating a motivating and welcoming learning environment. The quality of these interactions can directly influence students' motivation, impacting their performance and attitude toward curricular content.

For Piaget, affectivity is a psychological state directly or indirectly linked to factors such as environment, interpersonal relationships, family, professional, and social settings. This psychological state directly influences behavior and the affective and cognitive development of individuals (GIMENEZ et al., 2021). Piaget also states that "affectivity is always interconnected with all moments lived by each being, which is diametrically reflected in feelings, values, stimuli, choices, emotions, states of tranquility, health—in short, in all emotional and physical fields of life" (GIMENEZ et al., 2021, p. 248).

According to Humberto Maturana, "Emotions are not correctly called feelings. From a biological standpoint, what we denote when we speak of emotions are dynamic bodily dispositions that define the different domains of action in which we move. When we change emotion, we change our domain of action." In this way, we observe how emotional factors and affinity are directly linked to the progress or regression of students. Fear, insecurity, or other social and family conflicts affect each individual differently, depending on their lived experiences, and it is innate to human beings to undergo such



reactions. However, when these are brought into the classroom and the teacher knows how to perceive and act differently, seeking affinity, they ensure the development of that individual in their subject.

Having emotional reactions is interesting because it keeps us vigilant and attentive. On the other hand, emotions can be harmful, leading to anxiety and prolonged stress, negatively interfering with the educational process (COSENZA; GUERRA, 2011). The school also plays a role in addressing affective factors with students, making it necessary to discuss this topic within the school environment. There are various ways teachers can assist students in this regard, both through interventions on the topic and in the organization of their content (TASSONI; SILVA-LEITE, 2011). For Wallon—a philosopher, physician, and psychologist—the school is a fundamental institution that enables individuals to learn principles of scientific culture, valuing relationships between teacher and student and the development of their potential. He guided his theory toward the development of the whole person, bringing psychology and pedagogy closer together to value the training of educators and promote educational environments conducive to the growth of learners in all aspects (SILVA, 2017).

From this perspective, it is worth highlighting Bronfenbrenner's intrinsic relationship with developmental psychology and the theory of the human development ecosystem. To understand this approach, he considers development a reciprocal process resulting from the interaction of various systems that compose it (BRONFENBRENNER, 1979). Thus, the transition between each of these environments and the relational quality established within them influences the developmental trajectory.

Analogously, it is irrefutable to emphasize the importance of this study within this research and for society as a whole. The way a student is treated in the school environment, especially in the classroom, is key to their performance. The individual must be emotionally understood to thrive—even the most restless or uncontrollable student may carry emotional burdens that need to be addressed beyond the academic content. Consequently, the environment influences, but coexistence determines. Therefore, it is essential for teachers to be equipped to understand and emphasize this issue, as it is indispensable for educational development and for building a better society.

According to Mahoney (ALMEIDA, 2005), the school is the medium for the development of both student and teacher, and the teacher-student relationship is a determining factor in the teaching-learning process, as both are affected by each other and by the environment in which they are situated. Furthermore, no knowledge, even that acquired purely through perception, is a simple copy of reality or entirely determined by the individual's mind. It is the product of an interaction between subject and object, provoked by the organism's spontaneous attitudes and external stimuli. This knowledge is, therefore, learning—the result of a relationship that never has a single direction, but is the outcome of interaction. And affectivity is the energy that drives human actions; without it, there is no interest and no motivation for learning (PIAGET, 1996, Apud GARCIA, 2014).



From this understanding—that affectivity is among the essential elements for human development—this bibliographic research was conducted to investigate the relationship between teachers’ behavior in the classroom and students’ motivation to study Biology content.

METHODOLOGY

A bibliographic survey was conducted via the Internet, seeking data from various Higher Education Institutions across the country, as well as databases from governmental organizations and professional associations. To carry out the search, keywords such as affectivity in biology teaching were used in order to identify works related to the topic. We selected research published in the form of theses, dissertations, scientific journal articles, and books, covering the period from 2000 to 2024.

Subsequently, after selecting the documents, we proceeded to classify them. The classification was based on criteria established from the document set and using descriptors employed in similar research, such as: year of publication; academic program; disciplines involved; grade level, educational cycle or stage; and main topics addressed. For this purpose, abstracts of the studies were read and, when necessary, the full content of the works was reviewed.

The work presented here is characterized as a bibliographic research of the state-of-the-art type. This genre of academic work involves research aimed at inventorying, systematizing, and evaluating the production in a specific area of knowledge. It entails identifying works produced in the field, selecting and classifying documents according to criteria and categories aligned with the researcher’s interests and objectives, describing and analyzing the characteristics and trends of the material, and evaluating its main results, contributions, and gaps (MEGID NETO, 1999).

After data collection, the information obtained from the questionnaires was transcribed into Microsoft Word and Microsoft Excel programs, with the intention of assisting in the construction of a table used in the results and discussion section of this research.

RESULTS AND DISCUSSION

“[...] affectivity represents the energetic source that mobilizes intelligence without altering it, just as a car’s fuel causes the engine to function without modifying the machine.”
SARMENTO, 2013

From the studies conducted in this research, it was observed that learning requires two characters (the teacher and the learner) and a bond established between them (FERNANDEZ, 1991). We believe that we do not learn from just anyone; we learn from those to whom we grant trust and the right to teach. Paulo Freire (1996) already warned that “education is an act of love and courage,” and that the dialogical



relationship between educator and learner is essential for true learning. The configuration of learning requires the presence of a peculiar nutrient: affectivity, which mobilizes the learner’s pre-existing cognitive conditions (PIAGET, 1954).

“From the moment students begin to trust the teacher, it is undeniable that learning performance will improve. Thus, bonds of respect and responsibility are created, driven by a meaningful exchange, where both parties engage in the pursuit of a common goal.”
Amorelli (2004)

Table 01 presents a synthesis of the results found in this research, followed by a discussion on affective relationships in the classroom as motivational factors.

Table 01 – Documents Analyzed

Title	Authors	Origin	Year	Summary	Source
AFETIVIDADE NO PROCESSO ENSINO APRENDIZAGEM DE CIÊNCIAS E BIOLOGIA. [Affection in the Teaching-Learning Process of Science and Biology]	FRANÇA, Carolina T. S.	Institutional Repository of UFPB	2023	This research enabled an analysis of the importance of affection in the science and biology teaching process, contributing to a broader understanding of the role of affection in teaching-learning. It emphasizes the need to consider students' emotions and invest in teacher training that values the construction of positive affective relationships in the classroom.	https://repositorio.ufpb.br/jspui/handle/123456789/27311?locale=pt_BR
AFETIVIDADE E GOSTO PELA CIÊNCIA NO ENSINO FUNDAMENTAL: O QUE DIZEM OS PROFESSORES DE CIÊNCIAS. [Affection and Interest in Science in Elementary Education: What Science Teachers Say]	ROSA, Cleci T.W. PACHECO, Julia N. DARROZ, Luiz, M.	V. 24 N. 72 (2023): TEIAS MAGAZINE N 72	2023	This study investigates the presence of affective elements in the daily lives of 10 science teachers in elementary education through semi-structured interviews with 10 questions. These questions	http://educaca.fcc.org.br/scielo.php?script=sci_arttext&pid=S1982-0305202300100233



				address academic background, professional practice, classroom structure, perceptions of science teaching and its goals, the importance of affective dimensions during lessons, and student motivation.	
EMOÇÕES E AFETIVIDADES: IMPLICAÇÕES E PERSPECTIVAS NO ENSINO DE BIOLOGIA. [Emotions and Affection: Implications and Perspectives in Biology Teaching]	RODRIGUES, Antonia R. S. FRANÇA-NETO, Aldair SOBREIRA, Alana C. M. EDSON-CHAVES, Bruno.	Educar Mais Magazine	2021	This study aims to highlight the emotional and affective aspects directly involved in the teaching-learning process. The research was conducted specifically with biology teachers in public basic education, emphasizing that for student learning to be increasingly effective, teachers must be attentive to all important factors in the teaching-learning process, whether curricular, pedagogical, or emotional.	https://educacaopublica.ceci-erj.edu.br/artigos/20/41/afetividade-no-processo-de-aprendizagem
A AFETIVIDADE NO ENSINO DE CIÊNCIAS: UM ESTUDO EM UMA ESCOLA PÚBLICA. [Affection in Science Teaching: A Study in a Public School]	MENDES, Patrícia, P. MOREIRA, Maria C. A.	Práxis Magazine, v. 15, n.29	2023	The study investigated the influence of affection in teaching and learning processes among elementary students, who were protagonists of activities developed by	https://revistas.unifoa.edu.br/praxis/articulo/view/4350

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				<p>themselves and the researcher-teacher. The theoretical framework included Wallon and Vygotsky. The qualitative research was based on participant observation in the teaching of fungi and plants. Results showed increased student participation and improved affective relationships, leading to a more harmonious and caring classroom environment.</p>	
<p>A AFETIVIDADE NA RELAÇÃO PROFESSOR-ALUNO: UM ESTUDO DE CASO VOLTADO PARA O ENSINO DE BIOLOGIA. [Affection in the Teacher-Student Relationship: A Case Study Focused on Biology Teaching]</p>	<p>CARPIM, Camila S.</p>	<p>UFES - Federal University of Espírito Santo</p>	<p>2014</p>	<p>The affection manifested in the teacher-student relationship is an inseparable element of the knowledge construction process and is highly important for the quality of teaching-learning. This case study aimed to investigate the affective relationship between high school students at a public school in Vitória, Espírito Santo, and their biology teacher. It is considered essential for both teachers and school administrators to recognize and incorporate affection in pursuit of a more supportive school</p>	<p>https://la-bec.ufes.br/sites/la-bec.ufes.br/files/filed/anelxo/TCC_CAMILA_FINAL.pdf</p>

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				environment that meets students' needs.	
<p>A AFETIVIDADE E O CONVÍVIO EM SALA DE AULA: FATORES QUE INFLUENCIAM NA INTERAÇÃO PROFESSOR- ALUNO E NO PROCESSO DE ENSINO APRENDIZAGEM [Affection and Classroom Interaction: Factors Influencing Teacher-Student Relationships and the Teaching-Learning Process]</p>	<p>DINIZ, Jean Carlos A. SILVA, Regisnei A.O.</p>	<p>Federal Institute of Goiás</p>	<p>2011</p>	<p>This study analyzes the teacher-student relationship, considering factors that may affect social interaction in the classroom and identifying elements that contribute to positive relationships. The research was conducted with high school students and science/biology teachers at a state school in Jataí – Goiás, using focus groups. Results highlight factors that foster good relationships, such as mutual integration and emotional engagement, as well as clear boundaries.</p>	<p>https://periodicos.ifg.edu.br/index.php/semlic/articula/vi-ew/345</p>
<p>HABILIDADES SOCIOEMOCIONAIS E AFETIVIDADE NO ENSINO DE CIÊNCIAS E BIOLOGIA: PESQUISAS E REFLEXÕES [Socioemotional Skills and Affection in Science and Biology Teaching: Research and Reflections]</p>	<p>PAGAN, Alice A. ARAÚJO, Yzila L.F.M.</p>	<p>Publishing House UFS</p>	<p>2019</p>	<p>This book seeks to understand cognitive work in a broader sphere that encompasses the whole human being. It proposes a reflection on affective discourse in science and biology teaching, presenting research that points to the potential of socioemotional skills in building a didactic approach aimed</p>	<p>https://www.livraria.ufs.br/produto/habilidades-socioemocionais-afetiva-de-no-ensino-de-ciencias-e-biologia-pesquisas-e-reflexoes/</p>

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				at forming individuals more connected to nature, both cognitively and affectively.	
<p>O VÍNCULO AFETIVO NA RELAÇÃO PROFESSOR-ALUNO E SEUS EFEITOS NO PROCESSO DE APRENDIZAGEM EM BIOLOGIA. [Affective Bond in the Teacher-Student Relationship and Its Effects on the Biology Learning Process]</p>	<p>CAMARGO, Pâmela P.</p>	<p>LUME Repository, UFRGS</p>	<p>2017</p>	<p>This research aims to verify the presence or absence of affection in teacher-student relationships and whether these relationships influence student learning. The hypothesis confirms this influence.</p>	<p>https://lume.ufrgs.br/handle/10183/180458</p>
<p>AS RELAÇÕES AFETIVAS NA SALA DE AULA COMO FATORES MOTIVACIONAIS PARA A APRENDIZAGEM DOS CONTEÚDOS DE BIOLOGIA [Affective Relationships in the Classroom as Motivational Factors for Learning Biology Content]</p>	<p>PAULA, Ana Luiza N.B. CUNHA, Ana Maria de O.</p>	<p>USP - The University of São Paulo</p>	<p>2001</p>	<p>After presenting educators' arguments on the importance of considering affective aspects for successful student learning, this study investigates the relationship between teachers' behavior in the classroom and students' motivation to study biology. A direct relationship was observed between a pleasant classroom atmosphere, fostered by the teacher's kindness, and students' motivation to engage with the subject.</p>	<p>https://fep.f.usp.br/~profis/arquivo/encontros/enpec/iiienpec/Atas_em_html/o26.htm</p>
<p>A RELAÇÃO PROFESSOR- ALUNO</p>	<p>CARMIANATTI, Bruna.</p>	<p>LUME</p>	<p>2018</p>	<p>This research explores two under-</p>	

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<p>E SUA INFLUÊNCIA NOS PROCES-SOS DE ENSINO E APRENDIZAGEM DE CIÊNCIAS NO ENSINO MÉDIO. [Teacher-Student Relationship and Its Influence on Science Teaching and Learning in High School]</p>		<p>Repository, UFRGS</p>		<p>investigated themes: affection and the teacher-student relationship. It incorporates elements from common themes and is grounded in cognitive and sociocultural theories, which posit that students are active participants in teaching and learning processes and learn through social interaction.</p>	<p>https://lume.ufrgs.br/handle/10183/188240</p>
<p>A AFETIVIDADE E RELAÇÃO PROFESSOR-ALUNO: CONTRIBUIÇÃO DESTAS NOS PROCESSOS DE ENSINO E DE APRENDIZAGEM EM CIÊNCIAS NO ENSINO MÉDIO. [Affection and Teacher-Student Relationship: Their Contribution to Science Teaching and Learning in High School]</p>	<p>CARMINIATTI, Bruna. PINO, José C.D.</p>	<p>Investigações em Ensinos de Ciências - V24 (1), pp, 122-138, 2019 Investigations in Science Teaching, Vol. 24 (1), pp. 122-138</p>	<p>2019</p>	<p>This article presents a segment of a doctoral research project, discussing teachers' perceptions of the influence of affection and the teacher-student relationship on science teaching and learning in secondary education, relating these to other influencing factors.</p>	<p>https://scholar.google.com/+afetividade+e+relacao+professor+aluno:+contribuicao+destas+nos+processos+de+ensino+e+de+aprendizagem+em+ciencias+no+ensino+médio</p>

Source: Authors, 2025.

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FINAL CONSIDERATIONS

“I miss work because I’m exhausted. I think being a teacher means being truly involved with the profession, with the students, and that generates a physical and mental burden greater than a human being can bear. It’s very psychological, you know? I go to therapy once a month, I have to see a psychiatrist, because it’s too much. You get involved with the students’ problems and there’s not always a return. Sometimes you enter the classroom and are poorly received, because the teacher is still seen as the enemy. There’s a chasm between teacher and student, teacher and principal. It feels like no one understands each other. [...] The role of the teacher in society is very important, but no one recognizes that. When the professional is abandoned, they tend to abandon as well. We lose our dignity. We’re forced to accept many things, and that impoverishes us spiritually. [...] The State leaves everything neglected. No one wants to know how the class is going. Everything is covered up. You can’t give a failing grade without justifying it with a document. So, to avoid that work, they just give a passing grade. Move on. Everyone is tired of hearing about the problems in education, but no one does anything.”
(Pro Dia Nascer Feliz, 2005)

This study, by analyzing the state of the art on affective relationships in the classroom, highlighted the importance of these interactions as fundamental elements for student motivation and engagement, especially in the learning of biology content.

The reviewed works indicate that the affective bond between teacher and student significantly contributes to building a more welcoming, participatory, and meaningful school environment. It was found that affection in the pedagogical relationship is not limited to an emotional aspect but is directly related to valuing the student as an active subject in the educational process.

Teachers who demonstrate empathy, respect, and active listening tend to inspire greater interest and trust in students, promoting not only the learning of biological concepts but also critical and human development.

Despite the relevance of the topic, further investigations are needed to deepen this relationship in the specific context of biology, considering the challenges faced by teachers in different school realities.

It is concluded, therefore, that investing in affective pedagogical practices is a promising path to making biology teaching more meaningful and motivating. It is hoped that this work contributes to expanding reflection and fostering new studies that value affectivity as an essential pedagogical tool in the formation of more conscious, critical, and sensitive individuals toward knowledge and life.



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