A Systematic Literature Review on Student Boredom: Analyzing Contributing Factors

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Abstract. Student boredom in the academic environment has significant implications for engagement and learning outcomes, yet remains under-researched in systematic reviews. Addressing this gap is critical to developing strategies to improve student motivation and academic performance. This study aims to analyze the factors that contribute to student boredom, focusing on personal and environmental influences. The design used followed the PRISMA guidelines. Articles published from 2015-2024 were screened, resulting in 38 articles initially identified, with 7 articles meeting all inclusion criteria. Data were collected by thematic analysis of the articles, focusing on various contributing factors. The review identified two main categories of factors contributing to student boredom: personal factors, such as low interest, insufficient motivation, and self-concept issues, and environmental factors, including monotonous learning environments, lack of stimulation, and insufficient instructional diversity. These findings suggest that addressing both individual and contextual aspects is essential to increase student engagement and reduce boredom.

Keywords: Student Boredom; Academic Emotions; Systematic Literature Review

1 Introduction

Student boredom in school or often called academic boredom is the boredom that students experience in school and while they are completing academic tasks [1][1]. A common definition of boredom is an emotional state caused by a lack of interest and purpose in the learning process, which can adversely affect student engagement and academic outcomes. Boredom is more than just a lack of interest; it often results from stimuli in the environment being perceived as pointless or not meeting expectations [2][1]. Often the onset of boredom is associated with a lack of external stimuli [3][2]. Research shows that boredom in the classroom is a fairly common problem. [4][3] reported that more than 44% of students experience boredom at some level during lessons. Furthermore, [5][4] that on average students feel bored during

[1] Yacek DW, Gary K. The uses and abuses of boredom in the classroom. Br Educ Res J [Internet]. 2023.
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almost half of every lesson. These findings suggest that boredom is not just a minor problem, but an issue that requires serious attention from educators and researchers. Academic boredom not only impacts students' motivation but can also affect their academic achievement and emotional well-being. Students who feel bored tend to show low interest in lessons, which can reduce the quality of their learning and academic outcomes [6][5]. In addition, research by [7][6] shows how low student engagement and substandard academic performance are often attributed to boredom. It is important to understand the causes of boredom as a result.

2 Method

2.1 Study Design

This research used a systematic literature review design and focused on qualitative research. The review followed the PRISMA guidelines, with identification, screening, eligibility, and finally, abstraction and data analysis using inclusion and exclusion criteria.

2.2 Participant

This study examined, using inclusion and exclusion criteria, how susceptible students are to boredom in the classroom. Among the inclusion criteria was the study of boredom in school, published between 2015-2024, with the term “boredom” in the title, abstract, or keywords, fully published and accessible articles, using English, and empirical or conceptual articles within the field of educational psychology. Exclusion criteria included irrelevant research, such as articles published outside the 2015-2024 period, not containing the term “boredom”, not peer reviewed, not accessible, not in English, and outside the scope of educational psychology.

2.3 Instruments

The data collection method used in this research is a systematic literature review using the PRISMA technique. This method was used to gain in-depth insight into students' boredom proneness in schools.

2.4 Procedure

The systematic review process was conducted through several sequential stages. The term “ “boredom proneness in schools” was the main focus of the search, which was limited to journals published in the last ten years (2015-2024). 38 articles were found after searching four databases: Sage Journals, Springer Link, Science Direct, and Taylor & Francis. After going through the screening process, 21 articles were removed due to irrelevant topics, leaving 17 articles for further review. At the abstract and keyword stage, 4 articles were again eliminated, leaving 13 articles. 7 articles met the requirements and were subjected to additional analysis after reading all articles. Six articles were eliminated due to lack of relevance. Figure 1 displays a flowchart of the article selection procedure, illustrating each

[5] Schiefele U. Scientific Studies of Reading Interest and Learning From Text. Sci Stud Read. 1999.
[6] Pekrun R, Goetz T, Titz W, Perry RP. Academic Emotions in Students’ Self-Regulated Learning and Achievement: A Program of Qualitative and Quantitative Research. Educ Psychol [Internet]. 2002.

step of the process from identification, screening, and eligibility to the articles that were ultimately included in the investigation.

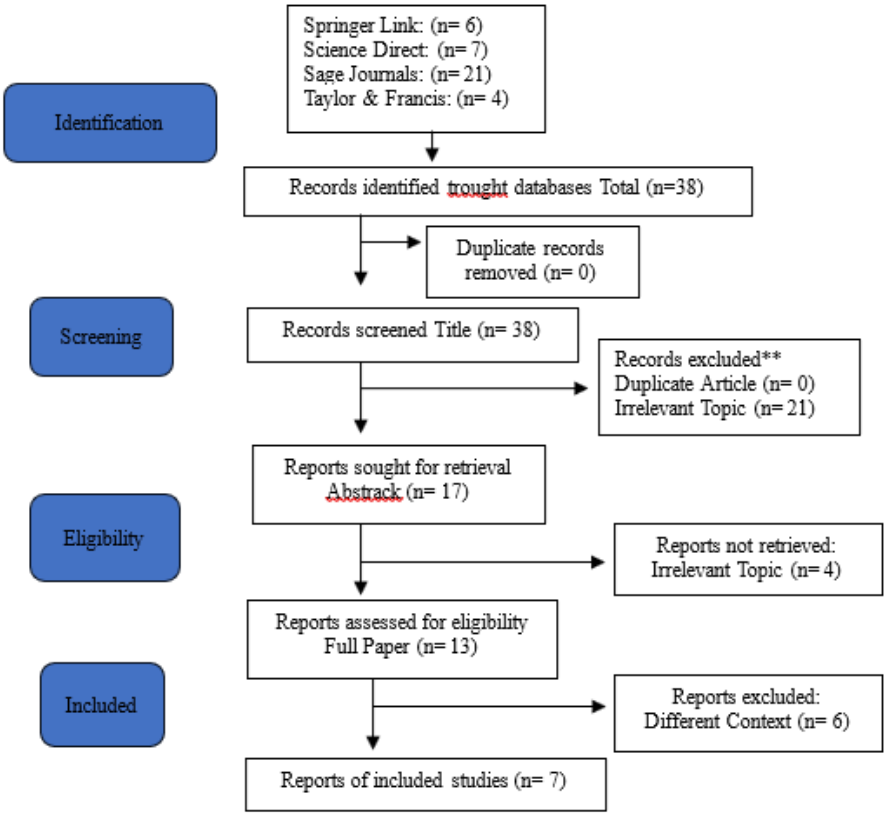

Fig. 1. Flowchart of Article Selection

2.5 Data Analysis

Data were analyzed using the thematic analysis method, which aimed to identify recurring themes relating to factors contributing to boredom proneness in schools. This approach helped to organize and summarize the main findings of the selected research.

3 Result

3.1 Participant's Characteristics

This study analyzed articles that met the inclusion criteria to understand boredom proneness in schools. Of the 38 articles screened, most involved students with varying degrees of boredom in a teaching context. The results of this study are expected to provide deep insight into the factors that cause student boredom from the point of view of the educational environment.

3.2 Data Analysis

Data analysis in this study used thematic analysis methods for articles that met the inclusion criteria. Of the 38 articles identified, 7 articles were selected and analyzed according to PRISMA guidelines. The article selection process is explained through the flowchart in Figure 1, while the results of data extraction and analysis are presented in detail in Table 1.

Table 1. Extraction and Analysis of Review Articles

Author and Country	Design, Sample, Variables, Instruments, Analysis	Results	Identification of Contributing Factors of Student Boredom
Chansaengsee (2023), Thailand [8]	**Design:** mixed methods. **Sample:** 285 Thai adolescents. **Variables:** Life experience of boredom (online activities); boredom level and preference for online learning. **Instruments:** In-depth interviews (key informants aged 13 to 18 years); Boredom Assessment Inventory: developed to measure participants' boredom level; and Questionnaire. **Analysis:** content analysis and descriptive statistics.	Adolescents experience boredom in online learning, which can lead to dysfunctional behavior. Hence the importance of creating a stimulating learning platform amidst the challenges of remote learning environments during the pandemic.	Limited interaction, monotonous learning environment, difficult content, lack of self-direction, and low motivation.
Sydänmaanlakka et al. (2024), Finland [9]	**Design:** quantitative. **Sample:** 1,310 Finnish high school students. **Variables:** interaction effects of learning environment (face-to-face vs distance learning) and math achievement level on achievement emotions (specifically enjoyment, pride, anxiety, boredom, anger, and embarrassment). **Instrument:** Adaptation of the Achievement Emotions Questionnaire-Mathematics (AEQ-M) scale. **Analysis:** Linear mixed effects modeling.	Higher ability students experience more negative emotions in distance learning.	Lack of challenge or stimulation in distance learning, and external factors related to the learning environment.
Clem et al. (2021), Finland [10]	**Design:** longitudinal study. **Sample:** 848 adolescents. **Variables:** self-concept of ability in math and literacy, and achievement emotions of pleasure, anxiety and boredom. **Instruments:** adaptation of existing questionnaires to measure self-concept and emotions. **Analysis:** random intercept cross-lagged panel model (RI-CLPM).	Students' perceptions of their own math prowess and their emotional states are significantly correlated. Students' level of boredom can be predicted by their high math self-concept, but self-concept and boredom are not inversely correlated.	Low self-concept regarding students' abilities, lack of control in learning, and disengagement from learning activities.
Abdellatif (2022), Saudi Arabia [11]	**Design:** Descriptive-analytic approach (structural equation modeling). **Sample:** university students. **Variables:** independent: academic boredom; mediator: self-compassion; dependent: academic quality of life. **Instruments:** self-compassion scale (modified version) and academic boredom scale developed	Academic boredom significantly affects self-compassion, which in turn affects students' quality of academic life.	Material not interesting or too challenging, repetitive learning activities, lack of motivation and stimulation.

Author and Country	Design, Sample, Variables, Instruments, Analysis	Results	Identification of Contributing Factors of Student Boredom
	by the researchers using existing literature. **Analysis:** using SPSS 25.0 and Amos 24.0, (Pearson correlations and structural equation modeling to test mediation effects).		
Xie et al. (2021), China [12]	**Design:** exploratory case study. **Sample:** graduate students. **Variables:** experience of boredom, attribution of causes of boredom, and coping strategies. **Instruments:** in-depth open-ended interviews, focus group discussions, and storytelling sessions, and coping strategies. **Analysis:** comparative approach.	The results show that boredom experienced by students is influenced by environmental and personal factors. Boredom affected students' approach to learning, and attribution of the cause of boredom (internal vs. external) significantly influenced how they coped with boredom during instruction, but not on the research task. Most participants engaged in motivational regulation, regardless of their attribution style or age.	Monotonous instructions, activities that are perceived as less meaningful, lack of interest in the task.
Dewaele & Li (2021), China [13]	**Design:** Mixed methods approach (explanatory sequential design and interviews). **Variables:** students' perceived EFL teacher enthusiasm, foreign language enjoyment (FLE), boredom, and student engagement in the classroom. **Instruments:** Teacher enthusiasm scale; Foreign language enjoyment scale; Boredom subscale of the AEQ; Engagement scale. **Analysis:** Pearson correlation and regression analysis, and using a combination of inductive and deductive coding methods.	The findings suggest that the relationship between students' perceptions of teacher enthusiasm and their participation in class is mediated by enjoyment and boredom in a foreign language. Students' perceptions of their teachers' excitement and fun are generally high, and this is positively correlated with their participation in class.	Monotonous tasks, overly strict teacher control, low perceived usefulness of tasks, and unattractive teacher personality.
Cui et al. (2024), China [14]	**Design:** quantitative (survey). **Sample:** 884 students majoring in English. **Variables:** Independent: interest in learning, perceived autonomy support, and student enthusiasm. Dependent: Class-related boredom. **Instruments:** questionnaires measuring class-related boredom (Achievement Emotions Questionnaire), interest in learning, and perceived autonomy support. **Analysis:** using SPSS 26.0, involving descriptive statistics and regression analysis.	English majors in China experience varying degrees of classroom-related boredom, which is influenced by various factors such as interest in learning, perceived autonomy support, and student enthusiasm.	Low interest in learning, lack of autonomy support and low student enthusiasm.

4 Discussion

Based on the analysis of various studies on factors affecting boredom in school students, it can be identified that student boredom is influenced by two main factors: personal factors and environmental factors. Both interact in creating an unsatisfactory learning experience for students.

4.1 Interests

Research by [14][7] shows that low interest in the subject matter is the main cause of boredom in class. [12][8] added that monotonous instruction and lack of relevance to students' interests exacerbate this situation, which makes it difficult for students to engage in learning. [15][9] also found that students' interests greatly affect learning boredom. Students who are not interested in the subject matter tend to feel bored and not engaged in the learning process. This is in line with [16][10] studies that highlight how students' subjective values about learning affect their emotional engagement, including feelings of boredom.

4.2 Motivation

According to [8][11], research, low motivation, especially in less interactive learning, increases boredom. [11][12] also pointed out that academic boredom can be attributed to low motivation, especially when students feel they are not receiving enough external stimulation. Motivation theory also suggests that lack of optimal arousal and the inability of the environment to arouse arousal can lead to boredom [17][13].

4.3 Self-Concept

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[7] Cui G, Zhou J, Zhang H, Hong T, Hu Y. The Influence of Study Interest, Perceived Autonomy Support, and Student Enthusiasm on Class-Related Boredom of English Majors. SAGE Open [Internet]. 2024.

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[10] Pekrun R. The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. Educ Psychol Rev. 2006.

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[10][14] found that students who have low self-concept, especially in subjects perceived as difficult such as math, are more prone to boredom. When students doubt their ability to face academic challenges, boredom increases, as they feel learning activities do not provide opportunities for success. This is consistent with self-determination theory, where feelings of inadequacy or lack of competence can worsen motivation and lead to boredom [18][15].

4.4 Learning Environment

A monotonous and unchallenging learning environment is an external factor that greatly influences student boredom. Research by [9][16] revealed that students feel bored more easily when they are placed in a classroom that does not offer variety and novelty. [11] added that a curriculum that relies on repetitive material and is not stimulating enough is another cause of academic burnout. These results are in line with the learning environment theory proposed by [19][17], which emphasizes the importance of ecosystem factors in students' psychological development. [20][18] outlines how students often feel bored with repetitive instructions and uninteresting material, taking into account external influences such as parental, peer and teacher support in preventing academic boredom.

4.5 Social Interaction

Limited social interaction, both with fellow students and teachers, is also a cause of boredom. [8] found that students become socially disconnected and feel alone when they do not receive meaningful interaction during the learning process, especially when the learning process takes place online. [12] added that low social interaction leads to a decrease in subjective value or meaning students feel towards learning activities. This research is supported by [21][19] view which emphasizes the importance of social interaction in constructivist learning.

4.6 Teacher Control

Teachers who tend to control the learning process excessively, such as giving monotonous tasks without flexibility, can increase student boredom. [13] research shows that when students feel they have no autonomy in their learning, motivation decreases, and boredom increases. This is in line with autonomy theory, which suggests that strict external control

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[14] Clem AL, Hirvonen R, Aunola K, Kiuru N. Reciprocal relations between adolescents' self-concepts of ability and achievement emotions in mathematics and literacy. Contemp Educ Psychol [Internet]. 2021.
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[18] Robinson WP. Boredom at School. Br J Educ Psychol [Internet]. 1975.
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without providing space for students to take initiative can decrease their active engagement [18].

4.7 Lack of Stimulation

Students who feel unchallenged by the learning material presented will more easily feel bored. [10], [9] noted that when learning activities do not match students' ability levels or interests, boredom tends to increase. This can happen when tasks are too easy or uninteresting for students, so they do not feel challenged to think critically or creatively.

Therefore, personal factors such as interest, motivation, and self-concept, as well as environmental factors such as a monotonous learning environment, minimal social interaction, overly strict teacher control, and lack of learning challenges all contribute to student boredom in school.

With a better understanding of how personal and environmental factors contribute to boredom, educators can design more adaptive and engaging learning strategies. This will ultimately increase student engagement and support their academic performance.

5 Conclusion

Student boredom is a complicated phenomenon influenced by external and internal factors. Personal factors such as interest, motivation and self-concept, as well as environmental factors such as a monotonous learning environment, limited social interaction, overly strict teacher control and lack of challenge in learning, all play an important role in increasing boredom. Therefore, a holistic approach that includes strategies to increase motivation, create an interactive learning environment, and provide challenges according to students' abilities is needed to reduce boredom and increase student engagement and achievement.

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Conflict of Interest

There are no conflicts of interest in relation to this research.

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