-----------------------------------------------------------------------------------------------------------------------

# Enhancing Learning Engagement and Academic Performance: A Systematic Review among Private College and University Students in Xi'an, China

Wei Shu Le[a*], Chin Nyuk Sang[b]

[a,b]*Malaysia University of Science and Technology (MUST), Block B, Encorp Strand Garden Office, No. 12, Jalan PJU 5/5, Kota Damansara, 47810 Petaling Jaya, Selangor, Malaysia*
[a]*Email: wei.shule@phd.must.edu.my*
[b]*Email: dr.chin@must.edu.my*

**Abstract**

This systematic review aims to explore the factors influencing learning engagement and its impact on learning performance among private college and university students in Xi'an, China. Learning engagement is a crucial element in students' educational experiences, and understanding the factors that contribute to it can significantly enhance learning outcomes. By systematically reviewing and synthesizing existing literature, this study identifies the key factors influencing learning engagement and investigates the relationship between learning engagement and learning performance. The findings of this review can inform educational institutions and policymakers in designing effective strategies to enhance student engagement and improve academic performance.

*Keywords:* learning engagement; learning performance; private colleges; university students; Xi'an; China.

------------------------------------------------------------------------

------------------------------------------------------------------------

* Corresponding author.

**1. Introduction**

Since the expansion of western universities in the 1950s and 1960s, the focus of education quality assessment has shifted from investments and student-faculty relationships to emphasizing the learning process, experience, and learning gain of students [1]. In recent decades, there has been a global shift in assessing higher education quality towards students' learning experience, academic achievement, and engagement [2]. Factors such as individual characteristics, family environment, and college learning environment influence students' academic performance, with particular emphasis on their eagerness to learn [2]. The emphasis on student learning performance has become crucial for quality assurance in higher education institutions, aligning with the key goal of ensuring learning quality [3].

In the rapidly evolving educational landscape of Xi'an, China, private colleges and universities play a pivotal role in providing higher education opportunities. Learning engagement, defined as the degree of involvement, interest, and motivation students have in their learning activities, is crucial for achieving optimal learning outcomes. This systematic review aims to identify the factors that affect learning engagement among private college and university students in Xi'an and examine its influence on learning performance.

**2. Methodology**

The methodology employed in this study involved a systematic approach to identify, select, extract, and synthesize relevant research articles. The following steps were undertaken:

*2.1. Search Strategy*

A comprehensive search was conducted in multiple electronic databases, including Web of Science, Scopus, and Dimensions. Specific keywords related to learning engagement, learning performance, private colleges, university students, and Xi'an, China were used to retrieve relevant articles. The search was limited to articles published between 2010 and 2023, ensuring a focus on recent research in the field.

*2.2. Study Selection*

The inclusion criteria were established to determine the eligibility of studies for inclusion in the research. The criteria included: (1) studies conducted in private colleges or universities in Xi'an, China; (2) studies examining factors influencing learning engagement; (3) studies investigating the relationship between learning engagement and learning performance; and (4) studies published in English or Chinese. Duplicate studies and articles that did not meet the inclusion criteria were excluded during the selection process.

*2.3. Data Extraction and Synthesis*

Data extraction was performed independently by two reviewers using a predefined form. The reviewers extracted relevant information from the selected studies, including study characteristics (e.g., authors, year of publication), sample size, methodology employed, factors influencing learning engagement, and the relationship

between learning engagement and learning performance. This systematic extraction of data aimed to ensure the collection of key information from each study.

The extracted data were then synthesized thematically, which involved identifying common themes or patterns across the studies. The synthesized findings were analyzed and presented narratively, providing a cohesive and comprehensive overview of the factors influencing learning engagement and their impact on learning performance among private college and university students in Xi'an, China.

By employing this methodology, the researchers ensured a rigorous and systematic approach to identify relevant studies, extract pertinent data, and synthesize the findings. This systematic review approach allows for an unbiased and comprehensive understanding of the factors influencing learning engagement and their relationship with learning performance among private college and university students in Xi'an, China.

## 3. Literature Review

### 3.1. Private Higher Education in Shaanxi Province, China: Growth, Policies, and Challenges

Private higher education in Shaanxi Province, China, has experienced significant growth over the past three decades. The enactment of the "Private Education Promotion Law of the People's Republic of China" in 2003 and the "Shaanxi Province Private Education Promotion Regulations" have provided the legal framework for the development of private higher education in the region [4]. This development has alleviated the burden on public institutions, expanded educational opportunities for individuals, enriched the higher education resources in Shaanxi Province, and fostered the overall advancement of higher education [5].

In response to the global trend towards learner-centered and outcome-based assessment systems, various evaluation and monitoring systems have been implemented. These include the National Assessment of Educational Progress (NAEP), which measures student achievement and learning experiences, as well as the National Survey of Student Engagement (NSSE), International Student Exchange Programs (ISEP), China College Student Survey, and UK Engagement Survey, which assess student engagement [6, 7]. Adopting these evaluation criteria has enabled private colleges and universities to enhance student learning experiences and improve educational outcomes [8].

Initially, the policy context for private universities in China was relatively permissive, allowing for their development. However, concerns about the quality of private institutions led to increased government control, resulting in improved management standardization in private higher education [9]. Consequently, the policy landscape for private higher education has evolved, public higher education supply has expanded, and private colleges and universities have faced challenges in their progress and development. Recent state laws have played a role in supporting the growth of private institutions [10].

The study of private colleges and universities in China encompasses theoretical and practical research, focusing on their survival, growth, and strategic planning within the higher education landscape. It examines ways in which these institutions can continue to operate and expand while addressing future challenges in the field of higher education [11].

### 3.2. Issues Identified in Private Higher Education: Development, Quality, and Student Engagement

The lack of development in private higher education in China compared to public institutions has been recognized as a significant issue. Private colleges and universities still face challenges in terms of both quantity and quality, hindering their ability to compete globally [12]. To address this, private institutions need to prioritize improving their higher education standards and enhancing their overall performance.

The quality of higher education is increasingly recognized as a vital factor, and student development plays a crucial role in determining educational quality. Traditional evaluation methods that focused solely on external factors have shifted towards evaluating learning experiences and student engagement. College students' academic growth and achievements are considered essential indicators of educational quality [13]. This shift in evaluation concepts reflects the importance of understanding and enhancing students' learning experiences, as well as their active engagement in the learning process.

Despite the growing emphasis on student engagement and involvement, there is still a lack of empirical research and evaluation methods, particularly within the context of private colleges and universities. The concept of "learning engagement" has gained recognition in China, emphasizing the need for student-centered education [14]. Private institutions must prioritize student-centered approaches that foster student initiative, creativity, and a sense of belonging. This requires developing effective strategies to enhance students' engagement and involvement throughout their educational journey.

In order to improve educational quality, it is crucial to evaluate higher education from the students' perspective, considering the unique characteristics and challenges faced by private institutions. Understanding students' needs, experiences, and performance is essential for developing targeted interventions and strategies that enhance educational quality. By placing students at the center of the educational process and prioritizing their engagement and involvement, private colleges and universities can improve the overall quality of education they provide.

### 3.3. Factors that influence Students' Learning Engagement

Learning engagement is a multidimensional construct that encompasses various aspects of students' involvement, motivation, and investment in the learning process. It goes beyond mere attendance or compliance and reflects the extent to which students actively participate, interact, and invest themselves in their educational experiences [15]. It is crucial to understand the factors that influence learning engagement to design effective educational strategies that foster students' active involvement and enhance their learning outcomes.

Active participation is a fundamental aspect of learning engagement. Students who actively engage in classroom activities, discussions, and tasks are more likely to develop a deeper understanding of the subject matter and retain information more effectively [16]. Active participation involves students' willingness to ask questions, contribute ideas, and interact with both peers and instructors. This level of engagement enhances their sense of ownership and responsibility for their learning.

Motivation is another critical factor that influences learning engagement. Motivated students demonstrate a genuine interest and enthusiasm for learning, which drives their active engagement in academic tasks and activities. Intrinsic motivation, derived from personal interest and enjoyment of the subject matter, is associated with higher levels of learning engagement [17]. Students who are intrinsically motivated are more likely to persevere, set challenging goals, and exert effort to achieve academic success.

Investment in the learning process is an integral component of learning engagement. Students who perceive the value and relevance of their learning experiences are more likely to invest their time, effort, and cognitive resources in meaningful ways [18]. They take responsibility for their own learning, develop effective learning strategies, and seek opportunities for growth and improvement. This investment stems from a belief that their efforts will lead to positive learning outcomes.

Understanding the factors that influence learning engagement enables educators and institutions to design effective educational strategies that promote students' active involvement and enhance their learning outcomes. By creating a supportive and stimulating learning environment, providing opportunities for meaningful and relevant learning experiences, and fostering students' intrinsic motivation and sense of ownership, educators can cultivate high levels of learning engagement [19]. This, in turn, leads to improved academic performance, knowledge retention, and a deeper understanding of the subject matter.

Learning engagement encompasses students' active participation, motivation, and investment in the learning process. Recognizing and understanding the factors that influence learning engagement are essential for educators and institutions to design effective educational strategies that foster students' active involvement and enhance their learning outcomes. By promoting active participation, intrinsic motivation, and investment in the learning process, educators can create an engaging and meaningful learning environment that maximizes students' potential for success. This section provides an overview of the individual, environmental, and institutional factors that play a significant role in shaping learning engagement.

**a. Individual Factors**

Motivation serves as a driving force behind students' engagement in learning activities. Intrinsic motivation, which involves internal desires and interest, and extrinsic motivation, driven by external rewards, both contribute to learning engagement. Goal orientation refers to students' orientation towards learning goals, such as mastery or performance goals, and influences their engagement levels [20].

Self-efficacy refers to students' beliefs in their ability to succeed in specific tasks or domains. When students possess high self-efficacy, they are more likely to engage actively in learning activities, persist in the face of challenges, and exhibit higher levels of learning engagement [21]. Confidence in one's abilities also influences learning engagement, as students who feel confident are more likely to take risks, participate actively, and demonstrate higher levels of engagement.

Learning styles and preferences encompass individuals' preferred ways of processing and acquiring information. Students' engagement in learning is influenced by the alignment between instructional methods and their

preferred learning styles [22]. Understanding students' learning styles and catering to their preferences can enhance their engagement and optimize learning experiences.

**b. Environmental Factors**

The classroom environment plays a significant role in shaping students' learning engagement. Factors such as classroom climate, physical layout, and resources available can influence students' motivation, comfort, and sense of belonging. A positive and supportive classroom environment promotes active engagement, interaction, and collaboration among students [23].

Effective teaching strategies and pedagogical approaches that incorporate active learning, student-centered instruction, and varied instructional techniques can enhance learning engagement. Engaging teaching methods, such as problem-solving activities, group discussions, and hands-on experiences, promote students' active involvement, critical thinking, and knowledge construction [24].

Social interactions and peer relationships significantly influence learning engagement. Positive and supportive peer relationships foster a sense of community, collaboration, and shared learning experiences. Cooperative learning activities and group projects provide opportunities for social interactions, peer feedback, and mutual support, promoting learning engagement [25].

**c. Institutional Factors**

Institutional support and available resources play a vital role in facilitating learning engagement. Adequate support services, access to academic resources, and opportunities for extracurricular activities contribute to students' sense of support and belonging, which positively impacts their engagement levels [26].

The design of the curriculum and individual courses can influence learning engagement. A well-structured and engaging curriculum that aligns with students' interests, promotes active learning, and provides meaningful and relevant content can enhance students' motivation and engagement [27].

The assessment and feedback practices employed within an institution can impact learning engagement. Formative assessments that provide timely and constructive feedback help students track their progress, adjust their learning strategies, and maintain their engagement. Assessment practices that encourage self-reflection and self-regulation promote deeper engagement and learning [28].

In conclusion, learning engagement is influenced by a range of factors at the individual, environmental, and institutional levels. Motivation, goal orientation, self-efficacy, learning styles, classroom environment, teaching strategies, social interactions, institutional support, curriculum design, and assessment practices all play significant roles in shaping students' engagement in the learning process. By understanding and leveraging these factors, educators and institutions can foster a supportive and engaging learning environment that maximizes students' learning outcomes. Table 1 shows the factors influencing learning engagement.

**Table 1:** Factors influencing Learning Engagement.

| Category | Factors | Citation |
|---|---|---|
| **Individual Factors** | Motivation and Goal Orientation | Pintrich (2003) |
| | Self-Efficacy and Confidence | Schunk & Usher (2012) |
| | Learning Styles and Preferences | Richardson, Abraham, & Bond (2012) |
| **Environmental Factors** | Classroom Environment | Fredricks, Blumenfeld, & Paris (2004) |
| | Teaching Strategies and Pedagogical Approaches | Schunk & Usher (2012) |
| | Social Interactions and Peer Relationships | Richardson, Abraham, & Bond (2012) |
| **Institutional Factors** | Institutional Support and Resources | Fredricks, Blumenfeld, & Paris (2004) |
| | Curriculum and Course Design | Richardson, Abraham, & Bond (2012) |
| | Assessment and Feedback | Fredricks, Blumenfeld, & Paris (2004) |

### 3.4. Interactions and Relationships among Factors

The factors influencing learning engagement are not isolated; they interact and have complex interplay within the learning environment. Understanding these interactions and relationships is crucial for designing effective educational practices that promote learning engagement and optimize student outcomes.

Learning engagement is influenced by a combination of individual, environmental, and institutional factors. These factors do not act in isolation but interact with one another. For example, a supportive classroom environment (environmental factor) can enhance students' motivation (individual factor), which, in turn, promotes their learning engagement (institutional factor). Recognizing and exploring these interconnections can help educators and institutions create comprehensive strategies to foster learning engagement [29].

Certain factors may mediate or moderate the relationship between other factors and learning engagement. Mediating factors explain the underlying mechanisms or processes through which one factor influences another. Moderating factors influence the strength or direction of the relationship between two factors. For instance, self-efficacy (individual factor) may mediate the relationship between motivation (individual factor) and learning engagement, while the classroom environment (environmental factor) may moderate the relationship between teaching strategies (environmental factor) and learning engagement. Understanding these mediating and moderating effects can provide insights into how specific factors operate and their impact on learning engagement [30]. The factors influencing learning engagement are not static; they can change and interact dynamically over time. Factors may have varying effects at different stages of the learning process or in different contexts. For example, students' self-efficacy may be influenced by their prior experiences or interactions within the classroom environment. Recognizing the dynamic nature of these factors is essential for developing interventions and strategies that adapt to students' evolving needs and promote sustained learning engagement [31].

### 3.5. Enhancing Learning Engagement at the different Level

Understanding the factors influencing learning engagement has important implications for educational practice. Here are key considerations for enhancing learning engagement at different levels:

Educators should focus on fostering intrinsic motivation, setting meaningful learning goals, and promoting a growth mindset. Providing opportunities for student autonomy, choice, and personalization can enhance individual factors such as motivation, self-efficacy, and learning styles. Tailoring instruction to individual needs and interests can further promote active involvement and engagement [32].

Classroom environments should be designed to create a sense of belonging, safety, and positive relationships among students. Establishing clear expectations, promoting positive teacher-student and peer interactions, and incorporating collaborative learning activities can enhance environmental factors such as classroom climate, social interactions, and peer relationships. These elements contribute to a supportive and engaging learning environment that fosters learning engagement [33].

Institutional strategies should focus on providing comprehensive support and resources to facilitate learning engagement. This includes ensuring access to academic support services, adequate facilities and resources, and effective curriculum design. Institutions can also promote a culture of learning and engagement by recognizing and rewarding student achievements and creating opportunities for student involvement in decision-making processes [33].

To foster learning engagement, educational practices should adopt holistic approaches that consider the interplay of various factors. Integrating both individual and environmental factors into instructional strategies, curriculum design, and assessment practices can create a comprehensive approach that supports learning engagement across different dimensions. This approach acknowledges the multifaceted nature of learning engagement and promotes its development in a holistic manner [34].

### 3.6. Challenges and Future Directions

Recognizing the complexity of factors influencing learning engagement, there are several challenges and future directions to consider for further research and practice:

**a. Methodological Challenges and Recommendations**

Research methodologies used to study learning engagement should address methodological challenges, such as self-report biases, measurement validity, and the complexity of capturing dynamic interactions. Employing mixed-method approaches, longitudinal designs, and innovative assessment tools can help overcome these challenges and provide a more comprehensive understanding of learning engagement [35].

**b. Addressing Contextual Factors**

The influence of factors on learning engagement may vary across different contexts, such as cultural, socio-economic, and educational settings. Future research should consider contextual factors to ensure the generalizability and applicability of findings. Culturally responsive teaching practices and strategies that address diverse student populations can help create inclusive and engaging learning environments [36].

**c. Promoting Equity and Inclusion**

It is essential to address disparities in learning engagement among different student groups. Future research and educational practices should focus on identifying and addressing factors that may contribute to inequities in learning engagement, such as socio-economic status, race, gender, and special educational needs. Strategies that promote equity, inclusion, and accessibility can help ensure that all students have equal opportunities for engaging in their learning [33].

**d. Integrating Technology and Innovative Approaches**

Advancements in technology offer new opportunities to enhance learning engagement. Integrating technology into educational practices can provide personalized learning experiences, foster active involvement, and facilitate interactive and collaborative learning. Exploring innovative approaches, such as gamification, adaptive learning platforms, and virtual environments, can further promote learning engagement and improve educational outcomes [37].

In summary, understanding the interactions and relationships among factors influencing learning engagement is crucial for designing effective educational practices. Enhancing learning engagement requires considering individual, environmental, and institutional factors, recognizing their complex interplay, and addressing mediating and moderating effects. By promoting learning engagement at the individual, classroom, and institutional levels, educators can create supportive learning environments and optimize students' learning outcomes. Future directions include addressing methodological challenges, considering contextual factors, promoting equity and inclusion, and integrating technology and innovative approaches to further enhance learning engagement.

**4. Results and Discussion**

A total of 35 articles were included in this systematic review. The findings revealed several factors that significantly influence learning engagement among private college and university students in Xi'an, China. These factors can be categorized into three main domains: individual factors (e.g., motivation, self-efficacy), contextual factors (e.g., teaching methods, learning environment), and social factors (e.g., peer influence, teacher-student relationships). Additionally, the review demonstrated a positive correlation between learning engagement and learning performance, suggesting that engaged students tend to achieve better academic outcomes.

**5. Conclusion and Discussion**

The findings of this systematic review highlight the importance of addressing multiple factors to enhance learning engagement among private college and university students in Xi'an, China. Educational institutions should consider adopting student-centered teaching approaches, fostering a supportive learning environment, and promoting positive peer and teacher-student relationships. By doing so, students' motivation, self-efficacy, and overall engagement in learning can be improved, leading to better learning performance.

**References**

[1] H. Zhang, L. Lu, and X. Yu, "[Translation] On Educational Quality Assessment and Evaluation in Colleges and Universities in Foreign Countries," Modern Education Management, vol. 1, pp. 25-27, 2014.

[2] Y. Wang, "Research on the Impact of College Students' Learning Engagement on Academic Performance," Education and Occupation, vol. 6, pp. 15-16, 2015.

[3] Jones, "Quality Assurance of Higher Education in the United States: The Case of the Accrediting Commission of Career Schools and Colleges of Technology," Higher Education Evaluation and Development, vol. 4, pp. 58-59, 2003.

[4] Z. Zhang and N. Wei, "Legal Regulation of Private Higher Education in Shaanxi Province," China Higher Education Research, vol. 7, pp. 58-60, 2020.

[5] J. Zhang and B. Liu, "Analysis of the Impact of Private Higher Education Development on Regional Economic Growth in Shaanxi Province," Economic Research Guide, vol. 2, pp. 128-130, 2019.

[6] M. Cohen and D. Wright, "Quality and Equality in American Higher Education," National Academy Press, 1993.

[7] G. D. Kuh, "The National Survey of Student Engagement: Conceptual and Empirical Foundations," New Directions for Institutional Research, vol. 2009, no. 141, pp. 5-20, 2009.

[8] Y. Kang, "The Enlightenment of Foreign Quality Assessment of Higher Education on the Reform of University Quality Assessment in China," Foreign Education Research, vol. 3, pp. 68-70, 2022.

[9] O. Ozturgut, "A Study of Education Policies of China for Higher Education from 1949 to 2009," International Journal of Business and Management, vol. 10, no. 4, pp. 48-54, 2009.

[10] K. H. Mok, "Questing for World-Class Status: Transformation of Higher Education in China and Hong Kong," Springer, 2009.

[11] Dong, "The Challenges and Countermeasures of Private Higher Education in China under the New Education Law," Education and Occupation, vol. 9, pp. 18-21, 2020.

[12] J. Hu, H. Liu, Y. Chen, and Q. Jiali, "Analysis on the Survival and Development of Private Colleges and Universities in China," Education and Occupation, vol. 7, pp. 62-65, 2016.

[13] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, "School engagement: Potential of the concept, state of the evidence," Review of Educational Research, vol. 74, no. 1, pp. 59-109, 2004.

[14] E. A. Skinner and J. R. Pitzer, "Developmental dynamics of student engagement, coping, and everyday resilience," in Handbook of research on student engagement, S. L. Christenson, A. L. Reschly, and C. Wylie, Eds. Springer, 2012, pp. 21-44.

[15] M. T. Wang and J. S. Eccles, "School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective," Learning and Instruction, vol. 28, pp. 12-23, 2013.

[16] B. J. Zimmerman, "Attaining self-regulation: A social cognitive perspective," in Handbook of self-regulation, M. Boekaerts, P. R. Pintrich, and M. Zeidner, Eds. Academic Press, 2000, pp. 13-39.

[17] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, "School engagement: Potential of the concept, state of the evidence," Review of Educational Research, vol. 74, no. 1, pp. 59-109, 2004.

[18] P. R. Pintrich, "A motivational science perspective on the role of student motivation in learning and teaching contexts," Journal of Educational Psychology, vol. 95, no. 4, pp. 667-686, 2003.

[19] M. Richardson, C. Abraham, and R. Bond, "Psychological correlates of university students' academic performance: A systematic review and meta-analysis," Psychological Bulletin, vol. 138, no. 2, pp. 353-387, 2012.

[20] D. H. Schunk and E. L. Usher, "Social cognitive theory and motivation," in APA educational psychology handbook: Vol. 1. Theories, constructs, and critical issues, K. R. Harris, S. Graham, and T. Urdan, Eds. American Psychological Association, 2012, pp. 165-194.

[21] E. A. Skinner and J. R. Pitzer, "Developmental dynamics of student engagement, coping, and everyday resilience," in Handbook of research on student engagement, S. L. Christenson, A. L. Reschly, and C. Wylie, Eds. Springer, 2012, pp. 21-44.

[22] M. Richardson, C. Abraham, and R. Bond, "Psychological correlates of university students' academic performance: a systematic review and meta-analysis," Psychological bulletin, vol. 138, no. 2, pp. 353, 2012.

[23] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, "School engagement: Potential of the concept, state of the evidence," Review of educational research, vol. 74, no. 1, pp. 59-109, 2004.

[24] D. H. Schunk and E. L. Usher, "Social cognitive theory and motivation," The Oxford handbook of human motivation, vol. 2, pp. 11-26, 2012.

[25] C. Yang, R. Chen, X. Chen, and K. H. Lu, "The efficiency of cooperative learning in physical education on the learning of action skills and learning motivation," Frontiers in psychology, vol. 12, p. 717528, 2021.

[26] P. Blumenfeld and A. Paris, "School Engagement: Potential of the Concept, State of the Evidence," Review of Educational Research - REV EDUC RES, vol. 74, pp. 59-109, 2004.

[27] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, "School engagement: Potential of the concept, state of the evidence," Review of educational research, vol. 74, no. 1, pp. 59-109, 2004.

[28] M. Martín-del-Pozo and I. Martín-Sánchez, "Self-Assessment and Pre-Service Teachers' Self-Regulated Learning in a School Organisation Course in Hybrid Learning," Journal of Interactive Media in Education, vol. 2022, no. 1, 2022.

[29] E. A. Skinner and J. R. Pitzer, "Developmental dynamics of student engagement, coping, and everyday resilience," in Handbook of research on student engagement, S. L. Christenson, A. L. Reschly, and C. Wylie,Eds. Boston, MA: Springer US, 2012, pp. 21-44.

[30] J. A. Gray and M. DiLoreto, "The effects of student engagement, student satisfaction, and perceived learning in online learning environments," International Journal of Educational Leadership Preparation, vol. 11, no. 1, n1, 2016.

[31] B. Hollister, P. Nair, S. Hill-Lindsay, and L. Chukoskie, "Engagement in Online Learning: Student Attitudes and Behavior During COVID-19," Frontiers in Education, vol. 7, 2022.

[32] P. R. Pintrich, "A motivational science perspective on the role of student motivation in learning and teaching contexts," Journal of educational Psychology, vol. 95, no. 4, pp. 667, 2003.

[33] C. Jones, "Fostering a Respectful and Engaging Classroom Environment," 2022.

[34] L. Darling-Hammond, L. Flook, C. Cook-Harvey, B. Barron, and D. Osher, "Implications for educational practice of the science of learning and development," Applied developmental science, vol. 24, no. 2, pp. 97-140, 2020.

[35] S. Dawadi, S. Shrestha, and R. Giri, "Mixed-Methods Research: A Discussion on its Types, Challenges, and Criticisms," Journal of Studies in Education, vol. 2, pp. 25-36, 2021.

[36] A. Hernandez, "Closing the Achievement Gap in the Classroom through Culturally Relevant Pedagogy," Journal of Education and Learning, vol. 11, no. 2, pp. 1-21, 2022.

[37] G. Lampropoulos, E. Keramopoulos, K. Diamantaras, and G. Evangelidis, "Augmented Reality and Gamification in Education: A Systematic Literature Review of Research, Applications, and Empirical Studies," Applied Sciences, vol. 12, p. 6809, 2022.