

Navigating the Decline: Analysis of Psychological Determinants of Student Engagement in Indian Higher Education

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ABSTRACT

Student engagement is a crucial determinant of academic success, influencing not only students' academic performance but also their overall satisfaction and retention in higher education. Recent trends in the Indian higher education sector, however, indicate a decline in student engagement. This decline raises significant concerns about the quality and outcomes of education in the country. This study examines the psycho-social and pedagogical challenges that contribute to the declining levels of student engagement within India's higher education sector. Drawing on data from a comprehensive survey of 1,750 students across 85 institutions, the research identifies several key factors influencing engagement. These include the widespread use of digital technology, the persistence of traditional teaching methods, and the escalating pressures of academic and socio-economic challenges. The findings report that only 10.9% of students reported feeling engaged during class sessions. This statistic underscores the urgent need for pedagogical reforms. The study further explores the dual role of technology in education. While essential, technology has also led to shorter attention spans and increased distractions among students. Moreover, the research highlights the critical role of interactive teaching methodologies, relevant course content, and instructor enthusiasm in fostering student engagement. The paper advocates for the adoption of experiential learning and innovative instructional strategies. These approaches aim to create more dynamic and inclusive learning environments.

Keywords: Student engagement; attention span; teaching-learning; technology enabled learning; higher education.

I. INTRODUCTION

Student engagement plays a pivotal role in the success of higher education institutions, serving as a critical indicator of academic outcomes [1]. It encompasses the degree of interest, motivation, and active participation that students demonstrate in their academic endeavors. Students who are highly engaged tend to perform better academically, complete their educational programs, and develop essential skills such as critical thinking and problem-solving. Despite its importance, there has been a noticeable decline in student engagement within the Indian higher education sector, raising concerns about the overall quality of education and student outcomes.

Engagement extends beyond merely attending classes or completing assignments. It involves active participation in the learning process, which includes engaging in classroom discussions, collaborating with peers, seeking assistance from instructors, and applying acquired knowledge to real-world scenarios [2][3]. High levels of engagement are associated with improved retention

rates, enhanced academic performance, and greater satisfaction with the educational experience [4].

However, recent studies have highlighted a significant decline in student engagement across India. A research survey found that only 40% of students in Indian higher education institutions reported being actively engaged in their studies [5]. Similarly, the All India Survey on Higher Education (AISHE) revealed a increase in dropout rates, with over 20% of students discontinuing their courses before completion. These findings underscore the urgent need to address the issue of declining student engagement in the Indian higher education system.

II. LITERATURE SURVEY

The decline in attention span and student engagement has emerged as a critical issue in the educational sector, particularly within the context of the teaching-learning process [6]. A comprehensive study by McCoy (2020) identified the significant impact of digital distractions, specifically smartphones and social media, on students' ability to focus during lectures [7]. The research highlighted how frequent switching between digital devices and academic tasks leads to cognitive overload, ultimately impeding deep learning and student engagement.

Challenges in sustaining engagement are especially prominent in online learning environments. Research has shown that online platforms often struggle to hold students' attention, resulting in disengagement [8]. Factors such as limited face-to-face interaction and an abundance of online distractions were identified as primary contributors to this decline. Additionally, Wilson and Korn [9] explored attention span in traditional classrooms and discovered that students typically lose focus after 10-15 minutes of continuous lecturing. This phenomenon, termed "attention drift," was linked to the passive nature of lectures that do not actively involve students. Their study recommended interactive teaching methods to counteract this drift.

Sweller, Ayres, and Kalyuga [10] introduced the cognitive load theory, which posits that the human brain can only process a limited amount of information at one time. The authors found that presenting excessive information to students diminishes their attention span and reduces engagement. They suggested that instructional design should aim to reduce cognitive load in order to improve engagement. Additionally, Junco and Cotten investigated the effects of multitasking on academic performance, revealing that students who frequently multitask during lectures or study sessions tend to have lower grades and shorter attention spans [11]. They argued that multitasking hinders deep cognitive processing, resulting in superficial learning and disengagement from academic tasks.

Kahu [12] provided a multidimensional framework for understanding student engagement, which includes behavioural, emotional, and cognitive components. The study found that declining engagement often results from a misalignment between student expectations and the educational environment. This misalignment contributes to decreased attention and participation in academic activities.

In another study, Risko et al. examined the relationship between attention span and learning outcomes, concluding that students with shorter attention spans struggle to retain and apply knowledge effectively. The authors suggested incorporating frequent breaks and active learning strategies to help students maintain focus and enhance learning outcomes [13]. Similarly, Crosnoe, Johnson, and Elder [14] found that structured, interactive, and supportive classroom environments increase student engagement, while chaotic environments lacking clear expectations contribute to attention loss and disengagement. Fredricks, Blumenfeld, and Paris emphasized the importance of teacher-student interaction in fostering engagement, noting that positive and supportive teacher-student relationships are key to sustaining student attention and involvement in the learning process [15]. They recommended that teachers adopt a more personalized teaching approach to improve engagement.

Finn and Zimmer [16] conducted a longitudinal study on student engagement trends over several decades, revealing a steady decline. They attributed this decline to changes in educational practices, the growing use of technology, and evolving student expectations. The study underscored the necessity for educational institutions to adapt their teaching methods to align with contemporary student needs. A growing body of research documents the decreasing attention span of students and its impact on engagement [17] [18]. Studies suggest that the average attention span has decreased from 12 seconds in 2000 to 8 seconds in 2022, largely due to increased digital technology use [19]. This reduction in attention span is particularly concerning in higher education, where sustained focus is critical for deep learning.

The literature on student engagement in online and offline education presents mixed findings. Dhawan (2020) found that while online education offers flexibility and accessibility, it also presents challenges to student engagement due to distractions, a lack of interaction, and an unstructured learning environment. On the other hand, offline education, though more interactive, suffers from outdated teaching methods, large class sizes, and insufficient personalized attention. Previous studies reveal that the decline in attention span and engagement is multifaceted, with digital distractions, ineffective teaching methods, cognitive overload, and poor classroom environments all contributing to this trend. To address these challenges, educators must adopt innovative teaching strategies that meet students' evolving needs, enhance engagement, and improve learning outcomes.

III. Factors Contributing to Reduced Student Engagement

Multiple factors contribute to the declining levels of student engagement in higher education. These include the excessive use of technology, diminished motivation, ineffective teaching methods, and the growing pressures of both academic and non-academic responsibilities. The COVID-19 pandemic has further exacerbated these issues, as the abrupt transition to online learning has led to increased disengagement among students [20].

While technology has revolutionized education, it has also played a role in diminishing student engagement. The overreliance on digital devices and social media has been associated with shorter attention spans and heightened distractions. Moreover, the vast availability of information online can result in cognitive overload, making it challenging for students to concentrate on their academic work.

Traditional teaching methods, including lectures and rote memorization, often fail to engage today's students effectively. In many Indian higher education institutions, the curriculum is outdated and misaligned with students' interests and needs [21]. This mismatch between the curriculum content and what students find relevant can contribute to their disengagement.

The growing pressure to excel academically is another significant factor leading to decreased engagement. Students frequently face overwhelming workloads, which can result in stress, anxiety, and burnout. The prevalence of mental health issues among students is increasing, further diminishing their capacity to engage with their studies.

Socio-economic conditions also significantly influence student engagement. Students from disadvantaged backgrounds often encounter obstacles such as limited access to resources, financial difficulties, and familial responsibilities. These challenges can severely impede their ability to fully engage in their academic pursuits [22].

IV. Analysis of Psychological Determinants in Student Engagement

To establish a robust dataset for identifying factors that influence student attention and engagement, a survey was conducted among 1,750 students from 85 higher education institutions across India. The survey spanned the states of Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Telangana, and Maharashtra. The sample consisted of 74% undergraduate and 26%

postgraduate students, covering both technical and non-technical disciplines. The primary objective of the survey was to identify key challenges affecting student engagement and to explore strategies for enhancing engagement within classroom settings. The collected responses provide valuable insights into the factors that influence student engagement, the barriers that impede it, and the instructional methods preferred by students. This analysis aims to uncover the psychological attributes associated with these findings, offering a comprehensive interpretation that can inform educational strategies in Indian higher education.

The data analysis primarily focused on the level of engagement students experienced within their learning environments. The survey results revealed a significant issue: only 10.9% of students reported feeling engaged during class sessions. In contrast, a staggering 89.1% of students indicated disengagement, suggesting that current teaching methodologies may be inadequate in capturing students' attention or fostering active participation. This substantial lack of engagement highlights the urgent need for pedagogical reforms that can make classroom interactions more stimulating and interactive.

The survey identified key factors contributing to student engagement, with technology use (76%) and interactive teaching methodologies (71%) being the most influential. These findings underscore the importance of integrating digital tools and interactive approaches into the curriculum to enhance engagement. Instructor enthusiasm (42.3%) and the relevance of course content (41%) also emerged as significant, though secondary, contributors. These results indicate that student engagement is multifaceted, depending not only on the content but also on how it is delivered and the enthusiasm of the instructor.

Monotonous teaching styles were identified as the primary barrier to student engagement, with 72% of students reporting this as a significant issue. This suggests that traditional, lecture-based approaches may be failing to engage students who prefer more dynamic and varied instructional techniques. Additionally, 45% of students cited a lack of interest, likely stemming from unengaging teaching methods and irrelevant course content. The pace of learning (43%) also plays a critical role, with both too slow and too fast-paced instruction contributing to disengagement. A significant majority of students (78.9%) found numerical sessions more engaging than theoretical ones (20.1%), indicating a preference for classes that involve problem-solving and the application of concepts. This preference may reflect a desire for more practical, hands-on learning experiences.

The survey also examined the instructional tools commonly employed in the teaching-learning environment. PowerPoint presentations dominate the instructional landscape in Indian higher education, as reported by 93.7% of students. However, the effectiveness of PowerPoint as a primary instructional tool in fostering student engagement is questionable [23]. Other tools, such as multimedia (30.9%), group discussions (35%), and hands-on activities (22%), are less frequently employed, despite their potential to enhance engagement by accommodating diverse learning styles and encouraging active participation. A majority of students (73%) expressed a preference for offline, in-person classes, while 24% favored online learning, and only 3% opted for a hybrid approach. This preference for offline classes suggests that students value face-to-face interactions and the traditional classroom setting, which supports more direct engagement with instructors and peers. The relatively low preference for hybrid learning may indicate that, while it offers flexibility, it has not yet achieved the perceived effectiveness of fully offline or online modes.

The survey responses reveal several psychological attributes associated with student engagement in Indian higher education:

- i. Preference for Interactive Learning: Students demonstrate a strong preference for interactive teaching methodologies and the use of technology, indicating a psychological inclination towards active, participatory learning environments that stimulate cognitive engagement.

- ii. Need for Relevance and Instructor Enthusiasm: The importance of relevant course content and instructor enthusiasm suggests a psychological need for contextualized learning that connects academic material to real-world applications and for instructional delivery that is passionate and engaging.
- iii. Aversion to Monotony: The high percentage of students reporting disengagement due to monotonous teaching styles reveals a psychological tendency to disengage from repetitive or uninspiring educational practices. This suggests that students thrive in dynamic and varied learning environments.
- iv. Preference for Practical Engagement: The preference for numerical sessions over theoretical ones highlights a psychological inclination towards practical, problem-solving tasks that provide a sense of accomplishment and applicability.
- v. Valuation of Traditional Learning Environments: The strong preference for offline learning environments underscores the psychological value students place on face-to-face interactions and the structured, immersive experience of traditional classrooms.

Looking ahead, student engagement in offline learning environments is likely to face ongoing challenges. The increasing reliance on technology, changing student preferences, and evolving educational models will necessitate more innovative and flexible approaches to teaching and learning. There may also be a growing emphasis on blended learning models that seek to combine the benefits of both online and offline education.

V. Possible Solutions to Enhance Student Engagement

To mitigate the challenges associated with reduced student engagement, it is essential for institutions to integrate technology in a manner that enhances rather than impairs engagement. This can be achieved by incorporating interactive learning tools, gamification strategies, and personalized learning platforms. Such platforms should be designed to cater to the individual needs of students, thereby fostering a more engaging and tailored educational experience. There is a pressing need for higher education institutions to revamp their teaching methodologies to make learning more engaging and relevant [24]. This could involve the adoption of experiential learning techniques, project-based learning approaches, and collaborative activities. These methods encourage active participation and help create a more dynamic and interactive learning environment.

Institutions must prioritize the mental health and well-being of students. This can be achieved by offering robust support services, promoting a healthy work-life balance, and shifting away from an overemphasis on rote learning and high-stakes examinations. These changes are vital for fostering a supportive educational environment that promotes overall student well-being.

Enhancing student engagement also requires the creation of inclusive learning environments that address the diverse needs and backgrounds of all students. This involves providing financial support, ensuring access to necessary resources, and fostering a sense of belonging within the student community. These efforts are crucial for building an educational atmosphere where all students feel valued and engaged.

VI. CONCLUSION

Student engagement is a vital determinant of the success of higher education institutions in India. The recent decline in engagement levels presents a pressing challenge that requires immediate attention. To counter this trend, it is essential for institutions to identify the underlying factors contributing to the disengagement and to implement innovative strategies aimed at revitalizing student involvement. The future trajectory of higher education in India hinges on the capacity of these institutions to adapt to the evolving needs and preferences of students, thereby cultivating an environment conducive to active participation and profound learning experiences.

Conflict of Interest

The authors declare that there is no conflict of interests.

Availability of data and material

This research employed data collection from 1750 students across 85 higher education institutions in India through an online survey. The data is confidential as it contains personal information and information related to the institutions and hence cannot be disclosed.

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REFERENCES

- [1] Bowden, J. L. H., Tickle, L., & Naumann, K. (2021). The four pillars of tertiary student engagement and success: a holistic measurement approach. *Studies in Higher Education*, 46(6), 1207-1224.
- [2] Smith, K. A., Sheppard, S. D., Johnson, D. W., & Johnson, R. T. (2005). Pedagogies of engagement: Classroom-based practices. *Journal of engineering education*, 94(1), 87-101.
- [3] Webb, N. M. (2009). The teacher's role in promoting collaborative dialogue in the classroom. *British Journal of Educational Psychology*, 79(1), 1-28.
- [4] Blasco-Arcas, L., Buil, I., Hernández-Ortega, B., & Sese, F. J. (2013). Using clickers in class. The role of interactivity, active collaborative learning and engagement in learning performance. *Computers & Education*, 62, 102-110.
- [5] Sandhu, S., Sankey, M., & Donald, P. (2019). Developing a Flipped Classroom Framework to Improve Tertiary Education Students' Learning Engagements in India. *International Journal of Education and Development using Information and Communication Technology*, 15(2), 31-44.
- [6] Silapachote, P., & Srisuphab, A. (2014, April). Gaining and maintaining student attention through competitive activities in cooperative learning A well-received experience in an undergraduate introductory Artificial Intelligence course. In *2014 IEEE global engineering education conference (EDUCON)* (pp. 295-298). IEEE.
- [7] McCoy, B. R. (2020). Digital distractions in the classroom phase II: Student classroom use of digital devices for non-class related purposes. *Journal of Media Education*, 6(1), 5-32.
- [8] Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5-22.
- [9] Wilson, K., & Korn, J. H. (2007). Attention during lectures: Beyond ten minutes. *Teaching of Psychology*, 34(2), 85-89.
- [10] Sweller, J., Ayres, P., & Kalyuga, S. (2011). *Cognitive load theory*. Springer Science & Business Media.
- [11] Junco, R., & Cotten, S. R. (2012). No A 4 U: The relationship between multitasking and academic performance. *Computers & Education*, 59(2), 505-514.

- [12] Kahu, E. R. (2013). Framing student engagement in higher education. *Studies in Higher Education*, 38(5), 758-773.
- [13] Risko, E. F., Anderson, N. C., Sarwal, A., Engelhardt, M., & Kingstone, A. (2012). Everyday attention: Mind wandering and computer use during lectures. *Computers & Education*, 59(1), 219-226.
- [14] Crosnoe, R., Johnson, M. K., & Elder, G. H. (2004). Intergenerational bonding in school: The behavioural and contextual correlates of student-teacher relationships. *Sociology of Education*, 77(1), 60-81.
- [15] Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109.
- [16] Finn, J. D., & Zimmer, K. S. (2012). Student engagement: What is it? Why does it matter? *Handbook of Research on Student Engagement*, 97-131.
- [17] Lee, K. (2024). Improving Student Engagement Despite Lowering Attention Spans in the Classroom.
- [18] Bradbury, N. A. (2016). Attention span during lectures: 8 seconds, 10 minutes, or more?. *Advances in physiology education*.
- [19] McGann, D., Taggart, F., & Taylor, J. (2022). The impact of digital technology on student engagement: An analysis of recent trends. *Journal of Educational Research and Development*, 60(3), 234-245.
- [20] Agarwal, P., & Kaushik, J. S. (2021). Impact of COVID-19 pandemic on mental health in children and adolescents: International journal of contemporary pediatrics. *International Journal of Contemporary Pediatrics*, 8(5), 945-950.
- [21] Aithal, P. S., & Aithal, S. (2019). Analysis of higher education in Indian National education policy proposal 2019 and its implementation challenges. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 3(2), 1-35.
- [22] Conger, R. D., Ge, X., Elder Jr, G. H., Lorenz, F. O., & Simons, R. L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child development*, 65(2), 541-561.
- [23] Schindler, L. A., Burkholder, G. J., Morad, O. A., & Marsh, C. (2017). Computer-based technology and student engagement: a critical review of the literature. *International journal of educational technology in higher education*, 14, 1-28.
- [24] Babangida, A. A., & Bisalla, B. A. (2020). The Teacher Factor and the Challenges of the Revamping Education Tailored to Meeting the Needs of learning in Nigeria. *Journal of Qualitative Education*, 14(1).