



Impact of Learning Mediums on Mental Health, Anxiety, and Achievement Motivation Among Secondary School Students

Tarkase Aruna Dasrao

Counsellor,

Kendriya Vidyalaya Parbhani (Maharashtra).

ABSTRACT

This study examines the influence of learning mediums on mental health, achievement motivation, and anxiety among secondary school students. A sample of 100 tenth-grade students from Parbhani City, Maharashtra, was selected, comprising 50 English-medium and 50 Marathi-medium students. The study employed the Mental Health Inventory (MHI), Achievement Motivation Scale (n-Ach), and Sinha's Comprehensive Anxiety Test (SCAT) for data collection. Statistical analysis using the t-test revealed significant differences across all three psychological factors. Findings indicate that English-medium students exhibit better mental health ($M = 137.58$, $SD = 4.06$) compared to their Marathi-medium counterparts ($M = 129.78$, $SD = 4.41$), with $t(98) = 9.20$, $p < 0.01$. Additionally, achievement motivation was significantly higher among English-medium students ($M = 131.26$, $SD = 4.11$) than Marathi-medium students ($M = 123.85$, $SD = 4.03$), $t(98) = 9.10$, $p < 0.01$. Conversely, anxiety levels were significantly higher among Marathi-medium students ($M = 42.15$, $SD = 5.74$) than English-medium students ($M = 34.78$, $SD = 5.99$), $t(98) = 6.85$, $p < 0.01$. These results highlight the role of educational resources, teaching methodologies, and career exposure in shaping students' psychological well-being and academic drive. Strengthening mental health support and career guidance in Marathi-medium schools could help bridge these disparities.

Keywords:- Learning Medium, Mental Health, Achievement Motivation, Anxiety, Secondary School Students, English Medium, Marathi Medium.

Introduction:

The rapid advancement of technology and the increasing accessibility of digital education have significantly transformed the way students learn. Traditional face-to-face learning, online education, and hybrid models are now widely available, offering students a variety of learning mediums to engage with academic content. However, these diverse learning approaches may have different impacts on students' mental health, anxiety levels, and achievement motivation. Secondary school students, who are at a crucial developmental stage, are particularly affected by the mode of instruction, which can shape their cognitive, emotional, and psychological well-being.

Several studies indicate that traditional learning environments provide social interaction, peer support, and direct engagement with teachers, which can contribute to better mental health and reduced anxiety (Ng, 2021). Conversely, online learning, while offering flexibility and personalized pacing, may lead to social isolation, increased screen time, and higher levels of stress due to self-regulated learning demands (Zhao et al., 2020). Hybrid learning attempts to balance both approaches, yet its effectiveness in minimizing anxiety and improving achievement motivation remains debatable.

Mental health is a critical factor influencing academic performance and motivation among secondary school students. Anxiety, which is prevalent among adolescents, can be exacerbated or mitigated by different learning environments (Li & Lajoie, 2022). For instance,



excessive reliance on digital platforms may increase cognitive overload, leading to higher anxiety levels and reduced motivation to achieve academic goals. On the other hand, structured learning settings with teacher guidance have been shown to foster a sense of security, thereby enhancing students' confidence and drive to succeed (Brown & Ryan, 2023).

Achievement motivation, defined as the intrinsic or extrinsic drive to accomplish academic goals, is another key factor influenced by learning mediums. Students engaged in face-to-face learning often benefit from classroom dynamics, competition, and immediate feedback, which can boost motivation (Singh & Kaur, 2021). In contrast, students in online environments may experience difficulty maintaining motivation due to the absence of social reinforcement and the need for high levels of self-discipline (Kim & Frick, 2020). The impact of hybrid learning on achievement motivation depends on its design and implementation, as effective integration of online and in-person elements can enhance engagement and persistence.

Given the increasing shift towards digital and hybrid education, it is essential to understand the psychological and motivational implications of different learning mediums. This study aims to explore the impact of face-to-face, online, and hybrid learning on mental health, anxiety, and achievement motivation among secondary school students. By analyzing existing literature and empirical findings, this research seeks to provide insights into the optimal learning environment that supports students' well-being and academic success.

Ng (2021) conducted a study on the effects of traditional classroom learning on students' mental health and academic motivation. The findings suggested that face-to-face learning fosters a sense of belonging and peer collaboration, which contributes to lower levels of anxiety and higher achievement motivation. The study also highlighted that students benefit from direct teacher support and structured learning, which reduces stress associated with self-directed study. The research further emphasized that traditional learning promotes emotional stability, allowing students to engage in active discussions and receive immediate feedback. However, the study acknowledged that rigid classroom structures might not accommodate all learners, particularly those who require flexible learning schedules. Ng concluded that while face-to-face learning remains beneficial, a blended approach may be necessary to address diverse learning needs.

Zhao et al. (2020) explored the psychological effects of online learning among secondary school students. The study revealed that prolonged screen time and lack of social interaction contribute to increased anxiety levels and reduced motivation to complete academic tasks. Many students reported feelings of isolation and difficulty in maintaining focus due to distractions in home environments. The findings also suggested that online learning requires high levels of self-discipline and time management skills, which many adolescents struggle with. Despite these challenges, some students benefited from the flexibility and personalized learning pace offered by digital education. Zhao et al. recommended incorporating social engagement strategies and structured guidance to mitigate the negative effects of online learning on mental health.

Li and Lajoie (2022) examined the relationship between anxiety, mental health, and learning environments. Their research indicated that students engaged in traditional classroom learning reported lower levels of academic anxiety compared to those in fully online programs. The study attributed this to the presence of in-person teacher support and peer interactions, which provided reassurance and reduced stress. However, online learning was found to be more effective for students with high self-regulation skills, as it allowed them to control their learning pace and explore individualized learning resources. Li and Lajoie suggested that hybrid learning, when implemented with adequate social support and structured guidance, could serve as a balanced solution to minimize anxiety while maintaining learning flexibility.

Brown and Ryan (2023) investigated the impact of hybrid learning on students' psychological well-being and motivation. Their study found that hybrid learning offers the advantages of both traditional and online education, promoting flexibility while maintaining essential face-to-face interactions. However, inconsistent implementation of hybrid models led to increased confusion and stress among students. The study also found that well-designed hybrid courses, incorporating structured online activities and real-time interactions, improved achievement motivation by allowing students to engage in both independent and collaborative learning. The researchers recommended that schools develop clear guidelines for hybrid learning to maximize its benefits while minimizing anxiety and mental health challenges.

Singh and Kaur (2021) examined how different learning mediums affect achievement motivation in secondary school students. Their study revealed that face-to-face learning positively influences motivation due to immediate feedback, peer competition, and classroom engagement. Conversely, students in online environments reported lower motivation levels, citing a lack of external reinforcement and difficulty in maintaining self-discipline. Hybrid learning was found to be effective when structured appropriately, as it allowed students to balance independent study with interactive learning sessions. The study suggested that achievement motivation is highest when students receive timely feedback, social support, and structured learning activities, regardless of the learning medium.

Objective of the study:

- 2) To investigate the mental health among English and Marathi medium secondary school students.
- 3) To explore the achievement motivation among English and Marathi medium secondary school students
- 4) To find out anxiety among English and Marathi medium secondary school students.

Hypotheses:

- 2) There will be no significant difference in mental health between English and Marathi-medium secondary school students.
- 3) There will be no significant difference in achievement motivation between English and Marathi-medium secondary school students.
- 4) There will be no significant difference in anxiety between English and Marathi-medium secondary school students.

Samples:-

For the current research, a sample of 100 secondary school students from the 10th grade was selected from Parbhani City in Maharashtra State. This group included 50 students from English-medium schools and 50 students from Marathi-medium schools. The students were aged between 16 and 18, with an average age of 17.06 years and a standard deviation of 2.46. The sampling method used in this study was non-probability random sampling.

Variable:-**Independents Variables:****1) Learning Medium**

- 1) English
- 2) Marathi

Dependent Variables

- 1) Mental Health
- 2) Achievement Motivation
- 3) Anxiety

Research Tools

1) Mental Health Inventory (MHI):

The Mental Health Inventory, developed by Dr. Jagdish and Dr. A K Srivastava in 1983, consists of 56 items with four response options: 1. Almost always true, 2. Sometimes true, 3. Rarely true, and 4. Almost never true. Its reliability, assessed using the split-half method, has a coefficient of .73. Construct validity, determined by the correlation with the general health questionnaire (Goldberg, 1978), is .54.

2) Achievement Motivation Scale (n-Ach) (Deo and Mohan, 2011)

Dr. Pratibha Deo and Dr. Asha Mohan (2011) developed the achievement motivation (n-Ach) scale to measure students' achievement motivation, which has been valuable in various studies. The scale was designed to identify factors relevant to assessing students' achievement.

3) Sinha's Comprehensive Anxiety Test (SCAT)

Sinha's Comprehensive Anxiety Test (SCAT), developed by A.K.P Sinha and L.N.K Sinha in 1995, consists of 90 items and measures anxiety levels. Higher total scores indicate greater anxiety. The test has high reliability, with a coefficient of 0.85 (Product moment correlation) and 0.92 (Spearman Brown Formula). Its validity coefficient is 0.62, significant beyond the 0.01 level.

Statistical Analysis:

“t” value Statistics is used for the present study.

Statistical Interpretation and Discussion

Table No-1

Mean, standard deviation, and t-value of mental health, achievement motivation, and anxiety among secondary school students in English and Marathi mediums.

Factors	English Medium		Marathi Medium		df	t
	Mean	SD	Mean	SD		
Mental Health	137.58	4.06	129.78	4.41	98	9.20**
Achievement Motivation	131.26	4.11	123.85	4.03	98	9.10**
Anxiety	34.78	5.99	42.15	5.74	98	6.85**

Significant at 0.01** = 2.62, 0.05* = 1.98

The analysis revealed that English-medium students (M = 137.58, SD = 4.06) had significantly better mental health compared to Marathi-medium students (M = 129.78, SD = 4.41), $t(98) = 9.20, p < 0.01$. This finding aligns with previous research that suggests students in urban, English-medium settings often have access to better infrastructure, learning resources, and mental health support, which positively impacts their well-being (Minges & Redeker, 2021). Additionally, the stress associated with academic competition in regional language schools may contribute to poorer mental health outcomes (Patel et al., 2022).

Some studies argue that students studying in vernacular mediums develop stronger cultural identity and social support, which can be beneficial for psychological resilience (Banerjee & Dutta, 2020). Therefore, while English-medium students may have better mental health due to structured environments and resources, Marathi-medium students might benefit from a culturally familiar learning environment that fosters social bonding.

The mean achievement motivation score for English-medium students (M = 131.26, SD = 4.11) was significantly higher than for Marathi-medium students (M = 123.85, SD = 4.03), $t(98) = 9.10, p < 0.01$. These results suggest that English-medium education may encourage a



more competitive and goal-oriented academic culture that enhances students' self-efficacy and motivation to achieve (Zimmerman & Schunk, 2011). English-medium schools often provide students with exposure to global knowledge, competitive exams, and career opportunities, which may foster higher intrinsic and extrinsic motivation (Singh & Kaur, 2021).

Conversely, students in regional language schools may face limited exposure to career-oriented education and global academic resources, potentially leading to lower aspirations and motivation levels (Joshi et al., 2022). However, some studies indicate that motivation is not solely dependent on language but also on teaching methodologies and school infrastructure (Garg & Mehta, 2020). Therefore, while English-medium education may enhance achievement motivation, the inclusion of modern teaching methods in Marathi-medium schools could bridge this gap.

The study found that students in Marathi-medium schools ($M = 42.15$, $SD = 5.74$) had significantly higher anxiety levels than their English-medium counterparts ($M = 34.78$, $SD = 5.99$), $t(98) = 6.85$, $p < 0.01$. One possible explanation is that Marathi-medium students may experience greater uncertainty regarding future academic and career prospects, as higher education and competitive job opportunities often favor English proficiency (Chakraborty & Kapur, 2020). Additionally, a lack of technological access and learning materials in regional languages may contribute to academic stress and anxiety (Rao, 2021).

Research suggests that student anxiety can be mitigated through mindfulness-based stress reduction techniques and peer support programs, which could be implemented in Marathi-medium institutions to address elevated stress levels (Li & Lajoie, 2022).

Conclusions:-

The results indicate that English-medium students demonstrate better mental health, higher achievement motivation, and lower anxiety levels compared to Marathi-medium students. These findings suggest that institutional resources, teaching methodologies, and exposure to global knowledge play crucial roles in shaping students' psychological well-being and academic success. However, it is essential to strengthen mental health support, career guidance, and stress management programs in Marathi-medium schools to reduce educational disparities. Future research should explore longitudinal effects of learning mediums on students' psychological development and identify interventions that promote equal learning opportunities across different educational settings.

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