

EFFECT OF VIRTUAL SCHOOLING ON STUDENT'S ACADEMIC ACHIEVEMENT AND ADJUSTMENT SKILLS

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ABSTRACT

Virtual schooling has become a significant mode of education, especially after the rapid integration of digital technologies in teaching and learning. This study examines the effect of virtual schooling on student's academic achievement and adjustment skills. Academic achievement is analyzed in terms of learning outcomes, performance, motivation and engagement, while adjustment skills include emotional, social and behavioural adaptation to the online learning environment. The study highlights how virtual schooling offers flexibility, self-paced learning and access to digital resources, which can positively influence academic performance for self-regulated learners. However, it also identifies challenges such as reduced teacher student interaction, limited peer collaboration, technological barriers and increased screen time, which may negatively affect students' adjustment and learning consistency. Students with self-discipline and family support perform better in virtual learning, while others face stress. Structured environments, teacher guidance and psychosocial support are essential for inclusive and effective virtual education models.

KEYWORDS: *Virtual Schooling, Academic Achievement, Adjustment Skills, Online Learning, Student Development.*

INTRODUCTION

Virtual schooling has emerged as a prominent alternative to traditional classroom education with the rapid advancement of digital technologies and the increasing accessibility of the internet. Especially after the COVID-19 pandemic, online learning platforms became an essential mode of instruction across schools, colleges and universities worldwide. Virtual schooling refers to the delivery of education through digital platforms where teaching learning processes occur remotely using computers, mobile devices **Aslan, Seda Akti & Kemal Duruhan (2021)**. This transformation has significantly changed the educational landscape, influencing not only how students learn but also how they adapt academically and psychologically.

Academic achievement is a key indicator of educational success and includes student's performance, understanding of concepts, motivation and engagement in learning activities **Zhao, Yuyang & Biao Sang (2025)**. Virtual schooling offers several advantages that may enhance academic achievement, such as flexible learning schedules, self-paced instruction, access to diverse digital resources and opportunities for personalized learning. However, it also presents challenges including limited face-to-face interaction, distractions at home, unequal access to technology and reduced immediate feedback from teachers, which can affect learning outcomes.

In addition to academic achievement, student's adjustment skills play a vital role in determining their success in virtual learning environments. Adjustment skills involve students' ability to adapt emotionally, socially and behaviourally to new learning conditions. Virtual schooling requires greater self-regulation, time management and digital competence **Ademola & Raziya (2021)**. Students who lack these skills may experience stress, anxiety, isolation and reduced motivation, which can negatively impact both adjustment and academic performance.

Therefore, examining the effect of virtual schooling on student's academic achievement and adjustment skills is crucial. Understanding these effects can help educators, parents and policymakers design effective virtual education strategies that support student's academic success while promoting healthy adjustment and overall well-being.

IMPACT OF VIRTUAL SCHOOLING ON ACADEMIC ACHIEVEMENT

Virtual schooling has significantly transformed academic achievement by altering instructional methods, assessment practices and learner engagement. Research indicates that academic outcomes in virtual environments are strongly influenced by students' self-regulation, digital literacy and learning autonomy **Kuo & Yu-Tung et al (2024)**. Unlike traditional classrooms, virtual schooling places greater responsibility on students to manage time, maintain focus and complete tasks independently, which can enhance achievement for motivated and disciplined learners.

Several studies report that virtual schooling supports academic achievement through flexible scheduling, personalized pacing and access to diverse multimedia resources. Recorded lectures, digital simulations and interactive learning platforms allow students to revisit content, improving conceptual understanding and retention **Lee, Elinda Ai-Lim & Kok Wai Wong (2014)**. This flexibility particularly benefits students with different learning speeds, enabling mastery-based learning and reducing academic pressure associated with fixed classroom timelines.

However, the literature also reveals mixed academic outcomes, especially among younger learners and students from disadvantaged backgrounds. Limited teacher student interaction reduces immediate feedback, clarification of doubts and academic scaffolding, which can negatively affect comprehension and performance **Hidayat &Khairil Nur (2018)**. Research highlights that lack of peer collaboration in virtual classrooms may reduce academic motivation, critical thinking, and collaborative learning skills, all of which are essential for higher academic achievement.

Technological access plays a crucial role in determining academic success in virtual schooling. Studies emphasize that inconsistent internet connectivity, lack of devices and inadequate digital infrastructure directly hinder learning continuity and assessment performance **Li, Na & Mohd Yusof Abdullah (2025)**. Moreover, prolonged screen exposure and home-based distractions

contribute to reduced concentration and academic fatigue, negatively impacting achievement levels.

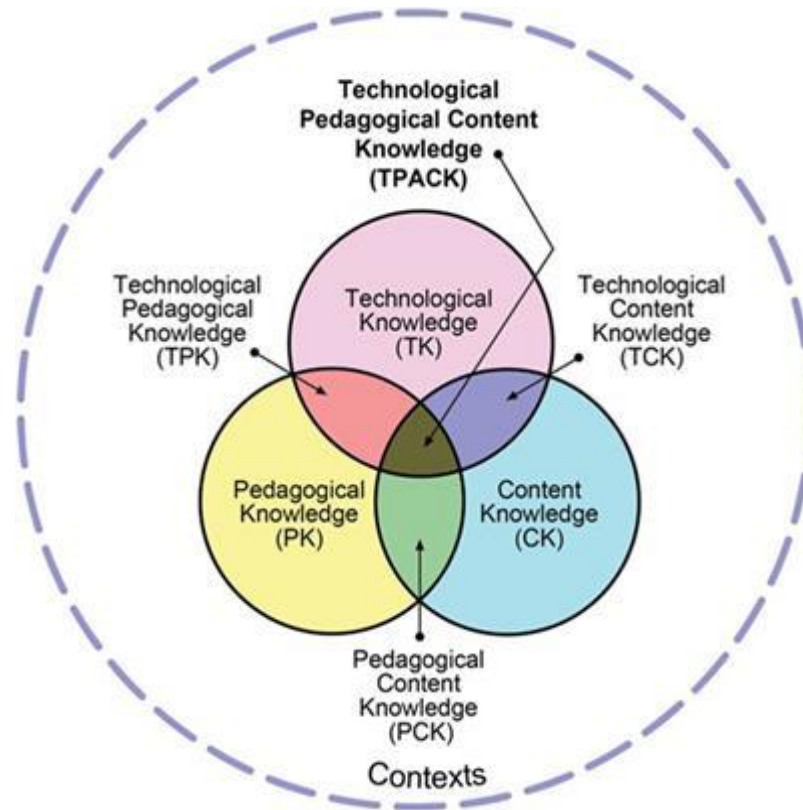


Figure 1. Technological Pedagogical Content Knowledge Model.

Assessment integrity is another major concern identified in the literature. Virtual examinations often face challenges related to monitoring, academic honesty and standardized evaluation, raising questions about the reliability of academic performance data. Despite these limitations, structured virtual learning environments with regular assessments, clear learning objectives and active teacher engagement show improved academic outcomes **Chiang, Tosti HC, Stephen JH Yang & Gwo-Jen Hwang (2014).**

The diagram represents the TPACK framework, showing the integration of Technological Knowledge, Pedagogical Knowledge and Content Knowledge **Saeedi & Gashin et al (2024).** Effective teaching occurs at their intersection, where technology is meaningfully combined with subject content and appropriate teaching strategies within specific educational contexts.

Research suggests that virtual schooling can positively impact academic achievement when supported by effective instructional design, trained educators, parental involvement and technological equity. Without these supports, academic disparities may widen, highlighting the need for balanced and inclusive virtual education strategies.

LITERATURE REVIEW

Existing literature indicates that virtual schooling significantly influences students' academic achievement and adjustment skills. Studies report improved flexibility and self-paced learning,

while highlighting challenges such as reduced interaction, motivation loss, emotional stress and the need for strong self-regulation and support systems.

EFFECT OF VIRTUAL SCHOOLING ON STUDENT'S ADJUSTMENT SKILLS

Virtual schooling has become an integral part of modern education, reshaping how students interact with learning environments, teachers and peers. While it offers flexibility and continuity of education, virtual schooling also presents significant challenges that directly influence students' adjustment skills. Adjustment skills refer to students' ability to adapt emotionally, socially, behaviourally and academically to changing learning conditions. In virtual learning settings, these skills play a critical role in determining students' overall well-being and success **Prashanth & N S (2021)**.

One of the most prominent effects of virtual schooling is on emotional adjustment. Students often experience feelings of stress, anxiety, and loneliness due to prolonged screen time, reduced face-to-face interaction and increased academic pressure. The absence of a physical classroom limits emotional cues and immediate support from teachers and peers, making it difficult for some students to manage emotions effectively. However, students with strong emotional regulation skills and supportive home environments tend to adapt more successfully to virtual learning demands.

Social adjustment is another key area impacted by virtual schooling. Traditional classrooms provide opportunities for peer interaction, collaborative learning and social skill development **Saeedi & Gashin et al (2024)**. In contrast, virtual schooling often restricts spontaneous communication and group activities, leading to feelings of isolation and reduced peer bonding. Studies indicate that limited social engagement may affect students' confidence, communication skills and sense of belonging. Nevertheless, well-designed virtual platforms that encourage discussion forums, group projects and interactive sessions can partially compensate for these limitations.

Behavioural adjustment in virtual schooling requires a high level of self-discipline, time management and motivation. Without direct supervision, students must independently manage schedule's meet deadlines and remain focused despite home-based distractions **Kweon, Young Ran & Myung Sook Park (2012)**. Students lacking these skills may show procrastination, irregular study habits and disengagement from learning activities. On the other hand, virtual schooling can enhance autonomy and responsibility among students who possess strong self-regulatory behaviours.

Family support plays a crucial role in students' adjustment to virtual schooling. Parental involvement, guidance and monitoring significantly influence student's emotional stability and learning behaviour. Research highlights that students with access to structured routines, quiet study spaces and encouragement at home demonstrate better adjustment and reduced psychological stress **Sharma & Jyoti et al (2022)**. In contrast, student's from less supportive or resource-limited households face greater adjustment difficulties.

Additionally, technological factors strongly affect adjustment skills. Inadequate access to devices, unreliable internet connectivity and limited digital literacy increase frustration and learning barriers, negatively impacting student's adaptability **Yoo, Yang Gyeong & In Soo Lee (2013)**. Continuous technical issues may lead to reduced motivation and increased emotional strain.

In the virtual schooling has a multifaceted impact on student's adjustment skills. While it can promote independence and flexibility, it also poses emotional, social and behavioural challenges. Effective teacher support, structured learning environments, parental involvement and psychosocial interventions are essential to help students develop healthy adjustment skills and thrive in virtual learning contexts **Qasim, Muhammad, Aqsa Saleem & Muhammad Hafeez (2021)**.

CHALLENGES AND SUPPORT SYSTEMS IN VIRTUAL LEARNING

Virtual learning has rapidly become a fundamental component of modern education, driven by technological advancements and global events. While it offers flexibility, accessibility and opportunities for self-paced learning, it also presents several challenges that impact student engagement, academic performance and overall learning outcomes. One of the primary challenges is the lack of face-to-face interaction, which can lead to feelings of isolation and reduced motivation among learners **Edo & Great Iruoghene et al (2025)**. Student's may struggle to communicate effectively with instructors and peers, limiting collaborative learning opportunities. Additionally, the digital divide remains a significant barrier, as not all students have access to reliable internet connectivity or suitable devices, exacerbating educational inequalities. Technical difficulties, such as software glitches, platform navigation issues and cybersecurity concerns, further hinder the learning process.

Another major challenge is the need for strong self-regulation and time-management skills. Without structured classroom environments, student's may face difficulties in maintaining discipline, completing assignments on time and avoiding distractions **Kotaman & Hüseyin et al (2025)**. Furthermore, instructorsoften encounter challenges in adapting traditional teaching methods to virtual formats creating engaging content and providing timely feedback.

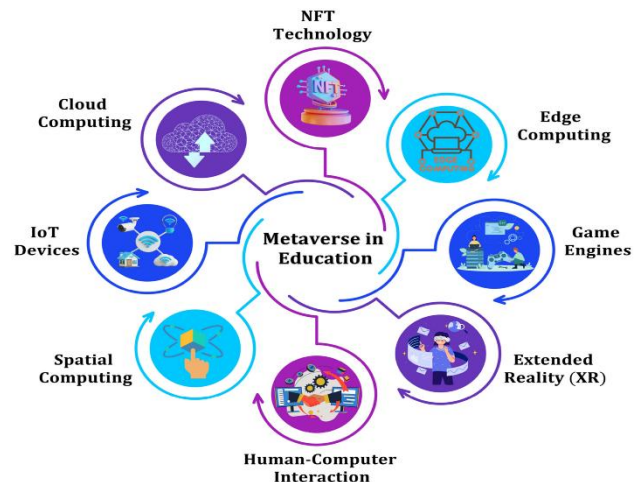


Figure 2. Metaverse for education developments, challenges and future direction Hodaei, Yousef, Soroush Fathi & Rahmatollah AmirAhmadi (2021).

To address these challenges various support systems have been implemented. Learning management systems (LMS) like Moodle, Canvas and Google Classroom provide centralized platforms for course materials, assessments and communication. Peer support networks and discussion forums foster collaborative learning and social interaction, mitigating feelings of

isolation. Institutions increasingly offer technical assistance, digital literacy workshops and mental health counselling to enhance student's ability to navigate online learning effectively **Durlak, Joseph A., & Roger P. Weissberg (2007)**. Additionally, instructors employ adaptive teaching strategies, such as interactive multimedia, real-time quizzes and personalized feedback to increase engagement and accommodate diverse learning styles.

While virtual learning presents multifaceted challenges including social, technological and self-regulatory barriers robust support systems can significantly enhance the learning experience **Lueken, Martin, Gary Ritter & Dennis Beck (2015)**. Effective integration of technology, peer collaboration and institutional support ensures that virtual learning remains an inclusive, interactive and productive educational approach.

THE ROLE OF TEACHER SUPPORT IN VIRTUAL LEARNING ENVIRONMENTS

Teacher support plays a crucial role in the success of virtual learning environments by enhancing student's academic performance, motivation and emotional well-being **Abid & Nisar et al (2022)**. In online settings, teachers act not only as content deliverers but also as facilitators, mentors and guides who help students navigate digital platforms and learning tasks. Clear instructions, structured lessons and timely feedback from teachers reduce confusion and promote effective learning.

Emotional and motivational support is equally important in virtual classrooms, where students may feel isolated or disengaged. Teachers who maintain regular communication through emails, discussion forums and live sessions help build a sense of connection and belonging. Encouragement and personalized attention boost students' confidence and persistence, especially for those struggling with self-regulation or technological challenges **Barman, Munmi & Ananta Kumar Jena (2023)**.

Teacher support also ensures inclusivity and accessibility in virtual learning. By adapting teaching strategies, providing recorded lectures and offering flexible deadlines, teachers address diverse learning needs and reduce barriers to participation **Almulla, Mohammed Abdullatif & Waleed Mugahed Al-Rahmi (2023)**. Additionally, teachers guide students in developing digital literacy and independent learning skills, which are essential for success in online education.

CONCLUSION

Virtual schooling has significantly influenced student's academic achievement and adjustment skills, presenting both opportunities and challenges. While flexible learning environments and access to digital resources can enhance academic performance for self-motivated learners, limitations such as reduced interaction, technological barriers and uneven support may hinder others. Virtual schooling also impacts student's adjustment skills, including self-regulation, social interaction and emotional adaptability. Students with strong digital literacy and supportive home environments tend to adjust more effectively, whereas others may experience stress and disengagement. The effectiveness of virtual schooling depends on quality instruction consistent teacher support parental involvement and equitable access to technology to ensure balanced academic growth and healthy adjustment skills.

FUTURE RESEARCH

Future research should examine the long-term effects of virtual schooling on students' academic achievement and adjustment skills, focusing on diverse age groups, learning styles, socio-emotional development, digital equity and the role of teacher and parental support.

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