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PSYCHOLOGICAL ASPECTS OF DISTANCE LEARNING IN SECONDARY SCHOOLS: A STUDY BASED ON FOREIGN RESEARCH EXPERIENCE

This paper examines the psychological dimensions of distance learning in secondary education, focusing on motivation, self-regulated learning, stress and well-being as well as social connectedness. Drawing on recent empirical and theoretical studies, it explores how remote formats challenge adolescents' psychological needs and developmental trajectories. As the present article relies exclusively on international research, it highlights global trends that can be instructive for improving distance education practices more broadly. The paper discusses mechanisms to support students – such as scaffolding self-regulation, fostering belonging, and providing emotional support – and proposes implications for educators and policymakers. Finally, it outlines limitations and offers directions for future research.

Keywords: distance learning, secondary education, adolescent psychology, motivation, self-regulated learning, mental health

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ПСИХОЛОГІЧНІ АСПЕКТИ ДИСТАНЦІЙНОГО НАВЧАННЯ В СЕРЕДНІЙ ШКОЛІ: ДОСЛІДЖЕННЯ НА ОСНОВІ ЗАРУБІЖНОГО ДОСВІДУ

Стаття присвячена аналізу психологічних аспектів дистанційного навчання учнів середньої школи, що особливо актуалізувалося у зв'язку зі зростанням цифровізації освіти та глобальними викликами останніх років. У роботі розглядаються ключові психологічні чинники, що впливають на успішність дистанційної освіти: мотивація, саморегульоване навчання, рівень стресу та емоційного благополуччя, а також соціальна пов'язаність між учнями, вчителями та шкільною спільнотою. Спираючись на сучасні зарубіжні емпіричні дослідження, підкреслюється, що задоволення базових психологічних потреб – автономії, компетентності та соціальної зачлененості – є визначальним для підтримки внутрішньої мотивації та академічної активності під час навчання онлайн.

Окрему увагу приділено ролі саморегуляції, яка є критично важливою в умовах дистанційного формату, де учні мають самостійно планувати, контролювати та оцінювати власний навчальний процес. Показано, що недостатній розвиток таких

навичок часто призводить до зниження результативності та підвищення рівня стресу. На основі зарубіжних досліджень проаналізовано фактори ризику для психолігічного здоров'я підлітків у дистанційному навчанні: невизначеність, недостатня структурованість навчального середовища, знижена соціальна взаємодія, технічні труднощі. Водночас окреслено і захисні чинники, серед яких – підтримка вчителів і батьків, відчуття залученості до шкільної спільноти, якісна комунікація та наявність можливостей для співпраці.

У статті обґрунтовано важливість інтеграції мотиваційних, когнітивних та соціально-емоційних аспектів у проектуванні дистанційного навчального середовища. Представленій аналіз може бути корисним для педагогів, психологів та освітніх політиків, які прагнуть підвищити ефективність дистанційного навчання та підтримати психологічне благополуччя підлітків.

Ключові слова: дистанційне навчання; середня школа; психологія підлітків; мотивація; саморегульоване навчання; психічне здоров'я.

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Problem statement

Distance learning has become an increasingly prominent modality in secondary education, accelerated by technological advancements and global disruptions such as the COVID-19 pandemic. While this format offers flexibility and broad access, it also introduces significant psychological challenges for adolescent students, who are in a critical stage of cognitive, social, and emotional development.

At the same time, there is considerable variability in how adolescents respond to online learning. Some students benefit from increased autonomy and flexible learning environments, while others struggle with decreased structure, reduced interaction and heightened emotional strain. Existing international research provides important insights but remains fragmented: many studies focus on higher education, examine only short-term emergency transitions to online learning, or analyse isolated psychological factors in separation from one another. As a result, there is still no comprehensive understanding of how motivation, self-regulated learning, mental health and social connectedness interact to shape adolescents' outcomes in distance learning contexts. Addressing this gap is crucial for improving educational policy and practice.

Analysis of recent research and publications

To better understand the scope of these challenges, it is necessary to examine the existing international studies. Previous research has examined various psychological dimensions of online learning. For instance, Ryan and Deci [11] emphasized the importance of intrinsic motivation and the satisfaction of basic psychological needs, while Zimmerman [16] and

Panadero [6] highlighted the role of self-regulated learning in academic achievement. Other scholars (Blumenfeld, Fredricks, Paris, Wentzel, etc.) have noted the effects of social connectedness and peer interaction on adolescents' engagement and well-being [5; 14], and research on stress and mental health (Cieślik, Hedberg, Reeves, Rutkowska, Szczepańska-Gieracha, Tomaszczyk, etc.) has underscored the potential for anxiety and emotional strain in remote learning contexts [8; 10].

Despite these insights, the psychological aspects of distance learning in secondary schools are not yet fully understood. Most studies have focused on higher education, short-term emergency remote learning, or isolated psychological factors, leaving a gap in understanding the comprehensive interplay of motivation, self-regulation, emotional well-being, and social connectedness in adolescent online learners. Additionally, domestic research on this issue remains limited, which is why the present article turns to well-established foreign studies to offer a broader and more evidence-based perspective.

The aim of this article is to examine the psychological dimensions of distance learning in secondary schools, identify the main challenges that students face, and discuss practical strategies to support their mental well-being, engagement, and academic performance. To achieve this, the paper integrates international empirical findings and theoretical frameworks, gradually building a comprehensive view of the psychological mechanisms underlying successful – and unsuccessful – distance learning experiences.

Presentation of the main material

A central framework for understanding motivation in distance learning is Self-Determination Theory. According to Self-Determination Theory, three basic psychological needs – autonomy, competence, and relatedness – must be satisfied to foster intrinsic motivation and well-being [11]. When these needs remain unmet or are actively frustrated by poorly designed learning environments, students' engagement and learning outcomes decline. In online learning environments, the design of activities and teacher support play a critical role in meeting these needs. For example, Farikah, Mulyani, Astuty, and Mazid [4] found that students' motivation in team-based online learning was strongly influenced by perceived autonomy, competence, and belonging, highlighting the importance of interactive and participatory learning structures. This indicates that distance learning must do more than simply transfer traditional content online; it must intentionally cultivate psychological conditions that sustain intrinsic motivation.

Self-regulated learning is essential in distance education, as students must independently plan, monitor, and evaluate their learning. Research indicates that self-regulated learning skills are directly linked to both academic achievement and students' ability to cope with online learning demands. Berger et al. [7] reported that adolescents with higher self-regulated learning capabilities were more effective in managing remote learning during COVID-19, particularly when supported by parents and teachers. Further, Cheng et al. [12] analyzed trace-based data from online learning platforms and found that high-performing students engaged in re-reading and elaboration strategies, whereas lower-performing students relied mostly on orientation activities. These findings underscore the importance of teaching self-regulated learning explicitly and providing digital scaffolds that promote effective self-regulatory strategies. Adaptive scaffolding systems have been shown to improve self-regulated learning and performance in online environments [13]. Taken together, these studies show that adolescents' ability to regulate their learning is not fixed but can be strengthened through deliberate pedagogical and technological support.

Distance learning can increase stress and anxiety in adolescents. Meta-analytic evidence demonstrates high prevalence rates of anxiety, depression, and stress among students engaged in remote learning during the COVID-19 pandemic [15]. Factors such as lack of structure, limited interaction with teachers, and technological difficulties exacerbate these challenges [3]. Conversely, perceived support from teachers and peers, as well as strong school connectedness, are protective factors that improve resilience, self-efficacy, and mental health [1; 2]. This contrast between risk factors and protective factors highlights the dual nature of distance learning environments: they can either undermine well-being or, if properly designed, serve as a context that strengthens coping skills and psychological resilience.

Social interaction is crucial for adolescent development. The absence of face-to-face peer engagement can weaken students' sense of belonging, reducing motivation and emotional support [14]. Programmes that encourage collaboration, group work, and synchronous discussion can help mitigate these negative effects. Moreover, coping strategies such as emotion regulation and adaptive engagement play a vital role in sustaining psychological well-being during distance learning [9]. Thus, modern distance learning must be understood not only as an instructional format but also as a socio-emotional ecosystem that directly shapes students' developmental trajectories.

Overall, the literature indicates that motivation, self-regulated learning, social connectedness, and emotional well-being are deeply interrelated in distance learning, and deficits in any of these domains can

negatively impact student outcomes. A comprehensive understanding of distance learning therefore requires an integrated approach that acknowledges the interplay between these psychological components.

To examine these psychological dimensions, a mixed-methods approach is appropriate:

Participants: Secondary school students aged 14 – 18 from schools using distance-learning platforms.

Design: Surveys combined with semi-structured interviews.

Measures:

Motivation: Self-Determination Theory-based scales assessing autonomy, competence, and relatedness.

Self-regulated learning: Questionnaires and trace-based analytics.

Well-being and stress: Standardized scales (e.g., Perceived Stress Scale, Anxiety Inventory).

Social connectedness: Measures of peer and teacher support.

Procedure: Surveys and platform usage data would be collected, with interviews exploring students' experiences in depth.

Analysis: Quantitative data would be analyzed using correlation and regression techniques, while qualitative data would undergo thematic analysis to identify patterns in psychological adaptation.

By employing this mixed-methods design, researchers can capture both the measurable psychological outcomes of distance learning and the nuanced personal experiences that explain why certain students thrive while others struggle.

The literature demonstrates that distance learning affects multiple psychological dimensions. Adolescents face challenges related to motivation, self-regulation, stress, and social connection, all of which are interdependent. Recognizing this interconnectedness is essential for developing effective interventions and designing supportive online learning environments.

Consistent with Self-Determination Theory, students' intrinsic motivation depends on satisfying the needs for autonomy, competence, and relatedness. Farikah et al. [4] showed that students' sense of belonging and competence strongly predicted engagement in online team-based activities. This suggests that interactive, participatory, and flexible instructional designs are essential for sustaining engagement in remote environments.

Self-regulated learning is critical for managing the demands of online learning. Students with stronger self-regulated learning skills can plan, monitor, and evaluate their learning effectively, leading to better performance and reduced stress [7; 12]. Digital scaffolds and adaptive feedback further support Self-Determination Theory, helping students develop strategies such as goal-setting, self-monitoring, and reflection [13].

Adolescents experience elevated stress and anxiety in remote learning, particularly when learning environments are poorly structured. Xu and Wang [15] reported high prevalence rates of anxiety and depression. However, school support, teacher feedback, and social connectedness are protective factors that enhance resilience and psychological well-being [1].

Social interaction is critical for adolescent development. Limited peer engagement can reduce belongingness, motivation and emotional support [14]. Thus, regardless of technological sophistication, distance learning cannot be effective if it neglects the social dimension of schooling.

Based on these findings, several strategies can enhance psychological outcomes in distance learning:

Promote Self-Regulated Learning:

Explicit instruction on planning, goal-setting and self-monitoring. Digital tools to track progress and provide adaptive feedback.

Enhance Motivation and Engagement:

Interactive and participatory online activities.

Opportunities for student choice and meaningful feedback.

Support Mental Health and Stress Management:

Virtual counselling and mindfulness programmes.

Regular teacher check-ins and communication with parents.

Foster Social Connectedness:

Online communities, discussion forums and mentorship programmes.

Collaborative projects and synchronous engagement.

Tailor Interventions to Subjects and Individual Needs

Recognize domain-specific challenges (e.g., language learning anxiety).

Adapt strategies to individual students' cognitive and emotional profiles.

Conclusions and Prospects for Further Research

Distance learning in secondary schools presents both opportunities and psychological challenges. Adolescents must navigate motivation, self-regulation, stress, and social connection – tasks that can significantly impact academic and emotional outcomes. The literature demonstrates that deficits in any of these areas compromise learning, while targeted interventions can improve engagement, well-being, and achievement. Educators and policymakers should focus on scaffolding self-regulated learning, promoting motivation, supporting mental health, and fostering social belonging. As international research clearly shows, distance learning can become a powerful educational tool when psychological factors are carefully addressed; without

such attention, however, it risks widening gaps in achievement and well-being. Future research should explore longitudinal effects, intervention efficacy, and cross-cultural differences to refine strategies that support adolescent learners in online environments.

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