



PERSPECTIVES

Teachers' Psychological Difficulties in Online Teaching: Research in some Middle and High Schools in the North and South of Vietnam

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ABSTRACT

In the context of global educational digital transformation and the widespread shift to online teaching, teachers' mental health has become a critical concern in both developed and developing countries. This study presents the research results on teachers' psychological difficulties in online teaching at some middle and high schools in the North and South of Vietnam. The goal of the study is to explore the manifestations and factors affecting teachers' psychological difficulties in a digital environment. Research results show that nearly 90% of the teachers faced psychological difficulties during online teaching. Psychological difficulties manifest in all three aspects: cognitive difficulties; emotional and behavioral difficulties. The findings indicated that 42.7% of the teachers experienced anxiety, 32.6% reported depressive symptoms, and nearly one quarter showed stress-related difficulties. There are subjective and objective factors that cause psychological difficulties in teachers during online teaching. Particularly, subjective factors have a stronger impact than objective factors. Among the factors affecting teachers' psychological difficulties in online teaching, namely the level of stress, limitations in teachers' online teaching competency; students' poor sense of learning; self-assessment of the teacher's difficulties in online teaching; network infrastructure for online teaching; overloading teaching content; teaching experience are the main and significant factors. Thus, from the perspective of digital transformation in education, it is clear that the internet infrastructure, teachers' adaptive capacity and interaction in digital teaching environments greatly affect the psychological difficulties, even teachers' mental health. The research results on Vietnamese teachers resonate with previous findings on teachers' psychological difficulties in the world.

1. INTRODUCTION

The rapid advancement of digital technology has driven a profound transformation in education, particularly in teaching modalities. This trend became even more pronounced in the context of the COVID-19 pandemic, when online education was no longer just an option but an essential solution to sustain teaching and learning activities (Hodges et al., 2020). In Vietnam, digital transformation in education has been identified as one of the key strategic missions to enhance teaching and learning quality, ensuring flexibility and personalization in education. Vietnam's education sector has identified accelerating digital transformation as a key task for the entire sector. This contributes to creating a diverse, rich, attractive and highly interactive learning environment that meets the needs of society, improves the quality of teaching and learning, and allows learners to study anytime, anywhere (Nguyen et al., 2024).

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However, alongside the benefits of online teaching, educators have also encountered numerous psychological challenges that affect their teaching effectiveness and mental well-being.

From a psychological perspective, online teaching requires educators to adapt to a digital environment, modify pedagogical methods, and cope with difficulties such as increased workload pressure, social isolation, reduced direct interaction with students, and stress related to technological management (Bao, 2020). Studies indicate that online educators are at a higher risk of experiencing occupational stress, burnout, and anxiety due to the need to adjust teaching strategies, assess students in digital learning settings, and maintain engagement with students through online platforms (Trust & Whalen, 2020). In Vietnam, during the large-scale implementation of online teaching, many teachers reported experiencing digital fatigue, work-life imbalance, and a lack of psychological support during this transition (Nguyen & Bui, 2021).

The rapid pace of digital transformation in Vietnam's education sector has created an urgent need to support teachers not only in terms of technological skills but also psychological well-being. Investigating the psychological difficulties faced by teachers in online teaching is essential for proposing appropriate support measures, thereby improving teaching effectiveness and ensuring the sustainable development of digital transformation in education. Therefore, analyzing the psychological challenges teachers encounter in online teaching, clarifying the influencing factors, and proposing support strategies based on psychological theories and empirical research findings hold significant importance.

New experiences of both teachers and students with online learning have caused great difficulties for teachers, students and educational activities in schools. Particularly, online learning has confronted both teachers and students with great challenges in terms of psychological aspects; teaching objectives, contents and methods; media, information technology and teaching techniques, especially posing a big problem in adapting to teaching activities in a digital environment.

Concerning students' psychological difficulties in the learning process, many studies around the world agree that students have shown signs of difficulties and psychological disturbances in online learning (Jiao et al., 2020; Wasserman et al., 2005; Zheng et al., 2020). The common psychological abnormalities are often related to emotional problems, such as stress, anxiety, depression and behavioral problems namely, aggressive behavior, cyberbullying, game addiction, internet abuse. These psychological difficulties are both a direct consequence of online learning and exert a negative impact on learning activities in the digital environment.

Despite a growing body of international research on teachers' psychological well-being during online teaching, there remains a lack of large-scale, nationally representative studies in developing countries, especially in the context of educational reform. This study fills this gap by providing comprehensive quantitative evidence from over 10,000 Vietnamese teachers across educational levels, thereby offering new insights into local teachers' mental health during a period of educational reform.

This research focuses on identifying teachers' psychological difficulties in the process of online teaching; clarifying the direct and indirect relationships between teachers' psychological difficulties and the conditions of online teaching as well as other factors in the digital teaching environment. The content presented in this research paper is the result of a study designed and conducted on Vietnamese teachers, aiming to clarify the following issues: (1) Expression of teachers' psychological difficulties during online teaching; (2) Factors affecting teachers' psychological difficulties in the process of teaching in a digital environment. The content of this paper provides practical research results in Vietnam about the impacts of the digital education environment on the psychological difficulties of teachers in online teaching. The paper is a useful reference for psychologists, educators and educational managers when implementing digital transformation in education.

2. LITERATURE REVIEW

Throughout the history of psychology, activity has been the central issue. The views of modern psychology basically agree that the activity of each individual is the sum of external actions, controlled by internal psychological structure, motivated by certain motives, towards certain needs of the subject. Accordingly, most psychologists acknowledge the dialectical relationship between external behavioral manipulation and internal psychological connotations. This is a two-way relationship. The inner psychological activity acts as a controlling factor for external behavior. On the contrary, it is also developed and enriched through practical actions. In the process of this two-way

transformation, if there are barriers between psychological activities and practical actions, it will have a direct effect on the unity and connection, which affect the performance of the operation. This phenomenon in psychology is called obstacles or psychological difficulties.

Under the impact of the Covid-19 pandemic, psychological difficulties have been studied as an important factor affecting the adaptive capacity of humans in special situations. In the field of education, research focuses on assessing the adaptation process of teachers, students and educational forces related to educational activities in special conditions - social isolation and teaching in a digital environment. The research results in this period highlight that in new learning conditions and social contexts, both teachers and students face manifold difficulties and psychological obstacles, specifically in the digital educational environment.

Regarding teachers' psychological difficulties in the process of teaching, studies have focused on clarifying teachers' difficulties in online teaching (Yohannes et al., 2021); teachers' coping strategies in online teaching (MacIntyre et al., 2020); factors affecting teachers' psychological difficulties during online teaching (Truzoli et al., 2021).

During the pandemic, in many parts of the world, the education systems responded by halting face-to-face in-classroom instruction and making a rapid conversion to online or remote teaching. In most cases, teachers were not trained on the necessary technical and pedagogical skills to integrate digital technology instruction (MacIntyre et al., 2020). Teachers worked without resources to discuss pandemics and uncertainties with their learners and scrambled to go digital without much support and training (Petrie., 2020).

According to Yohannes et al. (2021), teachers' difficulties during the implementation of online learning are caused by several factors such as students, teachers, the school, curriculum, and parents, particularly students and teachers. Specifically, 70% of the surveyed teachers agreed that they faced difficulties in implementing online learning. The remaining 30% mentioned a few significant difficulties they experienced when the topics were difficult to teach through online learning. The main difficulties related to student factors: students' difficulty to understand the material, students' complaints about electricity and internet costs rising, students lacked media to learn online, students' opinion that online learning did not yield optimal results, and students' lack of motivation in online learning (Yohannes et al., 2021). Obviously, the digital teaching environment is a direct factor that causes psychological problems for teachers.

The impact of risks and protective factors on online teaching experience include: depression and stress – the main predictors of satisfaction levels for online teaching; coping, locus of control and self-efficacy – important protective factors. Thus, teachers with high levels of depression and stress are at risk for lower online teaching satisfaction (Truzoli et al., 2021). In addition to technical difficulties, interacting in the digital environment and limitations in direct eye contact in a “face-to-face” manner with students also cause major psychological obstacles (Casacchia et al., 2021).

The Covid-19 pandemic is an unprecedented experience in human history, so it has caused many difficulties for teachers in the process of adapting in professional activities. Shagiakhmetova and colleagues (2022) claimed that teachers were not prepared emotionally, mentally, or cognitively in the process of using new methods and techniques in teaching.

The process of digital transformation in general and online teaching in particular in education is under the direct influence of physical facilities and technical infrastructure. Gurung (2021) discovered that teachers and students in remote areas face many difficulties in accessing digital transformation and online learning.

Subjective difficulties derived from the process of adapting professional activities in the online learning environment and objective difficulties related to physical and network infrastructure entail serious psychological obstacles and disturbances during online teaching. The increased psychological stress in teachers stems from worries about health problems of themselves and family members; changes in the family living environment; threats to future jobs and careers. Online teaching also causes more severe anxiety disorders and depression, exacerbating teachers' work-life imbalances (Kayabınar et al., 2021). Besides depression, sleep disturbances and loss of energy have also been identified by Casacchia et al. (2021). These psychological problems seem more common among female teachers than male teachers (Casacchia et al., 2021).

In Mosleh et al.'s study (2022), approximately 60% of the participating instructors reported moderate stress during online teaching. Furthermore, higher stress levels and lower satisfaction with the online teaching experience

were associated with more significant work and personal burnout. The participants who were married and had school-age children had a higher risk of personal burnout (Mosleh et al., 2022).

The results show that the Covid-19 pandemic has exacerbated existing widespread inequalities in access to internet connectivity, smart devices and teacher training required for an effective transition to online education. It is reported that teachers have quickly adapted to online teaching with the help of organizational training as well as self-study tools. However, the respondents expressed dissatisfaction with the effectiveness of online teaching and assessment methods, and a strong desire to return to traditional learning methods. In addition, 92% of the respondents faced mental problems such as stress, anxiety and loneliness due to online teaching (Dayal, 2023).

In another study by Yi et al. (2021), Problematic Internet Use (PIU) is a risk factor for psychological stress during Covid-19, as teachers are psychologically vulnerable. A high proportion of participants exhibited psychological distress: depression (20,4%), anxiety (26,4%), and stress (10,2%).

Recent international studies also highlight the persistence of psychological distress and burnout among teachers in the post-pandemic era (He et al., 2025). These works emphasize the complex interplay between emotional intelligence, job demands, and professional identity in shaping teachers' mental health. Studies on psychological difficulties in teachers have been conducted in many countries. Basically, the research focuses on clarifying the level, manifestation and factors affecting the psychological difficulties of teachers and students in the digital teaching environment. However, studies on teachers' psychological difficulties in Vietnam during online teaching are still scarce. Therefore, this study aims to identify the manifestations and causes of Vietnamese teachers' psychological difficulties during online teaching in the Covid-19 pandemic, contributing to sketching an overall picture of teachers' psychological difficulties in the process of adapting in professional activities, especially while teaching in a digital environment. Research can bring interesting findings, especially in the context of Vietnamese society - a developing country, which is still facing many constraints in network infrastructure and economy.

In psychology, there are different approaches to psychological difficulties, which may be generalized into three following directions. (1) The first approach considers psychological difficulties as a combination of attributes, states, psychological and personality characteristics that are not suitable for the subject of the operation, impeding the operation process and resulting in limited performance. Therefore, psychological difficulty is the "incompatibility" of the internal control system and the requirements of the external operation. This leads to inefficient operation; (2) The second approach considers psychological difficulties as a limitation in the subject's ability to adapt and eventually be less flexible in the process of operation, preventing the subject from timely mobilizing personal capacities. This means that the elements of inner psychological activity can have enough potential to meet the requirements of external activity, however, the process of operation and interaction between these elements is not effective. This results in the inability to precisely control external actions to meet operational requirements; (3) The third approach considers psychological difficulty as a state showing the subject's passivity and embarrassment when facing changing situations and conditions that hinder the course of action and distort the results of the activity. Accordingly, psychological difficulties are attributed to passivity, which causes poor adaptation to change, thereby creating the phenomenon of "phase difference" between the internal control and the external action of each individual.

Thus, despite the different approaches, most of these approaches agree on some common views when looking at psychological difficulties: (1) Psychological difficulties are recognized in the relationship between inner psychological activities and external activities; (2) Psychological difficulties are intrinsic psychological barriers, causing a phase difference with external activities, directly affecting operational efficiency; (3) The causes of psychological difficulties are diverse, which may come from limitations in the internal psychological structure; from poor connection and coordination leading to the poor adaptation or passive attitude to the requirements of life.

In this study, psychological difficulties are understood as psychological obstacles, causing negative effects on personal activities, reducing adaptability, effectiveness of activities and development ability of individuals.

The manifestations of teachers' psychological difficulties in online teaching are analyzed in three dimensions: cognitive, emotional and behavioral (Hoang, 2015): (1) In terms of perception: Perception is the process by which people understand the world at different levels and express their attitudes towards the world. Perception drives people's judgments, assessments about things, phenomena, the world, thereby leading to the corresponding response (attitude, behavior); (2) In terms of emotions: Emotions are attitudes of humans towards objects that are directly

related to the satisfaction or dissatisfaction of a need. Attitude has a direct impact on personal positivity, thereby greatly affecting performance of activities. Personal emotions are one of the basic factors that directly affect the transmission of signals from inner psychological activities to external activities. Therefore, teachers' attitudes and their emotions can strongly influence psychological barriers in the process of online teaching. The emotional aspect can create psychological obstacles for teachers' online teaching activities through the following aspects: Lack of interest and motivation in online teaching activities; Lack of positive emotions in the teaching process, such as joy, happiness, comfort, confidence, excitement, feeling full of energy, vitality...; Negative mood during online teaching: anxiety, sadness, boredom, discomfort, pressure, embarrassment, stress...; (3) In terms of behavior: Behavior is a combination of human manipulations that are motivated and controlled by the internal psychological structure. Psychological obstacles can mislead behaviors, causing teachers less adaptive or less active in the online teaching process. In the system of manifestations of psychological difficulties in online teaching, the behavioral aspect is the most revealing and observable aspect. In terms of behavior, teachers' psychological difficulties when conducting online teaching can manifest with the following expressions: Poor adaptive behavior towards online teaching activities; Inappropriate response to situations arising in online teaching activities; Deviant behavior, even standard deviation during online teaching; Performances and skills are not smooth, failing to synchronize and harmonize in the online teaching process.

Thus, perception, emotion and behavior are the three basic manifestations of psychological obstacles in the process of online teaching. These difficulties are interrelated in their manifestation, in which cognitive directly affects emotions and behavior, and at the same time, the teacher's practical actions affect their perception or feelings about online teaching.

Teachers' psychological obstacles can appear in specific aspect, or manifest simultaneously in all three aspects, towards the most concentrated expression, which are barriers to teachers' online teaching process.

The mechanism of the formation of psychological difficulties is a relatively complex issue. Summarizing the manifestations, it is possible to visualize through the following diagram:

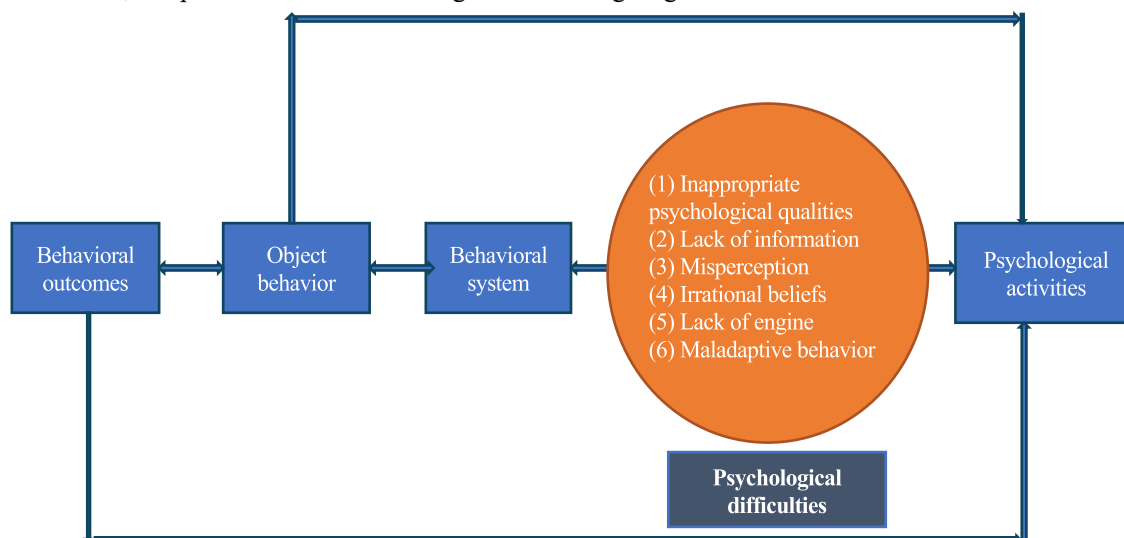


Figure 1. Mechanism of formation of psychological difficulties in operation

(Source: Authors' self-design)

3. MATERIALS AND METHODS

The study was conducted on an official sample of 676 middle and high school teachers randomly selected, at 8 representative middle schools and high schools over the country, including the South (Ho Chi Minh City; Dong Nai province; Long An province); the North (Hanoi city, Hai Duong province, Vinh Phuc province) from December 2023 to the end of February 2024. The teachers were all informed about the purpose of the study and volunteered to participate in the study.

The main methods used in this study are the DASS21 test (the DASS21 is used to assess stress, anxiety, and depression) and the questionnaire survey method. To assess the psychological difficulties of teachers in the process of online teaching, we have composed a questionnaire consisting of 15 items with 4 response levels, ranging from Never - 0 points; Rarely - 1 point; Sometimes - 2 points; Always - 3 points. After the teacher's answers were collected, they were entered into SPSS software for analysis of the expression and level of teachers' psychological difficulties.

The items in the questionnaire aim to assess the manifestations of the teacher's psychological difficulties and the factors affecting these manifestations. The design of the questionnaire was carried out in two phases: the trial survey phase and the official survey phase.

Table 1. Distribution of study sample

Criteria	Content	Total	
		N	%
Sex	Male	279	41,3
	Female	397	58,7
Residence area	Countryside	454	67,2
	City	222	32,8
Total		676	100

The survey was implemented online via Google Form. Teachers' responses were analyzed and processed by using the statistical software for the social sciences SPSS, version 22.0.

The reliability of the scale

The reliability of the scale of psychological difficulty in online teaching is determined based on Cronbach's Alpha coefficient and EFA factor analysis.

Table 2. Reliability of the sub-scales about psychological difficulties of Vietnamese teachers when teaching online

The scale of teachers' psychological difficulties in online teaching	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
<i>Reliability of the cognitive difficulty subscale</i>	<i>0,792</i>	
<i>Expression of awareness when teaching online</i>		
Believing that online teaching is not effective	0,576	0.751
Lacking understanding about online teaching methods	0,563	0.757
Not knowing how to effectively use teaching softwares	0,575	0.753
Believing that online teaching is only a temporary solution	0,561	0.759
Having difficulty in recognizing student's psychological state	0,598	0.744
<i>Reliability of emotional difficulty subscale</i>	<i>0,848</i>	
<i>Expressing emotional difficulties when teaching online</i>		
Being Afraid that the lecture might be recorded and distributed	0,575	0.837
Feeling tired of teaching online	0,699	0.805
Having discomfort when not being able to manage students	0,633	0.823
Feeling pressured to teach online	0,761	0.789
Feeling distant from students when teaching online	0,622	0.827

<i>Reliability of the behavioral difficulty subscale</i>			0,836
<i>Manifestations of behavioral difficulties when teaching online</i>			
Having difficulty working with computers and the internet	0,555		0.824
Having difficulties in using software in teaching	0,601		0.814
Having difficulty in interacting with students	0,701		0.785
Having difficulty in organizing teaching activities	0,689		0.788
Having difficulty in controlling student behavior	0,658		0.798
<i>The reliability of the full scale</i>			0,923

The reliability analysis of the subscales reveals that the surveyed items are closely correlated with the total variable. Cronbach's Alpha coefficients of all subscales have high reliability (all greater than 0,79). Besides, Cronbach's Alpha coefficient of the whole scale is 0,923. This allows us to confirm that the scale of teachers' psychological difficulties in the online teaching process is reliable given the sample of research subjects in Vietnam. This scale can be used to assess the level and manifestations of psychological difficulties among Vietnamese teachers.

The results of the factor analysis show that the coefficient of test KMO = 0,931 with sig. = 0,00. The number of loads of each item is > 0,3. The results of factor analysis of psychological difficulties in Vietnamese teachers allow us to explain more than 72% of the research phenomenon. This shows that the expressions of psychological difficulties and the specific manifestations of each aspect ensure convergence and divergence, allowing full reflection on the psychological difficulties of teachers during the online teaching process.

4. RESULTS AND DISCUSSION

4.1. Results

Levels and manifestations of teachers' psychological difficulties (TPD) during online teaching

Drawing on the rating scale for TPD in online teaching implemented in practice, we obtained the following results.

Table 3. Teachers' self-assessment of psychological difficulties in the online teaching process

Teachers' self-assessment of psychological difficulties in online teaching	Residence area				Total	
	Countryside		City			
	n	%	n	%	n	%
No difficulty	57	12,5	28	12,6	85	12,6
Limited difficulty	250	55,1	128	57,7	378	55,9
Difficulty	121	26,7	54	24,3	175	25,9
Many difficulties	26	5,7	12	5,4	38	5,6
Total	454	100	222	100	676	100

The results of the teacher's self-assessment show that 87,4% of the teachers faced psychological difficulties during online teaching at different levels, mainly on the level of "Limited difficulty" (55,9%). In addition, the survey results also show interesting data: 31,5% faced many difficulties in the process of online teaching. Levels "Difficulty" and "Many Difficulties" in the teaching process imply direct impact on professional operations, affecting the implementation of educational methods in a digital environment. New factors - computer systems, software, and internet facilities, can cause psychological problems for teachers and directly affect the effectiveness of the online teaching process. Therefore, educational managers need to pay special attention to these psychological difficulties in the process of online teaching to ensure the effectiveness of online teaching.

Table 4. Level of psychological difficulties during online teaching

Level of psychological difficulty when teaching online	Residence area		\bar{X}
	Countryside	City	
	Mean	Mean	
Cognitive difficulties	0,99	0,94	0,97
Emotional difficulties	1,01	0,89	0,97
Behavioral difficulties	0,99	0,97	0,98
\bar{X}	0,99	0,93	0,97

Analyzing the level of teachers' psychological difficulties in online teaching through the average score, we found that the average score of the research sample was 0,97, in the range from 0 to 1. Based on the analysis of the spectrum of scores according to the bell chart with the range of scores ranging from 0 to 4, the bell chart is skewed to the left. This shows that, in the overall sample, teachers' psychological difficulties in online teaching were moderate. Combined with their self-assessment of the psychological difficulties, it can be concluded that most of the surveyed middle school and high school teachers faced mental difficulties, however, these difficulties were mostly at a moderate level.

Analyzing the average score of teachers' psychological difficulties, the statistics show limited fluctuations by aspects: Cognitive difficulties - $\bar{X} = 0,97$; Emotional difficulty - $\bar{X} = 0,97$ and behavioral difficulty $\bar{X} = 0,98$.

Looking at the area of residence, the statistical results show that the teachers in rural areas faced more psychological difficulties than those in cities ($\bar{X} = 0,99$ vs. 0,93). This difference may be derived from disparities in facilities, and technical infrastructure of the internet and teaching capacity in the digital environment.

Table 5. Expressions of psychological difficulties of Vietnamese teachers when teaching online

Manifestations of teachers' psychological difficulties when teaching online	Residence area					
	Countryside		City		Total	
	n	%	n	%	n	%
<i>Expression of cognitive difficulties</i>						
Believing that online teaching is not effective	370	81,5	159	71,6	529	78,3
Lacking understanding about online teaching methods	344	75,8	164	73,9	508	75,1
Not knowing how to effectively use teaching softwares	336	74,0	149	67,1	485	71,7
Believing that online teaching is only a temporary solution	218	48,0	120	54,1	338	50,0
Having difficulty in recognizing student's psychological state	222	48,9	113	50,9	335	49,6
<i>Expressing of emotional difficulties</i>						
Being Afraid that the lecture might be recorded and distributed	341	75,1	151	68,0	492	72,8
Feeling tired of teaching online	326	71,8	145	65,3	471	69,7
Having discomfort when not being able to manage students	329	72,5	136	61,3	465	68,8
Feeling pressured to teach online	303	66,7	134	60,4	437	64,6
Feeling distant from students when teaching online	220	48,5	94	42,3	314	46,4

Manifestations of behavioral difficulties

Having difficulty working with computers and the internet	367	80,8	171	77,0	538	79,6
Having difficulties in using software in teaching	371	81,7	167	75,2	538	79,6
Having difficulty in interacting with students	341	75,1	162	73,0	503	74,4
Having difficulty in organizing teaching activities	205	45,2	102	45,9	307	45,4
Having difficulty in controlling student behavior	202	44,5	103	46,4	305	45,1

Psychological difficulties in terms of cognition

The survey results show that the psychological difficulties in terms of cognition manifest with 3 basic expressions: false beliefs about the online teaching process; limited awareness of teaching methods and online teaching softwares; limited ability to recognize and interact with students during online teaching. Overall, more than 49% of the teachers admitted that they faced all these difficulties in the process of teaching online.

Regarding cognitive difficulties, the most common is “having difficulty to recognize students’ psychological state” during online teaching (78.3%). Observing students’ psychological states to initiate interactions and choose appropriate teaching methods and techniques in the teaching process is essential. The level of understanding of students’ psychological state affects the effectiveness of the interaction, and has a direct impact on the effectiveness of the teaching process in the digital environment. However, due to the indirect nature of the online teaching process; with the support of the Internet and computers, the emotional interaction between the teacher and the students is limited. Thus the teacher has many difficulties in the process of recognizing students’ psychological states. This has a direct effect on the process of giving timely interaction and control to students, exerting great influence on the effectiveness of the online teaching process. This is also the most typical difficulty and limitation of online teaching compared to other forms of face-to-face teaching embedded with direct interaction between the teacher and other learners.

Next, negative beliefs about the effectiveness and potential of online teaching also cause great cognitive difficulties. The survey results show that 75,1% of the respondents believed that “online teaching is not effective” and 71,7% believed that “online teaching is only a temporary solution”. Belief has a great influence on motivation, effort, and creativity in activities. Negative beliefs can directly affect performance. The fact that the majority of teachers did not have confidence in the effectiveness and potential of online teaching is a big problem. These negative beliefs not only limit teachers’ efforts and creativity in the process of teaching in the digital environment but also have a great influence on their emotions in the process of implementing online teaching activities.

Research data also shows that a large number of teachers (about 50%) faced difficulties in using teaching methods and software in the online teaching process. Obviously, in online teaching, all methods must be deployed indirectly in the digital environment with the support of computers and smartphones with internet connection. This requires teachers to adapt traditional teaching methods in the online teaching environment. Besides, all teaching methods and techniques must be implemented through the support of educational software. Therefore, in order to teach online successfully, teachers need to overcome these psychological difficulties. However, for different reasons, more than 50% encountered difficulties when implementing methods and utilising software on computers when conducting online teaching. This can cause great obstacles for them in the process of teaching online.

Psychological difficulties in terms of emotion

Stemming from negative beliefs and objective barriers in the process of teacher-student interaction, teachers formed a series of negative emotions during online teaching. Among these negative emotions, the most common was “feeling distant from students during online teaching” (72,8%). In the teaching process, the teacher-student relationship is the root, the foundation for the implementation of all educational methods, thus having a direct influence on the effectiveness of teaching. However, due to the indirect nature of online teaching, teachers felt “emotionally disconnected”, thereby losing their sense of emotional closeness with students when teaching. The disconnection and feeling of “separation from students” on the one hand were phenomenal. On the other hand, they were the causes of difficulty in managing students when teaching online. The survey results showed that up to 69,7% of the teachers confirmed that they often experienced the feeling of “helplessness when they could not manage

students in the process of online teaching”. This is a critical point to address in the process of online teaching. The inability to manage students in the process of online teaching firstly can directly affect the quality of the teaching process. Also, the feeling of helplessness when unable to manage students can also promote negative attitudes, even causing emotional stress and other psychological problems for teachers in online teaching.

Resulting from negative beliefs, from the failure to manage students and the broken teacher-student relationship, the feeling of being “tired of teaching online” was cited by 68,8% of the teachers. Besides, 64,6% also confirmed that they often “feel pressured when teaching online”. These are negative emotions that are worth noting in most teachers when teaching online. This emotional state, if persisted for a long time, can promote occupational stress in teachers, and can even cause other mental health problems, especially in high-risk environments.

Finally, security is also a factor that causes psychological difficulties for teachers in a digital environment. 46,4% admitted that they were worried that “the lecture might be recorded and distributed”. With online teaching, every hour of the teacher’s class is observed and attended not only by students but also by a variety of other subjects such as students’ parents and family members. Thus, their lecture may be publicized on social networking platforms if it is illegally collected or distributed. This also causes concerns among teachers. Therefore, the management of information and the security of teaching content is also a major issue, which requires protection to ensure teachers’ secure feeling in online teaching.

Psychological difficulties in terms of behavior

Cognitive and emotional difficulties both manifest as a phenomenon and act as a direct cause of teachers’ behavioral difficulties in online teaching. Indirect delivery through the Internet and teaching software entails great obstacles in terms of teachers’ behavior when organizing classes (79,6%); in controlling student behavior (79,6%) and in interacting with students (74,4%).

Apart from the common behavioral difficulties mentioned above, the teacher respondents also faced many difficulties when deploying teaching softwares (45,4%) or working with computers and the internet (45,1%). In the process of online teaching, computers, internet and teaching software play a fundamental and decisive role in the teacher’s activities. When the internet is malfunctioning, or the teaching software is not fully exploited, the online teaching process would not be able to achieve the desired, optimal results.

The research results above show that the difficulties in implementing online teaching activities are derived directly from the technical characteristics when implementing teaching activities in the digital environment and limitations in teachers’ adaptive capacity in the process of online teaching. Therefore, it’s important to enhance the quality of teaching software while improving teachers’ information technology application capacity in the process of online teaching to promote online teaching and its effectiveness in 4.0 education.

Analyzing the relationship between the three aspects of psychological difficulties and the level of psychological difficulty, it is found that all three aspects, namely perception, emotion and behavior, were significantly and positively correlated ($p > 0.707$; sig.=0,000). At the same time, each aspect had a strong, positive and significant correlation with the overall psychological difficulty index ($p > 0,891$; sig.=0,000). This once again confirms the reciprocal relationship between emotional, cognitive, and behavioral difficulties in online teaching. Behavioral difficulties can promote emotional difficulties, thereby increasing behavioral problems, and causing general psychological difficulties of teachers during online teaching.

Analyzing the relationship between the level of teachers’ psychological difficulties and the manifestations of stress, anxiety, and depression, we obtained the following results:

Table 6. The relationship between teachers’ psychological difficulties during online teaching and the level of stress, anxiety, and depression

Correlation between the level of psychological difficulty and the level of stress, anxiety, depression		Psychological difficulty level
Level of stress	Pearson Correlation	0,572
	Sig. (2-tailed)	0,000
	N	676

Level of anxiety	Pearson Correlation	0,523
	Sig. (2-tailed)	0,000
	N	676
Level of depression	Pearson Correlation	0,492
	Sig. (2-tailed)	0,000
	N	676

Statistical results show that, the level of teachers' psychological difficulties correlated positively and significantly with the level of stress, anxiety, and depression among the teachers ($p > 0,492$; $\text{sig.} = 0,0000$), in which psychological difficulties were most strongly correlated with stress levels ($p = 0,572$; $\text{sig.} = 0,000$). This confirms the cause-and-effect relationship between teachers' psychological difficulties during online teaching and stress, anxiety, and depression. Research results allow us to conclude that teachers' psychological difficulties during online teaching can exacerbate their mental health problems, especially occupational stress and vice versa.

Causes of Vietnamese teachers' psychological difficulties in teaching online during the COVID-19 pandemic

Table 7. Causes of teachers' psychological difficulties when teaching online

Causes of the psychological difficulties of teachers in the process of online teaching	n	%	Correlation with level of psychological difficulties
Limited students' engagement	592	87,6	0,649 **
Being tired of using computers too much	579	85,7	0,654 **
Unstable internet connection	575	85,1	0,524 **
Teaching content overload	399	59,0	0,90 **
Lack of online teaching facilities	334	49,4	0,562 **
Insufficient support from the manager	235	34,8	0,478 **

Note: ** - $\text{sig.} = 0,0000$

Table 7 shows that these factors had an impact on teachers' psychological difficulties in the process of online teaching, showing a positive and significant correlation with the level of psychological difficulties.

Specifically, in two groups of causes (subjective and objective), subjective causes were more strongly correlated than objective ones. Among the subjective causes, two common causes with a strong impact on the level of psychological difficulties in online teaching activities, include: (1) The students' engagement in learning is limited. (87,6%); (2) Teachers are tired of working with computers during online teaching (85,7%). Among these subjective factors, difficulties related to students' learning participation and awareness in online learning, together with fatigue caused by prolonged computer use, were most frequently reported. Notably, teachers rarely referred to their own difficulties as contributing factors to psychological strain, despite their central role in the teaching process. This pattern may indicate a tendency toward externally focused explanations when reflecting on their psychological experiences. They tend to blame external factors to justify their internal psychological difficulties, while ignoring subjective reasons that are critical to themselves, such as limited adaptive capacity in an online teaching environment; ineffective teaching software; limited ability to manage students' classroom behavior. Besides these two subjective causes, although less common, "limited support of colleagues and administrators in the teaching process" was also mentioned as a subjective cause that affects the process of online teaching (34,8%).

Regarding the objective causes of psychological difficulties, there were 3 basic causes identified: (1) Unstable internet connection (85,1%); Teaching content overload (59,0%); Lack of online teaching facilities (49,4%). While being claimed by fewer teachers compared to subjective causes, objective factors in online teaching such as internet infrastructure and online teaching tools including computers, smartphones, and supporting learning software play a

crucial role. In addition, in order to adapt to the online form of teaching, the teaching contents also need to be restructured to ensure smooth transmission.

Next, we performed a multivariate regression analysis to evaluate the influence of factors on the level of psychological difficulty of teachers during online teaching.

Table 8. Regression model of factors affecting psychological difficulties of Vietnamese teachers during online teaching

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	D.W
First	0,851 ^a	0,724	0,721	4,879	1,931

The results of the regression model analysis show that the F-test result is significant (sig. = 0,00). The Durbin-Watson coefficient (D.W) is 1,931. According to statistical standards, the Durbin-Watson coefficient is within the allowable range ($1,5 < \text{Durbin-Watson} < 2,5$) (Yahua Qiao, 2011).

Adjusted R Square = 0,721 allows to explain 72,1% of cases. The regression model in this research sample ensures reliability, explaining the majority of cases studied.

Table 9. Impact of factors on teachers' psychological difficulties in online teaching

Y	Factors affecting the level of psychological difficulty	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	(Constant)	-1.468	0,629		-2,335	0,020		
X ₁	Stress level	0.336	0,028	0,286	11,901	0,000	0,717	1,396
X ₂	Poor students' engagement	2,314	0,295	0,214	7.857	0,000	0,557	1,797
X ₃	Self-assessment of psychological difficulties	2.483	0,315	0,199	7,887	0,000	0,647	1,546
X ₄	Stress of working with computers	1.587	0,274	0,165	5.793	0,000	0,511	1,957
X ₅	Insufficient teaching facilities	1.386	0,275	0,128	5.043	0,000	0,645	1,551
X ₆	Teaching content Overload	0.967	0,274	0,095	3,530	0,000	0,571	1,750
X ₇	Unstable internet connection	0,837	0,265	0,079	3,158	0,002	0,661	1,512
X ₈	Teaching experience	0,413	0,146	0,059	2,839	0,005	0,946	1,057

The results of the correlation analysis between the influencing factors and the level of teachers' psychological difficulties show that the 08 subjective and objective factors were positively and significantly correlated with the level of teachers' psychological difficulties. Some other factors such as: gender; residential area; duration of social distancing; professional qualifications did not have a significant impact in this regression model.

Among the 8 influencing factors (sig.<0,05), VIF coefficients are all less than 10. This eliminates multi-collinearity in the research model (Hair et al., 2009).

Specifically, the statistical results show that the level of teachers' stress; limited student engagement in learning activities; teachers' self-assessment of psychological difficulties and the feeling of fatigue due to frequent work with computers are factors with direct and strong influences on teachers' psychological difficulty (coefficient $\beta = 0,295$; 0,214; 0,199; 0,165 respectively). If these factors should increase by 1 unit, teachers' psychological difficulty level may increase to 0,295; 0,214; 0,199; 0,165 unit respectively.

In addition, limitations in technical and information technology infrastructure were found to have a strong impact on teachers' psychological difficulties in online teaching ($\beta = 0.128$). It is forecasted that when the insufficiency of online teaching tools such as computers, the internet, and teaching support software increases by 1 unit, the level of psychological difficulty will rise to 0,128 units. This figure not only confirms the strong impacts of information technology infrastructure and technical means for online teaching, but also raises a very serious issue of improving information technology infrastructure and online teaching tools to diminish the psychological difficulties for teachers.

Other factors include: "Content overload when teaching online"; "The internet connection is not stable"; "Teaching experience" also has an effect, but weaker than the subjective factors analyzed above ($\beta = 0,095; 0,079; 0,059$ respectively).

In conclusion, an overall analysis of subjective and objective factors affecting the level of psychological difficulty of teachers reveals that subjective factors have a stronger impact than objective factors. Among the subjective factors, the teacher's stress level and the students' poor students' engagement are prominent effects, causing psychological difficulties for teachers. Among the objective factors, the factors of information technology infrastructure, internet connection and technological means for online teaching have a significant impact on TPD.

On the basis of the β coefficients of the analyzed variables (X_n), the regression equation for teachers' psychological difficulties on online teaching (Y) is determined as follows:

Teachers' Psychological difficulties in online teaching (Y) =

$$0.286 \times X_1 + 0.214 \times X_2 + 0.199 \times X_3 + 0.165 \times X_4 + 0.128 \times X_5 + 0.095 \times X_6 + 0.079 \times X_7 + 0.059 \times X_8 + \varepsilon$$

The regression equation on factors affecting the level of psychological difficulties in Vietnamese teachers during online teaching is an important reference in forecasting, diagnosing and developing preventive strategies as well as measures to improve the effectiveness of teachers' online teaching activities during COVID-19 or in similar conditions.

4.2. Discussion

In comparison to previous research around the world on teachers' psychological difficulties when teaching online, certain similarities can be found in our research findings.

Yohannes and his colleagues pointed out the challenges teachers faced when teaching online. Specifically, 70% of the examined teachers faced difficulties when implementing online teaching (Yohannes et al., 2021). Several other studies in this direction also show similar findings. A research study on Vietnamese teachers showed that nearly 90% of Vietnamese teachers faced psychological difficulties during online teaching. It seems like this is a common psychological phenomenon among Vietnamese teachers, so it is necessary to ring a bell in the prevention of TPD and search for psychological support and intervention measures for teachers in the process of online teaching.

In the current study, we found that the level of psychological difficulty of teachers was positively and closely correlated with the manifestations of stress, anxiety, and depression. It can be stated that TPD had a close, cause-and-effect relationship with the manifestations of mental health. This conclusion is quite similar to the studies by Erdi, Massimo, Surbhi and colleagues (Santamaria et al., 2021; Lizana & Lera, 2022; Emeljanovas, 2023).

Specifically, the research results show that TPD when teaching online was manifested in all three aspects - cognitive, emotional and behavioral, which suggests a cause-and-effect relationship between these factors, eventually affecting negatively the results of teachers' online teaching.

When analyzing specific manifestations, we found certain similarities with the findings from previous studies in the world. In terms of perception, Surbhi and his colleagues pointed out the lack of trust among teachers in online teaching causes their dissatisfaction with the effectiveness of online teaching, thereby giving rise to a strong desire to return to traditional modes of learning (Dayal, 2023). The limitation in knowledge of teaching techniques in the digital environment is also highlighted in the research by MacIntyre et al. In this study, the authors assert that short preparation time in the process of converting the teaching form from traditional face-to-face teaching to online teaching, especially the lack of training on online teaching techniques create major obstacles in teachers' perception when implementing online teaching (MacIntyre et al., 2020). From a cognitive perspective, Yohannes emphasizes irrational beliefs about online teaching from learners, confirming that students' negative perception of online learning, or belief that online learning does not bring optimal results leads to students lacking online learning

dynamics, thereby affecting online teaching activities, causing psychological obstacles for both teachers and students (Yohannes et al., 2021). In our research on Vietnamese teachers, we also found similar symptoms.

In terms of emotions, the research results in Vietnam are quite similar to previously published studies. Massimo et al (2021) pointed out the manifestations of emotional difficulties when teachers often experience discomfort because of the lack of direct interaction with students. The situation of teachers who are not mentally prepared to use online teaching methods is also highlighted in Minzilya's research (Shagiakhmetova et al., 2022). In particular, the manifestations of stress, anxiety, and even depressive disorder are serious emotional expressions in teachers when teaching online during the Covid-19 (Dayal, 2023; Petrie, 2020; Mosleh et al., 2022).

In this study, in addition to teachers' pressure when implementing online teaching activities, the research results show that the feeling of separation from students, especially the helplessness in managing the class and worries about the limitations of their lectures that may be publicized and disseminated on social networking platforms are typical manifestations of emotional difficulties detected in the sample. Obviously, online teaching can hinder the emotional connection between teachers and students, thereby causing obstacles in managing classroom behavior. This again becomes the direct cause of triggering the feeling of fatigue and helplessness because of not being able to manage students' behavior when teaching in a digital environment. We believe that these emotional difficulties are both a manifestation and a direct consequence of the limitations of online teaching.

In terms of behavior, the current research confirms that most Vietnamese teachers faced problems when utilizing teaching software, computers, and the internet; as well as organizing and implementing teaching methods in the digital environment. The results of this study are quite similar to the previously published manifestations of TPD when implementing online teaching (MacIntyre et al., 2020; Shagiakhmetova et al., 2022; Yeh & Tsai, 2021; Yohannes et al., 2021). In addition, it is shown that Vietnamese teachers encountered great difficulties in interacting with students when teaching online. Interaction with students and classroom behavior management are fundamental issues in modern pedagogical approaches, which can directly affect teaching effectiveness. We believe that having this is a big problem in teachers' behavior when conducting online teaching activities. This obstacle can directly affect the effectiveness of online teaching.

Regarding the factors affecting the level of TPD when teaching online, previous studies highlights limitations in emotional connection with students (Casacchia et al., 2021); limitations in teaching techniques in the digital environment (MacIntyre et al., 2020; Shagiakhmetova et al., 2022); lack of facilities and information technology infrastructure for online teaching and learning (Yohannes et al., 2021); Inappropriate content of some subjects for implementation via online form and difficulties in maintaining classroom discipline (Yeh & Tsai, 2021; Yohannes et al., 2021); stress, anxiety and depression in online teaching process (Dayal, 2023; Mosleh et al., 2022; Truzoli et al., 2021) as the underlying causes of TPD. Our research results are quite similar to these findings. In addition, the results of correlation and regression analysis on Vietnamese teachers emphasize that the level of stress had the strongest impact on the level of TPD when teaching online.

The research results in Vietnam also emphasize that, compared with objective factors (internet network infrastructure, teaching software, teaching techniques, etc.), subjective factors such as: stress level, belief in the effectiveness of online teaching, students' limited sense of learning, teachers' sense of helplessness in managing classroom behavior have a strong influence. Thus, in the process of digital transformation in education, especially to limit TPD in online teaching, in addition to investing in physical facilities, information technology network infrastructure; upgrading of teaching support software; enhancement of online teaching capacity should be addressed along with psychological support for teachers, especially preparing teachers' attitudes and beliefs in online teaching.

In brief, our research results on Vietnamese teachers demonstrate certain similarities in the level, expression, causes and factors affecting TPD in online teaching. Besides, the research results in Vietnamese settings also supplement the differences in the notable research variables. This is an important finding to make recommendations to reduce the level of TPD and improve the effectiveness of teaching activities in a digital environment.

The trend of digital transformation in education is an inevitable and irreversible trend under the impact of the industrial revolution 4.0. Online teaching is an expression of digital transformation in education that needs attention and promotion not only in special social conditions such as the Covid-19 pandemic, but also under normal social conditions, towards the goal of diversifying learning forms for students all over the country, enhancing learning and

self-study opportunities for students in remote, isolated and island areas, where the conditions for direct contact with teachers in traditional classrooms are limited.

It is necessary to train and raise teachers' awareness of the inevitability of digital transformation in education. Special attention should be paid to changing teachers' perceptions and beliefs of online teaching. False and negative beliefs about online teaching are both an expression and a direct cause of emotional difficulties, which hinder teachers' adaptive behavior in the process of online teaching. In addition, it is necessary to conduct online training courses for teachers, considering this as one of the mandatory requirements in the teaching capacity of teachers in the current period. Teachers training universities also need to identify online teaching capacity as an important output standard to help teachers have the ability to adapt to digital transformation and meet the requirements of teaching in the 4.0 era.

Teachers' stress in the process of online teaching is both a manifestation and a factor that has a strong impact on their psychological difficulties in online teaching. Therefore, controlling stress and negative emotions of teachers when teaching online are important. It is necessary to take measures to prevent stress among teachers during online teaching.

Network infrastructure, online teaching software and online teaching techniques have a direct influence on TPD and the effectiveness of online teaching. Investing in and upgrading information technology and internet infrastructure; providing a full range of online teaching techniques for teachers and schools is an urgent requirement to support teachers and improve the effectiveness of online teaching activities. In addition, online teaching software also needed to robustly develop and improve in the direction of enhancing interaction with learners and supporting teachers in classroom behavior management.

Education managers and teachers need to focus on restructuring teaching content to suit online teaching. In fact, it is impossible and unnecessary to bring the entire educational program used in schools in the form of direct education to the form of online teaching. Potential content for successful online teaching also needs to be restructured to suit the form of teaching in a digital environment. In addition, it is necessary to research and develop online teaching methods in order to be implemented for online teaching, towards the goal of fully promoting the superiority of online teaching and applying technology in education, contributing to the successful implementation of digital transformation in education.

Despite the effort with an initially large sample, our study was eventually conducted within a sample of 676 middle and high school teachers. This sample should have been larger and more representative of all high school teachers in Vietnam. Therefore, it is necessary to conduct future research with larger and more representative samples.

Besides the 8 factors that have been studied and determined to have an impact on TPD when teaching online, there are still a number of other factors which have not been clarified. Further studies should be carried out to identify factors affecting TPD, and at the same time clearly define the mechanism of impact of these factors on psychological difficulties and mental health of teachers when teaching online.

Based on these findings, it is recommended that schools and educational authorities develop structured psychological support programs for teachers, including regular mental health screening, stress-management workshops, and access to counseling services. In addition, short-term emotional intelligence (EI) training focusing on self-regulation, empathy, and classroom emotion management could help teachers enhance resilience and reduce psychological difficulties. These practical interventions would translate research findings into concrete strategies to strengthen teachers' well-being and teaching effectiveness during teaching online.

5. CONCLUSION

Psychological difficulty is a problem that has been studied for a long time in psychology. Commonly, psychological difficulties are understood as psychological obstacles, causing negative effects on personal activities, reducing the ability to adapt, the effectiveness of activities and limiting the development ability of the individual. In the context of online teaching, these difficulties take on new forms and become particularly evident among teachers who must adapt to digital environments and new pedagogical demands.

Specifically, the psychological difficulties of teachers when teaching online are reflected in three aspects: perception, emotion and behavior. These expressions are related and interact with each other, causing obstacles to

the online teaching process, thereby reducing the effectiveness of teaching activities. In the manifestations of psychological difficulties, the teachers' irrational beliefs about online teaching methods; limited capacity and techniques of online teaching; stress state of teachers teaching; tiredness because of long contact with computers and smartphones; helplessness from failure to control classroom behavior; difficulties in manipulating teaching software and the lack of computers competency are outstanding difficulties, which need attention in supporting teachers and improving the effectiveness of teaching in digital environment.

Furthermore, research results on causes and factors affecting the level of teachers' psychological difficulties show that the level of stress in the teaching process; students' sense of learning; teacher's self-assessment of difficulties; online teaching capacity; network infrastructure for online teaching; teaching content overload and teaching experience are the main factors with significant impact on the level of teachers' psychological difficulties. Obviously, along with subjective factors, physical and technical conditions have a great influence on teachers' psychological difficulties while teaching in the digital environment.

Finally, research results gained from the Vietnamese teacher sample show certain similarities to those gained from other countries, especially in cognitive and emotional aspects. In this study, we discovered other characteristics, which are not exclusive but supplement the manifestations of teachers' psychological difficulties in terms of expression, the level and factors affecting teachers' psychological difficulties.

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