

Factors Influencing Lecturers' Stress in Online Teaching: Evidence from Higher Education

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Abstract

This study aims to examine the stress-inducing factors among lecturers in online teaching contexts. A quantitative research design was employed using a survey method, with data collected from 117 lecturers at Universiti Tun Hussein Onn Malaysia (UTHM). The data were analysed using the Statistical Package for Social Sciences (SPSS), including descriptive and correlation analyses. The findings indicate that technological difficulties, lack of facilities, facilitating conditions, and student behaviour are all significantly associated with lecturers' stress levels. Among these factors, technological difficulties ($r = 0.393$, $p < 0.001$) and student behaviour ($r = 0.391$, $p < 0.001$) were found to have the strongest relationships with stress. The results suggest that challenges related to technology usage and student engagement are the primary contributors to stress in online teaching environments. This study highlights the importance of enhancing institutional support, improving technological infrastructure, and addressing student-related challenges to reduce stress among lecturers. The findings provide practical implications for higher education institutions in developing effective strategies to support lecturers and improve the quality of online teaching.

1. Introduction

The COVID-19 pandemic has fundamentally transformed the landscape of higher education, accelerating the adoption of online teaching as a primary mode of instruction. During the 2020–2021 academic year, educators were compelled to rapidly transition from conventional face-to-face teaching to fully online or hybrid learning environments, often with minimal preparation and limited institutional support (Robinson *et al.*, 2022). While digital technologies enabled continuity in education, this abrupt shift introduced a wide range of new stressors and intensified pre-existing challenges within the academic profession (Cipriano & Brackett, 2020). Lecturers are expected to perform multiple roles, including delivering effective instruction, providing emotional support to students, and maintaining engagement in a virtual environment. These responsibilities are often undertaken alongside administrative duties and research expectations, thereby increasing workload demands. In many cases, insufficient training in digital pedagogy, lack of technological resources, and inadequate institutional support further contribute to heightened levels of stress, frustration, and burnout (Stauffer & Mason, 2013; Will, 2021). Additionally, concerns related to personal well-being, work-life balance, and job performance have become more pronounced in online teaching settings.

The challenges are further exacerbated by technological barriers such as unstable internet connectivity, limited access to appropriate teaching tools, and insufficient infrastructure. These issues are particularly significant in

developing regions and institutions where digital readiness varies considerably (Goldberg, 2021). Despite these constraints, lecturers remain accountable for ensuring student learning outcomes and adapting their teaching strategies to suit online platforms, which places additional psychological and professional pressure on them (Robinson *et al.*, 2022). Consequently, there has been a noticeable increase in stress levels, anxiety, and burnout among educators in the post-pandemic period (Steiner & Woo, 2021). Although previous studies have examined teacher stress during the pandemic, much of the existing literature focuses on school-level educators or general teaching populations, with limited emphasis on lecturers in higher education institutions. Furthermore, there is a lack of empirical evidence identifying specific stressor factors and examining their relationship with the level of stress experienced by lecturers in the context of online teaching. This gap highlights the need for a more focused investigation within the higher education setting. Therefore, this study aims to address the following research questions: What are the stressor factors impacting lecturers during online teaching? And Which stressor factors have significant relationships with the level of stress among lecturers in conducting online teaching? By addressing these questions, this study seeks to provide a deeper understanding of the key factors contributing to lecturer stress and to offer insights that can support the development of effective strategies to enhance lecturers' well-being and teaching performance in online learning environments.

2. Literature Review

This section reviews relevant theories and previous studies related to stress among educators, particularly in the context of online teaching. It covers the concept of stress, the education sector transformation during the COVID-19 pandemic, the Unified Theory of Acceptance and Use of Technology (UTAUT), and key stressor factors affecting lecturers such as technological difficulties, lack of facilities, facilitating conditions, and student behaviour. A conceptual framework is also developed to guide this study.

2.1 Stress

Stress refers to a physical, emotional, or psychological response to demands that require attention or action. It arises when individuals perceive that the demands placed upon them exceed their available resources and coping abilities. While stress can have both positive and negative effects, prolonged or unmanaged stress often leads to reduced motivation, decreased job satisfaction, and poor performance (Bhargava & Trivedi, 2018). In the education context, stress among educators is often associated with emotional strain resulting from both internal and external pressures (Kyriacou, 2001). These pressures include workload, time constraints, role ambiguity, and lack of institutional support. During the COVID-19 pandemic, additional stressors emerged, such as adapting to new teaching modalities, managing online classrooms, and ensuring effective student engagement (Zuraimy *et al.*, 2016). Unmanaged stress among lecturers can negatively impact teaching effectiveness, student learning outcomes, and overall educational quality. For instance, lecturers who are unable to adequately prepare for teaching due to stress may deliver less effective instruction, which in turn affects students' academic performance and psychological well-being (Gupta *et al.*, 2013; Madigan & Kim, 2021). Despite these findings, there remains limited research focusing specifically on lecturer stress in online teaching environments, particularly in higher education settings.

2.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) provides a theoretical framework for understanding individuals' acceptance and use of technology. According to Venkatesh *et al.* (2012), behavioural intention to use technology is influenced by performance expectancy, effort expectancy, social influence, and facilitating conditions. Facilitating conditions, in particular, refer to the extent to which individuals believe that organizational and technical infrastructures exist to support system usage. These conditions play a significant role in determining whether individuals can effectively adopt and use technology in their work environment.

In the context of online teaching, facilitating conditions include access to technological resources, institutional support, and technical assistance. When these conditions are inadequate, lecturers may experience difficulties in delivering online instruction, which can contribute to increased stress levels. However, while UTAUT has been widely applied in technology adoption studies, there is limited research examining its application in understanding stress among lecturers in online teaching environments. This indicates a gap in linking technology acceptance factors with psychological outcomes such as stress.

2.3 Stressor Factors Impacting Educators in Online Teaching

Educators are exposed to various stressors that can negatively affect their performance and overall well-being. These stressors become more pronounced in online teaching environments, where additional challenges emerge alongside traditional teaching demands. The sudden transition to digital learning has introduced new pressures related to technology, resources, institutional support, and student engagement. Technological challenges are

among the most significant stressors in online teaching. Educators frequently encounter issues such as unstable internet connectivity, system failures, software limitations, and insufficient technical support (Joshi *et al.*, 2020). In addition, a lack of knowledge and competence in using digital tools can hinder effective teaching delivery (Kowalczyk, 2014). These challenges can disrupt instructional activities, reduce teaching efficiency, and increase frustration. Educators who are less familiar with technology may also experience higher levels of anxiety when adapting to online teaching platforms. Another important stressor is the lack of adequate facilities, including reliable internet access, appropriate devices, and necessary teaching equipment. Many educators receive limited institutional support in terms of infrastructure and resources, which forces them to rely on personal devices and constrained technological tools (Joshi *et al.*, 2020). This limitation not only affects the quality of teaching but also restricts opportunities for professional development, thereby widening the gap in digital competencies among lecturers.

Facilitating conditions refer to the availability of organisational support, infrastructure, and resources that enable the effective use of technology (Venkatesh *et al.*, 2012). Inadequate facilitating conditions can hinder lecturers' ability to conduct online teaching efficiently and may contribute to increased stress levels. While prior studies have examined facilitating conditions in the context of technology adoption, limited research has explored their direct impact on lecturers' stress in online teaching environments. Student behaviour is another critical factor influencing lecturers' stress. In online settings, lecturers often face challenges such as low student engagement, limited interaction, lack of discipline, and difficulty in monitoring student participation (Joshi *et al.*, 2020). These issues can reduce teaching effectiveness and increase frustration, particularly when students fail to meet academic expectations or demonstrate low motivation toward online learning. Although previous studies have examined educator stress, most have focused on general teaching environments or school-level education. There remains a lack of empirical research specifically investigating stressor factors among lecturers in higher education, particularly within online teaching contexts. Furthermore, limited studies have examined the relationships between specific stressors—namely technological difficulties, lack of facilities, facilitating conditions, and student behaviour—and lecturers' stress levels. Therefore, this study aims to address these gaps by identifying key stressor factors and examining their relationships with lecturers' stress in online teaching environments.

2.4 Hypotheses Development

Based on the literature, several stressor factors have been identified as influencing lecturers' stress levels in online teaching environments, including technological difficulties, lack of facilities, facilitating conditions, and student behaviour. These factors are hypothesised to have significant relationships with lecturers' level of stress. Technological difficulties, such as poor internet connectivity, system failures, and lack of digital competence, have been widely reported to disrupt teaching processes and increase frustration among educators. Similarly, inadequate facilities, including limited access to devices and insufficient technological infrastructure, can hinder effective teaching and contribute to stress. Facilitating conditions, which refer to the availability of institutional support and technical resources, are also expected to influence lecturers' ability to adapt to online teaching. Furthermore, student behaviour, including low engagement and indiscipline in virtual classrooms, may create additional challenges that elevate stress levels. Therefore, the following hypotheses are proposed:

H1: Technological difficulties have a significant relationship with lecturers' level of stress in online teaching.

H2: Lack of facilities has a significant relationship with lecturers' level of stress in online teaching.

H3: Facilitating conditions have a significant relationship with lecturers' level of stress in online teaching.

H4: Student behaviour has a significant relationship with lecturers' level of stress in online teaching.

3. Methodology

This study employed a quantitative research design using a survey method to examine stress-inducing factors among lecturers in online teaching contexts. Primary data were collected through an online questionnaire distributed to lecturers at Universiti Tun Hussein Onn Malaysia (UTHM) via email and WhatsApp. A simple random sampling technique was applied, with a target population of approximately 943 lecturers. The questionnaire consisted of several sections measuring demographic information and key variables, including technological difficulties, lack of facilities, facilitating conditions, student behaviour, and stress level. All items were measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Data were analysed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics such as frequency, mean, and standard deviation were used to summarise the data, while inferential analysis (e.g., regression analysis) was conducted to examine the relationships between stress-inducing factors and lecturers' stress levels.

4. Results and Discussions

This section presents the findings based on the data collected from the questionnaires distributed to lecturers at Universiti Tun Hussein Onn Malaysia (UTHM). The analysis focuses on demographic characteristics and key variables, including technological difficulties, lack of facilities, facilitating conditions, student behaviour, and stress levels in online teaching contexts. A total of 280 questionnaires were distributed to lecturers at UTHM based on the recommended sample size from Krejcie and Morgan's (1970) table for a population of 943 lecturers. Out of these, 117 usable responses were received, resulting in a response rate of 41.79%.

4.1 Descriptive analysis

Descriptive analysis was conducted to examine the level of stress-inducing factors among lecturers. The results indicate that technological difficulties (TD) recorded a moderate mean score ($M = 4.36$), suggesting that lecturers experienced some challenges in using online teaching tools. In contrast, lack of facilities (LF) showed a relatively low mean score ($M = 2.48$), indicating that most lecturers had adequate access to essential resources. Facilitating conditions (FC) demonstrated mixed responses, reflecting variability in institutional support and technical readiness. Student behaviour (SB) emerged as one of the most prominent stress-inducing factors, with a high mean score ($M = 4.91$), indicating that lecturers faced difficulties related to student engagement, participation, and learning effectiveness in online settings. Similarly, the overall level of stress (ST) among lecturers was moderately high ($M = 4.29$), suggesting that online teaching has contributed to increased physical and mental strain.

Table 1 *Descriptive Analysis*

Item	Description	Mean	SD
TD1	Difficulties using tools/platforms	4.51	1.31
TD2	Lack of ICT support/expertise	4.32	1.21
TD3	Difficulty creating engaging activities	4.41	1.39
TD4	Usability issues (error, compatibility)	4.32	1.10
TD5	Difficulty troubleshooting issues	4.24	1.23
Average		4.36	
LF1	Access to basic facilities	2.48	1.26
LF2	Access to online platforms	2.49	1.07
Average		2.48	
FC1	Knowledge of online tools	4.58	1.13
FC2	Skills to manage resources	3.19	1.02
FC3	Platform compatibility	2.88	0.90
FC4	Availability of resources	2.89	0.94
FC5	Lack of professional support	4.21	1.11
FC6	Clear institutional guidelines	4.58	0.97
FC7	Institutional support	4.58	0.95
Average		3.84	
SB1	Difficulty evaluating students	4.60	1.02
SB2	Concern about cheating	4.99	0.97
SB3	Difficulty verifying learning	4.96	0.95
SB4	Students left behind	4.71	1.00
SB5	Student concentration issues	5.12	0.83
SB6	Low participation stress	5.08	0.94
Average		4.91	
ST1	Physical/mental stress	4.31	1.00
ST2	Work-life balance issues	4.19	1.00
ST3	Burnout/exhaustion	4.27	1.09
ST4	Overall stress level	4.38	0.92
ST5	Stress compared to past	4.30	0.97
Average		4.29	

4.2 Correlation analysis

Spearman's rho correlation analysis was conducted to examine the relationships between stress-inducing factors and lecturers' stress levels. Table 2 shows the correlation analysis results.

Table 2 *Correlation Analysis*

Variable	Stress (r)	p-value
Technological Difficulties	0.393	<0.001
Lack of Facilities	0.305	<0.001
Facilitating Conditions	0.301	<0.001
Student Behaviour	0.391	<0.001

This study examined the relationship between stress-inducing factors and lecturers' level of stress in online teaching contexts. The findings indicate that all four independent variables technological difficulties, lack of facilities, facilitating conditions, and student behaviour are significantly related to lecturers' stress levels. The results show that technological difficulties have a significant relationship with stress ($r = 0.393$, $p < 0.001$), supporting H1. This suggests that challenges in using online teaching tools, troubleshooting technical issues, and integrating digital platforms contribute to increased stress among lecturers. Similarly, lack of facilities was found to have a significant relationship with stress ($r = 0.305$, $p < 0.001$), supporting H2. Although the mean score for this variable was relatively low, the findings indicate that inadequate access to resources still plays a role in influencing stress levels. Facilitating conditions also demonstrated a significant relationship with stress ($r = 0.301$, $p < 0.001$), supporting H3. This implies that insufficient institutional support, lack of training, and unclear guidelines can contribute to lecturers' stress in online teaching environments. Furthermore, student behaviour was found to have a significant relationship with stress ($r = 0.391$, $p < 0.001$), supporting H4. Issues such as low student participation, difficulty in monitoring learning, and concerns about academic integrity appear to be major contributors to lecturers' stress. Among all variables, technological difficulties and student behaviour showed the strongest relationships with stress, indicating that these are the most critical stressors in online teaching contexts. These findings are consistent with previous studies that highlight technological challenges and student engagement issues as key factors affecting educators' well-being in digital learning environments.

5. Conclusions

This study provides empirical evidence that multiple factors significantly contribute to lecturers' stress in online teaching contexts. The findings reveal that technological difficulties, lack of facilities, facilitating conditions, and student behaviour are all positively associated with stress levels among lecturers. Among these factors, technological difficulties and student behaviour emerged as the most influential stressors, highlighting the challenges lecturers face in adapting to digital teaching environments and managing student engagement effectively. These findings underscore the importance of institutional support in mitigating stress among lecturers. Universities should prioritise improving technological infrastructure, ensuring reliable access to digital tools, and providing continuous technical assistance. In addition, structured training programmes and clear institutional guidelines are essential to enhance lecturers' readiness and confidence in online teaching. Addressing student-related challenges is equally important, as issues such as low participation, lack of interaction, and difficulties in monitoring student progress significantly contribute to stress. From a practical perspective, higher education institutions should adopt a more holistic approach by integrating technological, organisational, and pedagogical support systems. Enhancing communication between lecturers and students, promoting interactive learning strategies, and implementing effective assessment methods can help reduce stress levels and improve teaching outcomes. Furthermore, policymakers and university management should recognise the psychological and workload-related pressures faced by lecturers and implement supportive measures to maintain their well-being. Overall, this study contributes to the growing body of literature on online teaching by identifying key stress-inducing factors and providing actionable insights for improving lecturers' experiences in digital learning environments. Future research is recommended to explore additional variables, such as individual coping mechanisms and organisational culture, as well as to employ longitudinal designs to better understand stress dynamics over time.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

The authors confirm contribution to the paper as follows: **study conception and design:** Nur Izzah Izzati Idris and Kamilah Ahmad; **data collection:** Nur Izzah Izzati Idris; **analysis and interpretation of results:** Nur Izzah Izzati Idris; **draft manuscript preparation:** Nur Izzah Izzati Idris and Kamilah Ahmad. All authors reviewed the results and approved the final version of the manuscript

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