Journal of Contemporary Educational Research, 2023, Volume 7, Issue 12
http://ojs.bbwpublisher.com/index.php/JCER
ISSN Online: 2208-8474
ISSN Print: 2208-8466

A Study on the Level of Technostress Among University Educators in Inner Mongolia, China

Yu-Ge Yao[1,2], Lai-Kuan Kong[1,3]*

[1]Faculty of Education and Liberal Studies, City University Malaysia, Petaling Jaya 46100, Malaysia
[2]Jining Normal University, Ulanqab 012000, Inner Mongolia Autonomous Region, China
[3]Universiti Teknologi MARA (UiTM) Pahang Branch, Raub Campus, Raub 27600, Malaysia

***Corresponding author:** Lai-Kuan Kong, konglaikuan@gmail.com

Abstract: With the rapid development of science and technology, higher education in Inner Mongolia is ushering in unprecedented changes. Digital and intelligent educational tools provide students with a rich learning experience but also create new challenges for educators. Through a questionnaire survey of 17 universities in Inner Mongolia, this study examined the stress faced by university educators in the application of technology. The results showed that educators generally experienced technostress, and the most significant stress experienced was techno-invasion. Hence, this study recommended several strategies to assist educators in adapting to technological change and ease the technostress.

Keywords: Technostress; University educators; China; Digital

Online publication: December 25, 2023

1. Introduction

With the rapid advancement of science and technology, higher education institutions in Inner Mongolia are undergoing unprecedented transformations. Digital and intelligent educational tools are assuming an increasingly pivotal role in pedagogy which facilitates a more immersive learning experience for students. Nevertheless, this paradigm shift also presents novel challenges for educators, particularly during the process of assimilating and integrating these emerging technologies.

Inner Mongolia is home to a multitude of colleges and universities, each with the noble mission of cultivating future builders and professionals. Gaining an in-depth understanding of the specific challenges faced by university educators in Inner Mongolia regarding technostress is crucial for propelling higher education across the region toward a more innovative and future-proof direction. However, there exists a series of issues in the current implementation of technology, including potential pressures on educators such as technological overload, invasion, insecurity, complexity, and uncertainty. These pressures not only impede the teaching effectiveness of educators but also constrain students' learning experience.

In order to gain a comprehensive understanding of these issues, this study aims to delve deeply into the actual situation of university educators in Inner Mongolia regarding the application of technology and

analyze the current level of technostress. By uncovering the essence of these problems, this study can provide a robust foundation for formulating more targeted and practical support measures, thereby assisting university educators in Inner Mongolia in overcoming technostress and promoting improvements in education quality and innovation. The objective of this study is to systematically reveal the extent of technostress experienced by university educators when applying technology in Inner Mongolia and provide empirical data as a scientific basis for their professional development. The significance of this research lies in stimulating enhancements of higher education quality, facilitating the transformation towards digital education, and offering policymakers a scientific and rational basis for decision-making. Through thorough analysis, it is hoped that this study will encourage universities in Inner Mongolia to progress towards a more innovative and adaptable educational system while achieving an overall enhancement in teaching quality and student experience.

2. Literature review

2.1. The role of technology in education

The field of education is currently undergoing a profound transformation due to the rapid advancements in technology. Advanced technology plays a pivotal role in facilitating teaching and learning, thereby presenting new prospects for educational practices. Digital and intelligent educational tools not only foster an interactive and personalized learning environment for students but also equip educators with abundant teaching resources and tools that enhance instructional efficacy [1]. However, such resources and tools might also impose stress on educators if they are not ICT-savvy enough. As such, understanding the university educators' technostress is crucial as it has been observed that colleges and universities in Inner Mongolia have established smart classrooms and multimedia classrooms, while also making progress in constructing teaching platforms and digital teaching resources.

2.2. Educator's technostress

Educators worldwide are confronted with challenges arising from the utilization of technology [2]. The rapidly evolving technological landscape necessitates educators to continuously enhance their skills in order to adapt to novel teaching tools and platforms, thereby intensifying the demands of their profession [3].

Previous studies have yielded significant findings in uncovering the technostress experienced by educators, encompassing their attitudes towards technology, capacity to adapt to technological change, and the impact of technology on teaching and learning outcomes [4]. These insights contribute to a more nuanced understanding of the challenges faced by educators in utilizing technology [5].

2.3. Research questions

According to a comprehensive literature review, numerous studies have been conducted on the technostress experienced by educators. However, limited attention has been given to investigating the technostress specifically among university educators in Inner Mongolia, China. Therefore, this study aims to address this research question: What is the extent of technostress among university educators in Inner Mongolia?

3. Methods

3.1. Study design

In this study, a quantitative research design method was employed to conduct a questionnaire survey among 17 universities in Inner Mongolia. Non-probability sampling was utilized as the sampling method, and the

technostress scale for educators proposed by Thiyagu was adopted as the measurement tool [6]. This structured Likert scale encompasses five dimensions of technostress: techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty [7]. The reliability and validity of the scale were ensured through its previous validation in relevant studies.

3.2. Data analysis

Initially, the survey received responses from 650 participants. To ensure data accuracy, a pruning method was employed to eliminate detached responses, resulting in a final dataset comprising of 533 valid and usable responses. The analysis was conducted using the SPSS29.0 statistical software tool, and descriptive statistical analysis was performed on the dataset consisting of 533 observations.

The sample size of 533 data points is presented in **Table 1**, along with the minimum, maximum, and average values for each of the five dimensions. Notably, the mean for techno-invasion exhibits the highest mean value (M = 3.7810), indicating a relatively elevated level within this dimension. Conversely, the mean for techno-insecurity demonstrates the lowest mean value (M = 3.1129), suggesting a comparatively lower level within this dimension.

Table 1. The level of technostress

	n	Minimum	Maximum	Mean
TOV	533	1.40	5.00	3.5617
TI	533	1.00	5.00	3.7810
TC	533	1.20	5.00	3.4769
TIS	533	1.00	5.00	3.1129
TU	533	1.00	5.00	3.6796

Abbreviations: TOV, techno-overload; TI, techno-invasion; TC, techno-complexity; TIS, techno-insecurity; TU, techno-uncertainty

4. Findings and discussion

The analysis of technostress levels among university educators in Inner Mongolia revealed that all respondents experience varying degrees of technostress. The respondents' experiences highlighted the multidimensional nature of this phenomenon, as evidenced by the presence of five dimensions of technostress. Among these dimensions, the highest level is technological invasion and the lowest level is technological insecurity. The findings indicated that university educators in Inner Mongolia are confronted with significant technostress, aligning with global research highlighting the pervasive issue of technostress in higher education. The finding also aligns with previous research by Ayyagari *et al.*, which emphasizes the incessant demand for technology and its pervasive integration into both professional and personal aspects of educators' lives [8].

5. Implications and recommendations

The advancement of technology makes the application of technology in teaching and learning unavoidable. Thus, educators' feeling of being invaded by technology is not a surprising phenomenon. As a result, universities' management could provide technical training programs to educators to increase their proficiency in technical skills and ensure their adaptability to the rapidly evolving technological landscape. Besides, universities could also establish clear policies to ensure that educators have a work-life balance, for instance,

educators are not required to instantly reply to messages or calls especially during holidays or after office hours unless there is an emergency. By implementing these strategies, universities can better support educators in adapting to technological change and alleviating technostress.

Disclosure statement

The authors declare no conflict of interest.

Author contributions

Y.Y.G. and K.L.K. conceived of the idea, developed the proforma, and drafted the manuscript. All authors read and approved the final manuscript.

References

[1] Dogan S, Dogan NA, Celik I, 2021, Teachers' Skills to Integrate Technology in Education: Two Path Models Explaining Instructional and Application Software Use. Education and Information Technologies, 2021(26): 1311–1332.

[2] Chen Y, 2019, Technostress in Online Learning. International Journal of Information Management, 2019(49): 424–438.

[3] Jena RK, 2015, Technostress in ICT Enabled Collaborative Learning Environment: An Empirical Study Among Indian Academician. Computers in Human Behavior, 2015(51): 1116–1123.

[4] Boyer-Davis S, 2020, Technostress in Higher Education: An Examination of Faculty Perceptions Before and During the COVID-19 Pandemic. Journal of Business and Accounting, 13(1): 42–58.

[5] Brown J, Green T, 2021, Technology Stressors for University Faculty: A Mixed-Methods Study. Computers & Education, 2021(167): 104163.

[6] Kock N, Hadaya P, 2018, Minimum Sample Size Estimation in PLS-SEM: The Inverse Square Root and Gamma-Exponential Methods. Information Systems Journal, 28(1): 227–261.

[7] Asad MM, Erum D, Churi P, et al., 2023, Effect of Technostress on Psychological Well-Being of Post-Graduate Students: A Perspective and Correlational Study of Higher Education Management. International Journal of Information Management Data Insights, 3(1): 100149.

[8] Ayyagari R, Grover V, Purvis R, 2011, Technostress: Technological Antecedents and Implications. MIS Quarterly, 35(4): 831–858.