A PROPOSED MODEL OF INHIBITORS AND CONSEQUENCES OF TECHNOSTRESS AMONG UNIVERSITY ACADEMICIANS: KNOWLEDGE SHARING AS A MEDIATOR

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ABSTRACT – Academician academicians nowadays are facing a new scenario, that is, expecting them to acquire and utilise technology intensively in teaching and learning activities. Moreover, they are also required to be innovative at work. The spread of COVID-19 escalated these expectations, where the traditional face-to-face mode of teaching and learning was riskier as compared to using online technology for the above-mentioned activities. As a result, they might experience technostress, especially those who are not ICT savvy. However, to date, there is little study on the inhibitor of technostress and its consequences on academicians' innovative work behaviour. Thus, this study aims to propose a framework to examine the Inhibitors and consequences of technostress among university academicians. This study will also propose knowledge sharing as the mediator between the relationship of technostress and innovative work behaviour.

INTRODUCTION

Technology can boost productivity, but it can also harm human well-being, especially from a human psychological and physical perspective. Since technology is difficult to regulate and can produce changes at an uncontrollable rate, the usage of new technology could make the scenario worse. For example, during the spread of Covid-19, many sectors relied on online technology to deliver their services. But now the pandemic is going back to normal. So, in the education sector, they changed their traditional mode of teaching and learning from face-to-face teaching to online courses using various channels such as Micro-credentials (MC), Microsoft Teams, massive open online courses (MOOC), Google meetings, Voov meetings and so on. Unfortunately, this phenomenon could post-stress to academicians, especially those who are not ICT savvy. When academicians employ educational technology without understanding its didactic possibilities, without receiving enough training in educational technology, or when they just refuse to use it, the professional and working environment might be drained. As a result, faculty members who are under increased strain due to educational technology integration are more likely to exhibit stress and anxiety disorders, such as technostress. Technostress has increased in the workplace as ICT has grown (Robert & Rothman, 2016). Computer aversion, cyber stress, personal information security, internet stress, computer anxiety, and Technophobia are all terms for technostress. Fuglseth and Sorebo (2014) referred to technostress as mental stress and unfavourable psychophysical impacts that employees suffer due to the use of ICT at work. As to survive in a competitive academic field, academicians must integrate many technological tools and devices in their teaching and learning activities. On top of that, nowadays, university academicians are also expected to be innovative in all aspects of their work. For instance, they are expected to be creative while using online technology in teaching activities and innovative in product creation, conducting research, providing consultations, and so on. Thus, it is expected that all academicians should be competent in using technology and be innovative; if they don't know or can't use ICT tools, it stresses them out (Barone & Hagner, 2011). Therefore, looking at the current phenomenon in which academicians need to extensively apply technology in their work as well as be innovative in work behaviour, this study intends to propose a techno-stress model in the educational sector, which comprises its inhibitors (organisational support, computer literacy), consequences (i.e., innovative work behaviour) and a mediator of knowledge sharing as to gauge insight and in-depth information of the occurrence of technostress.

PROBLEM STATEMENT

Technostress has increased in the workplace as ICT has grown, leading to increased psychological stress and job satisfaction. To survive in a competitive academic field, teachers must integrate many technological tools and devices. Research shows that using instructional resources like video and animations, web connections, webinars, and virtual laboratories can foster student creativity in online and social media-heavy courses. However, some teachers may not be competent to use technical tools for teaching and learning. To study the technostress of academicians in terms of its influencing factors and outcomes, it is important to study the five dimensions of technostress: techno-overload, technoinvasion, techno-complexity, techno-insecurity, and techno-uncertainty.

This study focuses on the impact of technostress producers on innovation, not employee output metrics like productivity. It will define innovative behaviour based on Kanter (1988) and Scott and Bruce (1994). School leaders must emphasise teachers' innovation to move away from the factory model. Knowledge sharing is important for innovative behaviour because it helps college teachers relieve technical pressure, improve productivity and innovation, and improve work quality, decision-making skills, and problem-solving ability.

Robert Eisenberger's concept of organisational support includes perceived, affective, and instrumental support. Few studies have examined how the rise of educational technology has affected university academicians' jobs. Amna, Gaye, and Carolanne (2020) found that technostress impacts productivity, job satisfaction, end-user satisfaction, employee engagement, user resistance, intention to use ICT, organisational commitment, negative affectivity, technology enable performance and task performance. Monalisa (2020) wanted to know if ICT-related workplace phenomena, such as technostress inhibitors and creators, affected knowledge-sharing disengagement. This study examines technostress, its antecedents, and its relationship with innovation behaviour among Chinese university academicians. Current research will also examine the mediation effect of knowledge sharing in the relationship between technostress and innovation behaviour.

LITERATURE REVIEW

An Overview of Literature Review

This study proposed a model of inhibitors and consequences of technostress among university academicians by Knowledge Sharing as a Mediator. This chapter evaluates the transaction theory of stress and some of the key points like technostress, inhibitors of technostress, innovative work behaviour, the relationship of technostress, inhibitors of technostress, innovative work behaviour and the literature gap.

Transaction Theory of Stress

Transaction theory of stress explains stress issues as the combination of stimulus conditions and individuals' reactions to them (Monalisa, 2020). Based on this theory, the appearance of stress has gone through stress sources, affectionate factors to strain and outcomes, and it seems to be a linear process. Hence, this study proposes that organisational support and individual computer literacy will negatively influence technostress, and technostress will negatively influence individual innovative behaviour.

Technostress

In 1984, Brod created the term "technostress" and defined it as "a modern disease of adaptation caused by a pathological incapacity to adapt to the new computer world technology." Clark and Kalin (1996) suggested that technostress is a kind of negative effect on physiology, behaviour, and psychology, which is caused by direct or indirect technology.

Research showed that using instructional resources like video and animations, web connections, webinars, and virtual laboratories can foster student creativity in online and social media-heavy courses (Asghar & Shater, 2020). Instructors don't always do this. As the need to integrate ICT and innovation into academicians' daily activities arises, it poses a new issue for those who are still reluctant to embrace it, resulting in increased psychological stress. Studies showed that stress affects job satisfaction and role clarity (Tarafdar, 2008).

Tarafdar and Gordon (2017) defined techno stress from five dimensions, including (i) techno overload, which means a demanding ICT-caused workload; (ii) techno-invasion, which work invades personal life and causes conflict at home. Since they can't stop the invasion, this stressor reduces employees' autonomy. It also reflects employers' growing demand for off-hours connectivity. The technology creates urgency and allows for immediate responses. Thirdly, techno-complexity, which refers to a lack of confidence in using technology. As a result, employees feel anxious or hesitant about using the required technology. Fourthly, techno-insecurity refers to employees worrying that their technological skills aren't up to par and that they may be replaced, and lastly, techno-uncertainty refers to employees feeling overwhelmed by all the changes in technology (Gennaro et al., 2020).

Technostress has positive and negative effects on individuals and businesses, according to Qi (2019). Technology advancements have impacted employees' lives, families, jobs, and society as a whole. Nevertheless, technostress may exacerbate the conflict between role overload, resources and work needs (health, skills, time)(Jena, 2015). It could also reduce productivity, job satisfaction, organisational commitment, creativity, and innovation (Brillhart, 2014; Bondanini et al., (2020). Technostress can be good or bad for a person's career (Shainesh, 2015), but how does it affect academic innovation? Kilani and Kobziev (2016) found that technostress can exhaust academics (Kilani, 2016). While this study field is ongoing, current research focuses on the impact of technostress producers on innovation, not employee output metrics like productivity (e.g., a creativity-based employee output parameter).

Inhibitors of Technostress

Organizational Support

Robert Eisenberger proposed the concept of organisational support in 1986. Social psychologists believe that employee organisation reflects care and support (Elkjaer & Simpson, 2011). Later studies defined organisational support as how much employees felt valued and cared for. Based on Robert Eisenberger's concept of organisational support, researchers proposed perceived, affective, and instrumental support. Organisational affective support includes intimate and respectful support from leaders and colleagues. Organisational instrumental support includes personnel, resources, training, equipment, etc. (Shainesh, 2015).

Cooper and Cartwright (1994) noticed that organisational climate and structure are potential sources of strain that are rooted in the organisation's culture and management style. From the aspect of the P-E fit model, these stressors could be argued along the dimensions of "abilities-demands" and "values-supplies". Nonetheless, organisational climate studies usually emphasise communication processes within the organisation. For instance, Driscoll & Cooper (1996) indicated that when organisations' communications highlighted employees in a negative way or generated feelings of mistrust, they would feel stress. Hierarchical and bureaucratic structures, on the other hand, can cause stress as they provide employees little opportunity for participation.

Computer Literacy

Computer literacy is the knowledge and ability to effectively use computers and information technologies (Safahieh & Asemi, 2010). The term comprises a person's knowledge of computer terminology, operational processes, and concepts. Literacy in computing encompasses a broad spectrum, ranging from the ability to turn on and shut down a computer and utilise simple apps such as word processors and email clients to an in-depth understanding of programming languages and software development frameworks. As computers and information technology advance, so does the notion of computer literacy. As information technology enters every aspect of our lives, the ability to utilise computers proficiently is becoming an increasingly essential work skill.

Different scholars and different institutions have asked, "What kind of people are computer literate?" This problem has been expressed in much the same way. For example, the National Forum on Information Literacy in the United States pointed out in its 1990 annual report: "An information literate person who understands his or her own information needs has the ability to identify potential information sources, develop successful retrieval strategies, obtain information from information sources, including computers and others, and has the ability to evaluate information...". Kretschmann (2015) found that the higher the level of computer maintenance of physical education teachers, the more possible they will incorporate technology into physical education. Tu, Wang, and Shu (2005) pointed

out that the higher the level of computer skills of individuals, the less technostress they experienced, and vice versa. Çoklar and Sahin (2011) suggested that elevated levels of computer and Internet literacy among users can inhibit high technological stress.

Innovative Work Behaviour

West (1989) and Farr (1990) determined innovative work behaviour as the introduction of new ideas, processes, or procedures by employees to their work, team, or organisation. In 2013, the pursuit of new practices and products and the generation and implementation of new concepts can be defined as innovative behaviour (Jeffrey et al., 2013). Yuan & Woodman (2010) specified it as "an employee's intentional introduction or application of new ideas, products, processes, and procedures. This study defines innovative behaviour based on Scott and Bruce (1994) and Kanter (1988). Innovative behaviour can also be defined as finding novel products or practices, generating creative ideas, and executing creative ideas.

As universities or enterprises increasingly introduce information technology into their business processes, employees need to continuously adapt to new systems, technologies, and workflow. Faster information flow forces employees to speed up the pace of work, requiring constant contact with work, which in turn causes negative stress responses. When technology invades employees' lives, they may not have enough time for innovative thinking and innovation, or they may need continuous innovation in order to get rid of technological pressure. Scholars are studying teachers' innovative behaviour to better understand what motivates teachers to create and innovate in schools. They found that there are two main key factors that affect the behaviour of innovative teachers: (i) the individual internal (attitudes, beliefs, attitudes, and self-efficacy), and (ii) the environmental support (i.e., facilities, organisational culture, resources, managers, and colleagues) (Thurlings et al., 2015).

KNOWLEDGE SHARING (KS)

Previous research provided KS schemes and practices in HEIs from the perspective of the individual or the institution (Beaudry & Pinsonneault, 2005). This study focuses on the individual level and seeks to determine whether knowledge sharing acts as a mediator in the relationship between technostress and innovation behaviour among university academics.

Some teachers may be reluctant to create or adopt instructional innovations that foster knowledge economy skills due to change risks (Dryden, 2018). Knowledge sharing is important for innovative behaviour because it helps employees relieve technical pressure, improve productivity and innovation, and enhance work quality, decision-making skills, and ability to solve problems (Asrar-ul-Haq & Anwar, 2016). Transferring knowledge among organisations, departments, teams, groups, and individuals is called knowledge sharing. As such, knowledge sharing will be adopted to examine whether there is an intermediary relationship between technostress and academicians' innovative work behaviour, as this model of study is under-researched.

The Relationship of Technostress, Knowledge Sharing, and Innovative Work Behaviour

In the educational setting, the incorporation of advancements in ICTs has allowed for a quantum jump in the pedagogies used in higher education since the first online courses were given in the 1980s. Cloud storage, Internet, smart terminals, video conferences, 5G applications, enhanced reality, network security, and 3D printing are just some available technical tools(Davis, 2020). The increasing popularity of information and communication technology has increased the pressure that users face, but it also provides major practical and intangible benefits for educational institutions, such as increased student access, flexibility, convenience, and improved quality of online or otherwise. A decline in productivity, job satisfaction, organisational dedication, innovation, and creativity have all been related to technostress.

When technology invades teachers' lives, teachers may not have enough time for innovative thinking and innovation or need continuous innovation to get rid of technological pressure. Knowledge sharing is a fundamental practice that leads to better organisational productivity, performance, operational cost reductions, better competitiveness, and higher levels of innovation.

At present, knowledge-sharing behaviour is very popular, and it has a positive impact on the tendency and ability of information-sharing to promote and implement new ideas. According to Wang

and Hu (2018), knowledge sharing serves as a link between collaborative creativity and organisational performance. In addition, it acts as a mediator between individual creativity and subjective happiness (Wooldridge, 2009). There is also evidence that clusters of businesses that share information can foster innovation (Connell et al., 2014). According to Kamasak and Bulutlar (2010), knowledge sharing within the group influences exploitative innovation.

Literature gap

Numerous studies have been conducted about the technostress associated with the workstation, educators, and students (Bondanini et al., 2020), (Davis, 2020), (Jena, 2015), (Tarafdar, 2008). However, the association between technostress and academicians' innovative work behaviour, as well as the mediating result of knowledge sharing in the aforementioned relationship, is under study. Therefore, we propose to fill that void by suggesting the below model.
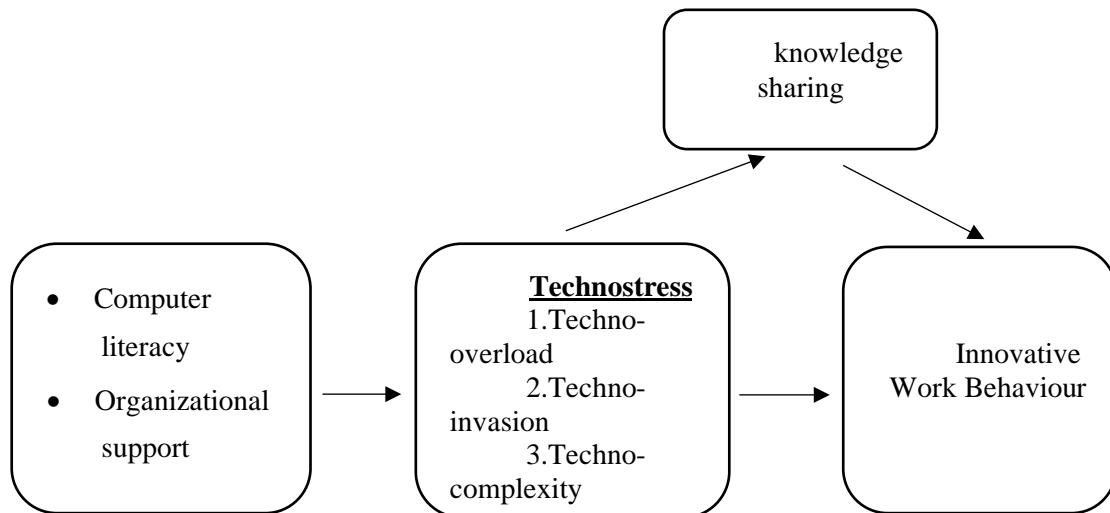
METHODOLOGY

In a broader sense, research can be described as the systematic collection and analysis of data and information in order to enhance understanding in any area. Systematic procedures are used in research to find answers to intellectual and practical concerns. A study or experiment intended to discover and interpret facts, revise existing ideas or laws in light of new facts, or put such new or revised theories or laws into practice are all examples of research, according to Webster's Collegiate Dictionary. The movement from the known to the unknown is seen by some as a movement in and of itself. You are actually embarking on a journey of discovery.

Research Design

There is a qualitative approach. The researcher will use deductive reasoning for this study. Using the explanatory design, researchers can use qualitative data to explain significant (or no significant) results, outliers, or surprise outcomes.

Population and Sampling

In China's Inner Mongolia Autonomous Region, there are 54 universities, 17 of which are general undergraduate colleges and 37 of which are higher vocational colleges. In this study, the population refers to the 16,995 academicians of 17 ordinary undergraduate universities in the Inner Mongolia Autonomous Region, China. The university has high requirements and support for teachers due to the large number of majors and the high level of its students.

This study employed probabilistic random sampling; a technique likely to reveal the phenomenon of technostress. According to Mathieson (2014), probabilistic random sampling methods provide an equal chance of selection for all members of a population, resulting in a representative sample. Probability sampling was (a) arbitrary, (b) fixed and known, (c) conclusive, (d) impartial, (e) objective, (f) statistical, and (g) evaluated (Catania et al., 2015).

G*Power was the ideal statistical design for social and behavioural applications, and a priori sample size analysis was sufficient for correlational and regression studies (Nieuwenstein et al., 2015). Sufficient sample size also helped ensure accuracy and bias control (Schoemann et al., 2017). A sufficient sample size limited the likelihood of Type I and Type II errors to the desired levels of effect size, power, and certainty (Greenland et al., 2016).

Data Collection

Primary data, which are considered the key data, confirms the opinion on the research issue with the latest updates from a sample of respondents at will. Preliminary data are collected from the questionnaires in the research study.

Measurement/Trustworthiness

The quality of a person or business that gives others trust in its credentials, talents, and dependability to do certain duties and fulfil given responsibilities.

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