Embracing Technostress to Overcome Online Teaching Challenges

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The Covid-19 pandemic forced institutions of higher education to shift from in-person to remote learning in a matter of weeks. Over 23 million students and their instructors altered processes, roles, practices, and requirements to meet the need for continuing education. Dependence on information and communication technologies (ICT), vital to supporting online teaching and learning, increased as did the stress associated with this sudden change. For university teachers, pushed to invest inordinate time and energy adapting with little instructional support (Bastrikin, 2020), the stress has been palpable (Rapanta et al., 2020). Moreover, these challenges underscore the college and university presidents' concerns that failure to adapt to technology in healthy ways (i.e., technostress) will result in burnout, depression, absenteeism, poor decision making, and other mental health issues for faculty and students alike. By examining technostress as a process of adaptation online instructors will gain the knowledge, skills, and abilities needed to successfully overcome online teaching challenges.

Understanding Technostress as an Adaptative Process

Technostress is best described as a "disease of adaptation" caused by the inability to cope with technological change in a "healthy manner" (Brod, 1984). Others (Weil and Rosen, 1997; Shu et al., 2011) later expand this definition to include the negative impact on users' attitudes, thoughts, and behaviors both directly and indirectly experienced due to technological innovation. Much of the research on technology-induced stress remains relatively scant within the education realm (e.g., Joo et al. 2016; Syvänen et al. 2016). Even fewer investigate technostress experienced by faculty expected to keep pace with the ever-changing ICTs supporting remote learning (Ortagus et al. 2018). Online teachers are under mounting pressure to work better, faster, and longer (Al-Fudail and Mellar 2008; Jena 2015). Left unchecked, these expectations feed performance paranoia, job insecurity, apathy, and attrition (Li and Wang 2020). While these and other challenges are readily apparent, embracing technostress as a catalyst for online teaching (OT) success may not be.

Figure A introduces a Model of Technostress (MoT), derived from a model of occupational stress (Kreitner & Kinicki, 2013). This model identifies three stages to the technostress process: integration, adaptation, and consequence. It illustrates how online instructors evaluate technology-enabled situations and events, come to experience stress, develop coping strategies, and adapt in hopes of achieving positive outcomes. During integration, new ICTs are introduced to the online classroom. As part of the adaptative process, instructors then determine if this change is consequential and what, if anything, can be done. Those changes deemed consequential are evaluated as either positive or negative. Positive stress, eustress, leads to speedy action and positive outcomes. While negative evaluations are considered problematic and result in technostress. Consequences are ultimately dependent upon how instructors cope with their technostress experience.

Figure A: Model of Technostress (MOT)
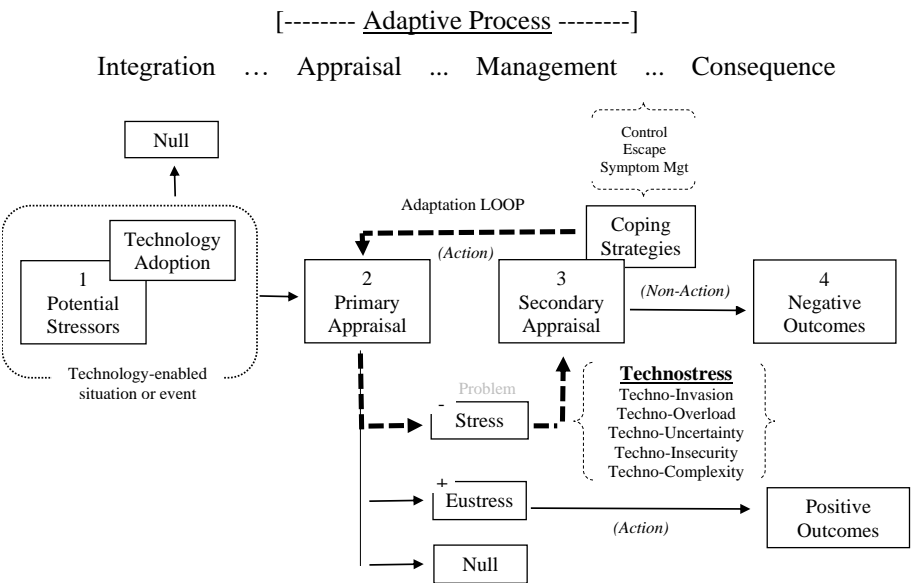
Online teachers experience technostress due to five possible conditions: techno-overload, -invasion, -complexity, -insecurity, and -uncertainty (Table1). Either they adapt, act in attempts to reduce stress, or to do nothing and experience negative outcomes. Those who act enlist

coping strategies to confront, avoid, or simply reduce the symptoms attributed to stress. In any advent, these actions alter their experience and result in a new situation which is then reassessed to determine if stress persists. Consequences, positive or negative, result when no further action is or can be determined. In the case of positive outcomes, conditions associated with technostress are resolved. In the case of negative outcomes (e.g., job dissatisfaction, burnout, concentration problems, and workplace violence), alternative responses are exhausted.

Table1: Technostress Conditions

Conditions	Perceptions
-Overload	Experience the need to work more and faster.
-Invasion	Remain increasingly connected regardless of time or place.
-Complexity	Dedicate increasing time and effort to understand ICTs essential to work.
- Insecurity	Fear failure and experience increasing sense of inadequacy and doubt.
- Uncertainty	Feel outdated and pressured to learn and re-learn at a rapid pace.

Adaptation best describes the series of actions online teachers take when attempting to overcome the challenges or problems associated with technostress. This process is depicted (Figure A) as a loop between Primary Appraisal, Secondary Appraisal, and Coping Strategies. Once technostress is experienced, online teachers formulate coping strategies and act to alleviate the problem. In doing so, they appraise each situation and outline actions based upon their individual differences. For example, one instructor might experience eustress while another may not. In either case, each will develop their own unique approach and act accordingly. Those who perceive stress and act will enlist coping strategies designed to reduce or alleviate technostress. After which they will reevaluate the situation to determine if additional action is needed. This cycle (i.e., Adaptation LOOP) will continue until no further action is taken or positive outcomes result.

Instructors who do not, cannot, or will not act experience negative consequences.

Technostress and the University Teacher

Research identifies three inhibitors thought to reduce the negative impacts of technostress for university teachers: literacy facilitation, technical support provision, and involvement facilitation (Fuglseth and Soreba 2014; Ragu-Nathan et al. 2008; Tarafdar et al. 2011). Li and Wang (2020) further investigate the relationship between these inhibitors, technostress conditions, and the impact on university teachers' performance. Technical support (i.e., the provision of additional resources to assist with problems and challenges) had the greatest potential for curbing feelings related to overload, confusion, and job insecurity. Involvement facilitation (i.e., the inclusion of teachers during the integration stage), was also found to reduce these technostress conditions. Finally, literacy facilitation (i.e., training programs which increase university teachers' skills) was found to have varying impact. Older or senior university teachers found developmental programs, knowledge sharing, and teamwork to be stressful, while younger teachers did not. Combined, these findings suggest that online teachers be included at the initial stages of technology adoption, offered supports to facilitate the development of coping behaviors, and provided ICT programming which aligns with generational differences.

Although much can be gained from understanding technostress inhibitors within the traditional classroom, OT is unique and requires unique knowledge, skills, and abilities (Blackman, Pedersen, March, Reyes-Fournier, & Cumella, 2019). Online teachers are uncommonly challenged by the pace at which technology is changing (Li and Wang 2020). According to International Data Corporation, a premier global provider of market intelligence, the digital universe in which these courses reside will double in size every two years (Lynkova 2019). To remain competent in this ever-expanding world, online teachers must continue to up their game, staying abreast of the latest tools, techniques, and practices which shape the universe of online education (Rapanta et al., 2020). Online teachers must be to be agile, developing coping strategies to address mounting pressures. They must be accessible, willing and able to respond to stakeholder needs with a degree of immediacy dictated by the situation. They must demonstrate resiliency, exhibiting the fortitude to try, fail, and try again in

hopes of managing ever-increasing demands. What worked yesterday will most likely not work tomorrow. Online teachers must be prepared for this; embrace this as one of life's challenges.

The demand for increasing ICT will likely continue to grow. Challenges associated with how online university teachers learn, assume roles and role stress, practice, and meet work demands will prove even more stressful (Jena 2015; Syvanen et al. 2016)." These stressors are further compounded when centralized decision making within region campus (RC) systems distance teachers from ICT evaluation, integration, training, and feedback processes. Decentralization negatively impacts RC teachers' abilities to embrace technological change and increases perceptions of techno-overload, -complexity and -security (Li and Wang 2020), often leaving teachers working longer hours, dedicating inordinate time and effort struggling with ICT, and fearing failure due to feelings of adequacy. Positive outcomes, however, can and do result for those able to manage the challenge of online teaching regardless of location.

A closer look at coping strategies helps pinpoint the role of action to overcoming OT challenges. Coping strategies (i.e., control, escape, and symptom management) enable action, however, vary in influence. Symptom management strategies, while effective in the short term, do little to address the challenges but instead focus on managing the "fallout" individuals' inabilities to deal with constantly evolving ICTs (Shu et al., 2011). They should be thought of as temporary at best. Escape strategies avoid the problem altogether and potentially increase long-term stress as problems remain unaddressed. Control strategies, actions which directly anticipate and solve problems, have the greatest potential to overcome OT challenges and will thus be the focus of this paper moving forward.

Hardiness to Overcome Online Teaching Challenges

Online teachers who adapt to classroom ICTs using control strategies take the best route toward overcoming challenges associated with failure to adapt. To avoid negative outcomes, they must directly address challenges, engaging thought and action to resolve technostress. Social support, Type A behavior, and hardiness have been found to moderate how individuals perceive, respond to, and experience stress and its outcomes (Lazarus and Folkman, 1984). These dispositions not only help identify those most likely to experience technostress but suggest possible solutions to challenges as well. Social support, derived from instrumental

relationships, aligns with Li and Wang's (2020) technical support provision and literacy facilitation suggesting that help from others eases techno-overload, -complexity, and -insecurity. Type A behavior, the chronic struggle to work more, describes the fervor with which many online teachers approach ICT use. This behavior, although positively associated with work performance, can and often does result in feelings of overload. Finally, hardiness — the ability to behaviorally transform negative stressors to positive outcomes — is most aligned with the adaptive process as it relies on direct action to overcome OT challenges.

Kobasa (1979) identifies three features of hardiness associated with overcoming negative stressors: "the ability to perceive change as a challenge, to maintain a sense of purpose and deep commitment to the people and activities in which they are involved, and to perceive a sense of personal control in handling life's events and activities (McCalister et al., 2006, p. 184)." Online teachers who embrace technostress maintain commitment to their online students and activities and aspire to control technology-enabled situations and events through action. They commit and stay involved regardless of challenge. They put students first in word and deed. Finally, they positively influence outcomes through action and welcome the opportunity to learn from problems. It is challenge, commitment, and control that provides the courage and motivation online instructors need to overcome the challenges associated with OT.

Although hardiness as a personality characteristic is difficult to change, it is possible to alter responses to challenge through increased awareness and emphasis on the development of alternative responses (Maddi et al. 1998, Maddi et al. 2002). Being aware that stress exists is the first step. The second involves expanding options for action. Encouraging control responses like situational reconstruction and imagination procedures to broaden perspectives and deepen exploration of problems fosters decisive plans of action (Maddi et al. 2002). These and other hardiness boosters alter dispositions and forge innovative responses to stress and technostress (Maddi et al. 1998). By improving hardiness, teachers reduce work stress (Steinhardt et al. 2003, Manning et al. 1988, Sharpley et al. 1995) and increase job satisfaction (Steinhardt et al. 2003, Berwick 1992, Rush et al. 1995), which in turn positively influences teaching outcomes. By embracing the process of adaptation, engendered by technostress, online teachers accept change and grow to overcome

challenges. The following section shares how online teachers can enhance hardiness by improving their sense of challenge, commitment, and control.

Sense of Challenge

Accepting challenges as the norm can bolster online instructors' abilities to adapt. As discussed earlier, ICT change is a challenging yet fundamental component to online teaching. Embracing it requires that teachers observe it in a neutral and objective way. Accepting challenge means viewing problems as data, collecting facts and information needed to respond and adapt in ways appropriate for the situation. Online teachers must discover alternative ways to respond to these challenges. This includes the creative exploration of issues and discovery of new ideas and approaches to success. Technostress can be reduced by developing creative solutions, alternatives, new ideas, experiments, and repeated effort.

Sense of Commitment

Awareness of student needs and how to meet them is paramount to overcoming online teaching challenges. Actions associated with this effort involve prompting even incentivizing students to communicate their experiences. In addition, instructors must discover alternative approaches to achieving learning objectives within remote environments. Searching existing literature to discover successful approaches for varying students and learning environments is a good start. There are a number of journals which lend themselves to alternative pedagogies and learning interventions. As well, many institutions have online teaching and learning experts to assist. Commitment means finding ways to meet students' needs. Dedicating time to design and certify online coursework, effectively implement and grade assignments, maintain student engagement, incorporate alternative and iterative mastery assessments, and remain flexible represent concrete actions for reducing technostress.

Sense of Control

The ability to control outcomes is critical to success. Accomplishing this first requires determining those aspects of the problem that can be controlled. This "punch-list" is affirming and offers clear targets for action. With this knowledge in hand, instructors can plan direct action and call upon instrumental relationships for effecting change of aspects outside their reach. These relationships can then be used to increase awareness of

upcoming technology changes, facilitate discussions with decision makers, gain access to beta testing, garner support from information brokers and change advocates, and to enhance the availability technostress inhibitors. Alternative responses to the perceived lack of control and technostress reduction include proactive information gathering, professional development, use of instrumental relationships, increased flexibility and openness, self-efficacy, psychological resiliency, and optimism.

Conclusion

Online instructors struggle to cope with technology-induced stress in a healthy manner. These challenges are particularly troublesome when there is limited involvement facilitation and time to adapt. The ability to transform technostress into positive outcomes both describes the desired consequence and the process by which it is achieved. The Model of Technostress illuminates how instructors come to experience technostress and the stages and cycles that follow to overcome it. Embracing this process with hardiness empowers online instructors to view technology-induced stress as a challenge to be overcome, gain control over stressful situations and events, commit to student success, and act to overcome online teaching challenges and achieving successful outcomes.

Enhancing online instructor hardiness is critical to adapting within an ever-changing technological landscape. The MoT and concept of hardiness are used to explore ways to strengthen instructors' abilities to overcome OT challenges. Suggestions for increasing awareness and developing alternative behaviors by improving instructors' sense of challenge, commitment, and control are provide varying approaches to achieve overcome challenges. Guidelines for alleviating technostress are also offered.

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