Booster or Burden: The Technostress on English Teachers in China

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ABSTRACT

This study discusses the English teachers' technostress in China. The traditional Chinese teaching belief, the ill-fitting design of educational techonology, and the lack of administrative support are the three main reasons which lead to English teachers' technostress. In the widespread of information technology in education, English teachers are advised to face the challenges and update their teaching beliefs, play an active role in the design of educational techonology, and make full use of the external supports. The effective integration of technology and education would faciliate teaching in classroom and benefit students in the end.

Keywords: *technostress, English teaching, educational technology, teacher stress*

1. INTRODUCTION

The study of teacher stress can be traced back as early as 1970s[1], and the stressors in traditional classrooms were studied, such as classroom discipline, workload, and teaching unmotivated students[2]. With the revolutionary changes the technology has brought to our life, the education in school has felt the technological impact as well. The classroom environment, teaching methods, and even ways to give the assignment have undergone changes. Teachers may encounter the stress induced by technology, termed as technostress, while they try to fit in the new modes of teaching. The psychological strain of unfamiliarity or incompetence with the technology may lead to teachers' burnout and result in turnover, the impact of which is reported to be associated with some serious educational problems[3]. The analysis of its causes and possible solutions may play a significant role in school education.

2. LITERATURE REVIEW

2.1. Researches on Teacher Stress in China

With the highest level of job stress[4] on shoulders, teacher stress has been studied in an early time and in a variety of topics in developed countries[2][5][6], yet the stress problem does not gain much attention among researchers in China[7]. A search on CNKI, with "teacher" included in the title, "anxiety/stress (*jiaolv* in Chinese)"

in the subject word, and sources restricted in CSSCI and Beida Core Journals, presents only 126 relevant papers spanning from 1994 to 2021. Fig. 1 shows that the number of journal papers on teacher stress increases slowly and peaks during the 2006-2009 period, and it goes down continuously until the end point of our search results. Besides the papers written in Chinese language, there are some papers published in international English journals. The subjects in these studies mainly cover both primary / secondary school teachers and university teachers with different focuses.

Studies on secondary school teachers tend to discuss teacher stress in an all-round manner. P. Wang et al.[8] carried out a survey on the work stress of high school teachers, and identified eight stress factors, i.e. leadership and management, workload, examination for entering a higher school, students, interpersonal relations, self and body-mind, society, occupational development and promotion. Similarly, S. Liu et al.[7] noticed that heavy workload, unusual expectations from parents, and school promotion policies constitute the major sources for teacher stress in their research.
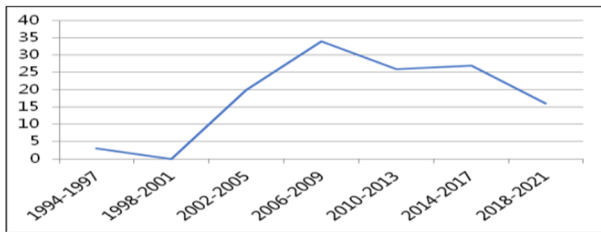
Figure 1. Number of papers about teacher stress on CNKI

Many of the researches on teacher stress are oriented towards secondary school teachers, probably because Chinese secondary school teachers are expected to "deal with a wide range of tasks"[8], which they may not have sufficient skills to handle.

X. Meng et al.[9] believed that the uncertainty and ambiguity of educational reform would lead to teacher stress, teachers being a general term without specific identity in the research. One of the solutions to the stress they figured out was to renew the teaching facilities and employ some technical means to relieve teachers of task burdens. X. Wang et al.[10] also studied the teacher stress in educational reform, focusing on the university EAP teachers. Studies on university teacher stress are centered around more specific concerns, such as time anxiety[11], role anxiety[12], and existential anxiety[13].

Teacher stress has become an "indisputable topic"[13] in modern times. Along with the stresses inherent in the teacher profession in traditional classrooms, technology-related stress arises as more technology-assisted learning and teaching facilities come into use in school education. China is developing fast in the past decades, and technology has transformed both daily life and educational modes on campus as well. The impact of technology in education has brought about not only convenience and benefits for students, but also huge impacts on teachers.

2.2. Researches on Technostress of Teachers in China

In recent years, technostress on teachers comes into researchers' view gradually. Compared with other researchers, C. Liu et al.[14] noticed the technostress of teachers at a relatively early time. They used the term "informatization anxiety" to describe the teachers' pressure related to information technology. According to the results of questionnaire for primary and secondary school teachers in eight cities, they found that all the teachers reported informatization anxiety, while the degree of anxiety varies with the proficiency of information technology.

J. Zhao [15] discussed the relationship between the technological advancements and the teachers' workload from the view of Hartmut Rosa's Critical Theory of Social Acceleration, and argued that the use of information technology in schools would increase teachers' workload in the long run.

The penetration of technology into school education may be gradual and unobtrusive. Teachers seem to have enough time to learn and adapt to the technology-induced changes. Yet the outbreak of the pandemic in 2019 has disrupted the familiar teaching modes and made the need of learning and using technology in class more urgent.

H. Liu et al.[16] focused their attention on the livestreaming English teaching anxiety during COVID-19. Secondary school English teachers were investigated and six types of anxiety were identified, among which two were related to technological factors. One is the teachers' inadequate technological pedagogical content knowledge (TPACK), the other is the limited technological support from school authorities. L. Gao[17] studied the university English teachers' cognition about online teaching during the pandemic. The analysis revealed the teachers' concerns over insufficient information and communication technology (ICT) skills, and the coping strategies they adopted, such as understanding the students' learning needs and improvement through practice.

Some studies discussed the relevant aspects of technology, including the current situations of ICT skills of English teachers in primary and secondary schools in Shanghai[18], technology uptake in secondary schools in Beijing[19], university English teachers' attitudes towards ICT[20], and Chinese cultural barriers to the imports of ICT in education[21].

There are not many studies in Chinese teacher stress, but the lack of research does not imply that there is less stress on teachers in China. Considering the belief that teaching position is one of the most favored jobs in public opinion and the "limited job opportunities" due to large population[7], it is quite unlikely for teachers in China to leave and start another career. Yet the association of high stress, low enthusiasm and decreased productivity[22] make the study of technostress more essential and urgent. In this paper, we will try to figure out the main causes which result in English teachers' technostress and possible solutions to relieve the pressure.

3. REASONS OF TECHNOSTRESS FOR ENGLISH TEACHERS IN CHINA

There are various factors which will result in technostress on English teachers. The main reasons lie in the pedagogical, technological and administrative barriers which teachers have to face during the integration of technology and education.

3.1. Traditional Chinese Pedagogical Beliefs and English Teachers' ICT Incompetence as Barriers

China has a long history of showing respect for teachers. The proverb which puts teacher and father in a parallel role (*yiri weishi zhongshen weifu*) proves the cultural importance of teachers in ancient China. In traditional Chinese education, it is believed that teachers and students should maintain a hierarchical relation[21], in which teachers are assumed to possess rich knowledge and intellectual authority.

This teacher-dominated pedagogical belief is deep-rooted in the Chinese culture unwittingly. Under the situation of educational technology, teachers are expected to be the master of knowledge resources and students are expected to construct meanings mainly by themselves. The turn of teachers' role from knowledge transmittor to resources coordinator may result in the sense of incompetence and stress. The traditional approach to English teaching in classroom, either teacher-dominated or teacher-student interactive, is under teachers' control[23]. However, the educational technology incorporated into teaching activities disables the teachers' authority, and the inadequate technical skills would make the situation worse.

As the response to this conflict between traditional cultural teaching belief and modern technology, teachers would experience technostress and turn out to be less motivated with the use of technology. Li L. et al.[19] has conducted a study on primary and secondary school English teachers and discovered that the teachers showed less confidence both in their technical competence and the use of technology in language teaching. English teachers' technology use was mainly limited to the use of PowerPoint to explain "grammar and sentence structure"[19]. A continued research a couple of years later arrived at the similar conclusion, even though besides PPT, they used computers and Internet to "create customized materials"[24]. The technology use of PPT as a preferred tool for neat representation indicate that English teachers are still restrained within the framework of traditional teaching approach.

3.2. Unsuitable Technological Designs as Barriers

The criticism towards the myth of educational technology has never waned[25]. Educational technology is blamed for the illusion it has created in school education. Even though technology is considered as a panacea for educational problems by technology optimists[26], A. Oettinger and many other researchers[27][28][29][30] reflect on the contentious relationship between technology and education. Putting aside the arguments that educational technology may turn the teachers into the workers on the assembly line of

data[30] and turn the learners into a regulated autonomous subject[31], technology application in classrooms deserves careful consideration.

The need to incorporate technology into education is accelerated in the situation of COVID-19 and the social distancing policy. The computer-assisted class organization, assignment distribution, and assessment platform seem to become the new normal. However, teachers interviewed expressed anxieties over the congestion of Internet and breakdown of platform during online class[20]. Though these worries related to Internet will disappear as the crowded point of time passes by, the concerns brought about by the design of technological facilities for learning / teaching / testing may persist.

The platforms or software are designed with somewhat universal features intended to be used in as many fields as possible, math, physics, English, to name just a few. This seemingly powerful function creates its weakness too. Each subject has its unique characteristics which is unlikely to be put in the same mode of design. Take automated assessment technology as an example. Reich[29] has pointed out its aptness for highly structured answers, but not for performance displaying reasoning. English, taught as a foreign language, is a typical subject in humanities which demands logical and clear thoughts for expression. The communicative and writing abilities in language learning, for example, cannot be effectively evaluated by computational systems. Yet this misfit between the technology and teaching content would trigger a sense of burden and anxiety on English teachers' mind.

3.3. Insufficient Administrative Support as Barriers

The schools or universities get equipped with technological instruments or learning and teaching platforms, expecting the maximum use and greatest benefits for students. However, the teachers are not able to master the relevant skills overnight as the equipment are installed. When the teachers are pushed into this physical-technological environment, the external supports are critical for teachers' adaptations.

The studies on teachers' technostress have pinpointed the problem of technical training for teachers. C. Liu et al.[14] noticed that teachers were lacking in the knowledge of theory and practice as far as educational technology is concerned, which was the primary contributor to the teachers' technostress. Among L. Li's interviewees in secondary school, "few (English) teachers were satisfied with the current provision of ICT training"[19]. Similar problems are noticed in more recent studies as well. In the study of ICT-integrated English teaching in primary and secondary school, S. Yang[18] pointed out the lack of teaching resources and excellent teaching examples, besides the inadequate instruction of technical theory and

application. In H. Liu's study[32] university English teachers showed more enthusiasm to the use of technology, yet there was an intention-behavior gap in the real practice of teaching. The facilitating conditions and technological knowledge are the major restraints for this gap.

Too much technostress would lead to teachers' exhaustion and increase the possibility to give up technology or leave the profession. Thus it is essential to figure out the ways to help relieve the stress.

4. POSSIBLE SOLUTIONS

To relieve the technostress and achieve the effective use of educational technology in English class, teachers should try to adopt a positive attitude and be encouraged to get involved in the design of technology, along with the schools' provision of sufficient training. These factors are inter-related and reinforce one another.

4.1. Acceptance of Educational Technology

Chinese Ministry of Education has called on to improve teachers' information technology literacy and help teachers for the adaptation to new technologies, in order to achieve the aim of effective teaching[33]. Technological development is the inevitable tendency in society, in the big wave of which teachers would either ride the tide and move forward or be left behind. There is no standstill in the rapid-changing teaching context. Thus the teachers should update their teaching beliefs as the technology updates itself.

Teachers' attitudes toward technology constitute the "strongest barriers" preventing them from using technology besides levels of knowledge and skills[34]. Similarly, in the study of pre-service teachers' technology dispositions, T. Li et al.[35] discovered that the interests in computers contribute to the marked difference in their teaching ability of technology-integration.

The teachers' attitudes are an important factor in the employment of technology in education, and the external technical supports are equally important. Without technical competence, enthusiasm alone won't produce fruitful results, as the studies on the gap between intention and behaviour has shown[36][20].

4.2. External Supports

Schools or universities set up a physical technological environment, meanwhile they should construct a learning environment for teachers, too. The negative relationship between school support and technostress was confirmed in an empirical study by researchers[37]. Proper training for teachers would not only relieve them of pressure, but also help attain high quality class. G. Yan[11] has argued this point from the perspective of time. Yan pointed out

that teaching is a timeless profession, i.e. there is no time limit for a teacher to prepare an hour's class. It can either be a very long time or a very short time. If a teacher spends too much time and effort groping the use of teaching software and platform by himself, there won't be much time for preparation of lessons. The poor quality of classroom teaching might be the direct result.

Besides, the technology training provided for teachers should not only be on technical skills, but also on the pedagogical use. How the technology is used in specific subjects is as important as the knowledge on what the technology is. Take language teachers as an example. Talking about training course for language teachers, Hubbard suggested that "this sort of course should not be about technology, or even technology in education, but specifically about technology in language education and should help participants to build both technical and pedagogical skills and knowledge. [38]"

The concept of literacy facilitation[39], i.e. the promotion of collaboration among colleagues who share skills and advice, is also helpful to reduce the negative impact of technostress. If the educational institutions nurture an atmosphere of communication and encouragement, English teachers can help and learn from each other. In this way, the technological knowledge and skills are facilitated so that the adaption time is shortened. Study shows the effective collaboration among teachers benefit not only teachers, but also students in many ways[40].

4.3. Incorporation of Teachers in Technology Design

The biggest dilemma for educational technology is probably the designers' lack of pedagogical knowledge and the teachers' inability to get involved. As to the poor quality of some computer-aided language learning (CALL) products, L. Li et al. made the comment that it was due to the failure to "take adequate account of pedagogy, the curriculum and coursebooks.[19]"

Researchers advised that teachers should be incorporated in the design of technology[41]. Teachers who carry out authentic teaching tasks have a clear idea of particular requirements of subject content. With teachers' involvement, the technological products are likely to meet the needs of classroom activities, assignments, and tests in specific disciplines. Besides offering advice for professional technological designs, teachers, given adequate technical support, can cooperate and try their hand by themselves.

The learning-by-doing method is practiced by some researchers and has got positive results. M. Koehler et al. tried the design-based activities in which teachers participated in an online course design. Teachers not only prepared the content of the course, but also they had to "learn specific hardware and software skills"[42]. The

survey results have witnessed an evolution of teachers' attitudes towards the complex relationships among content, technology, and pedagogy as well as their progress in TPACK. As to teachers' attempts to design, J. Reich echoed a similar comment that "some of the most interesting education technology efforts emerge from universities" [29].

5. CONCLUSION

During the past decades, Chinese have experienced the amazing changes in life. The technology-mediated education follows the trend of a digitalized society. The issue of technostress should be handled with efforts and determination before teachers abandon the technology or they are burnt out in the end[15]. English teachers, who are often said to be poor at science subjects, should show courage to face the challenges in the presence of fast developing technology. Teachers' active attitudes to learn, use, and get involved in the educational technology, along with the sufficient external supports, would contribute to the effective and creative integration of technology and teaching. Therefore, the issue of technology as a booster or a burden depends on the people who make policies, the users, and the technology itself. The related factors constitute a complex web of relationship, in which all sides involved contribute unanimously to the beneficial use of technology. The future study of this topic may attempt to discover more ways for teachers to be part of the educational technology design.

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