

Teacher, Teaching, and Technology: The Changed and Unchanged

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Abstract

The use of videotaped microlectures as a new medium of teaching has been receiving increased attention in China's educational reform agenda. Since 2012, microlecture competitions targeting various levels of education have been held nationwide. However, a top-down contest-based approach, while efficiently popularizing the concept of microlectures, may create a false impression among classroom teachers unfamiliar with technology, leading them to confuse microlectures with exhibitions of complex computer and media technologies and, thus, intimidating them from trying the new teaching mode. Using autoethnography to document in detail the author's production of a nationally awarded microlecture, the present study highlights what classroom teachers can do using technology-mediated teaching and asserts that teachers' personal practical knowledge, rather than technology, plays the decisive role in producing a microlecture. It also argues that by taking on the dual role of ethnographer-as-researcher and ethnographer-as-informant, classroom teachers can use reflective autoethnography as a meaningful learning experience to understand and critique their teaching practices and develop living educational theories for the enhancement of technological pedagogical and content knowledge (TPACK) in massive open online courses (MOOCs).

Keywords: autoethnography, educational reform, microlecture, personal practical knowledge, TPACK

1. Introduction

With the fast development of new technology and media, massive open online courses (MOOCs) and microlectures are gaining popularity as part of China's educational reforms. In 2010, the Chinese State Council promulgated the Educational Reform and Development Scheme (2010–2020) to promote the use of digital resources in foreign language teaching and learning. Microlecture contests targeting various levels of education have been held nationwide since 2012. Despite its efficiency in popularizing and showcasing the microlecture medium, a top-down contest-based approach to promoting microlectures might create misleading, if not false, impressions of what a microlecture is. The strong technological component manifested in many microlectures could deter teachers who are experienced in the classroom but lack educational technology skills. Worse, perhaps, teachers could confuse the ultimate purpose of microlecture as *showing teaching* instead what it really should be: a *facilitated learning experience*.

In the present study, the researcher, a Chinese English-language teacher inexperienced with technology, produced a microlecture that won a national prize. Using autoethnography, the study is a self-exploration seeking to understand the meaning of the researcher's process in producing a microlecture. It examines the relationship among teachers, teaching, and technology in producing a technology-mediated teaching mode of microlecture. Using "personal practical knowledge" (Clandinin & Connelly, 1986, 1992, 1995, 1996), a concept derived from "teacher knowledge," as the theoretical framework, the researcher attempted to answer two questions: 1) How did the researcher utilize her personal practical knowledge in producing a microlecture? 2) What new personal practical knowledge did she develop from her experience with microlecture production?

2. Research in Microlecture and Technology Integration

With the development of information technology, MOOCs are now being tested in classrooms. How to utilize technology to facilitate teaching and learning has become a common consideration of educational institutions worldwide. In China, the microlecture has proven to be the entry point into the MOOC era.

In 2010, the Chinese State Council promulgated the Educational Reform and Development Schema (2010–2020) to promote the use of digital resources in foreign language education and learning. This was done to explore new

teaching ideas and styles, as well as to facilitate the formation of a communication platform to showcase education methods and share teaching experiences. In the same year, Tiesheng Hu, a teacher/researcher and official in a Chinese local education bureau, introduced the concept of microlectures and organized a municipal contest for collecting and ranking quality microlectures produced by primary and middle school teachers (Hu, Huang, & Li, 2013). Since 2012, microlecture contests targeting various levels of education have been held around the country. In related theoretical explorations of the concept, 1236 articles have been published in Mainland Chinese journals since 2011 (Tang, Fan, Pang, Zhong, & Wang, 2015), indicating a national zeal for exploring the microlecture.

Described as a short recorded audio or video presentation on a single, tightly defined topic (EDUCAUSE, 2015), the microlecture originated in 2008 at the University of Iowa in the form of a “one-second lecture” and was then developed into its full form, a short online lecture, by Khan Academic, an American university renowned for its free online courses. Compared with its university-based and learning needs-driven development trajectory in the American context, the promotion of microlectures in China has a top-down and teaching/teacher-exhibition character, starting from government initiatives and implemented mainly via contests. The various contest websites have become the main reference point for teachers seeking to familiarize themselves with what a microlecture is. Despite its efficiency in popularizing the concept of microlecture teaching, the top-down contest-based approach to promoting microlectures may lead to misunderstandings of the concept. Since the microlectures that teachers have access to are made for competition or “show” purposes, many are highly watchable, with complicated uses of software and video-making technology, but they suffer from the problem of “form surpassing content” (Hu, 2014, p. 5). In other words, the teaching content is not effectively designed for learning purposes despite its complex technological components. Moreover, the high level of technology embedded in the exhibited microlectures may intimidate experienced teachers unfamiliar with technology. Worse, perhaps, is the possibility that teachers could confuse the ultimate purpose of microlectures as *showing teaching* rather than what it really should be: a *facilitated learning experience*.

The technological- and teaching-oriented features of microlectures shown in the Chinese context could be further strengthened in the literature. After reviewing 446 articles and ten master’s dissertations on microlectures published between 2011 and 2014 in Chinese Mainland journals, Tang et al. (2015) reported that the majority (86%) of research comprised theoretical discussions of topics related to educational technology development, digital resource construction, and software application. Concrete studies illustrating how classroom teachers have produced microlectures based on their knowledge of effective classroom teaching and learning experience were scant. More case studies are needed to further explore the integration of normal classroom teaching and microlectures (Tang et al., 2015).

The international body of research has confirmed the unpreparedness and discomfort that teachers can experience when required integrating technology into their teaching (Baytak & Hirca, 2013; Chen & Jiang, 2014; Hughes, 2005; McNiff & Whitehead, 2006; Joo, Lim, & Kim, 2016). Numerous studies have been conducted to understand how to effectively develop teachers’ technological pedagogical content knowledge (TPACK; Angeli & Valanides, 2005; Koehler, Mishra, & Yahya, 2007; Koehler & Mishra, 2009; Niess, 2005; Olofson, Swallow, & Neumann, 2016). Chen and Jiang (2014) conducted a national survey among Taiwanese senior high school teachers to investigate the correlation between levels of concerns in implementing educational changes and TPACK development. They concluded that a higher level of technological integration could occur with more synthesized types of teacher knowledge.

There is a branch of studies adopting qualitative or mixed methods to scrutinize how technological integration can be enhanced through courses or collective learning activities particularly designed for TPACK development (e.g., Bowers & Stephens, 2011; Nicholas & Ng, 2012; Shafer, 2008; So & Kim, 2009; Tee & Lee, 2011). Teachers can also track their development of TPACK through their own practices of integrating technology into classroom teaching (Almas & Krumsvik, 2008; An & Shin, 2010; Hofer & Swan, 2008). For instance, King’s (2002) research observed that teachers inexperienced with technology began to reconsider their knowledge base and modify their actions when engaged with technology-learning experiences. Likewise, with the aim of exploring the nature of teachers’ learning during technological professional development activities, Hughes (2005) adopted a contrastive multiple case design investigating four English language arts teachers’ ranges of teaching and technological experience. She claimed that different types of learning experiences influenced teachers’ perceptions of the usefulness of newly introduced technology, and content-based technological learning experiences were the most effective in this sense. These studies and others like them indicate a shift toward *content* in educational technological development; that is, technology is not treated as a separate, unrelated technical form but is integrated into teachers’ pedagogical and subject matter knowledge base.

It is notable that the content-based technological development studies reviewed above were mainly conducted in a

Western context because TPACK, as a burgeoning area of research, has had more application in the North American region (Chai, Koh, & Tsai, 2013). In-depth case studies on TPACK development conducted in other regions (e.g., China in this study) featuring differentiation in technological advancement may thus yield new insights. This could be especially true regarding what other types of technological learning and practice experiences could be conducive in transforming teachers' initial concerns about employing technology and generating highly synthesized types of teacher knowledge, contributing to technology-integrated teaching.

3. Research Significance

Against the backdrop of China's unfolding MOOC era, in which of various educational technologies are developing and are in their exploratory stages, one of which is the microlecture, the present study contributes to the literature by providing a concrete case of a content-based technology application and development. It informs teachers and researchers in the field how subject matter content, as well as pedagogical and technological knowledge can be integrated in microlecture teaching. It may also enrich global understanding of how reflective autoethnographic writing could be adopted as an effective form of learning experience to enhance TPACK. These self-explorations and insights can shed light on teachers' professional development research.

4. Theoretical Framework: Personal Practical Knowledge

This study follows Connelly and Clandinin's vein of narrative study of teacher experience and teacher knowledge. Teachers' "personal practical knowledge" was used as the central concept and theoretical framework for the study due to its ability to holistically capture teachers' experiential knowledge, shedding light on "the teacher's personal past history, personal understanding of human affairs, and all of the cultural understanding any teacher brings into the classroom situation" (Johnson, 1989, p. 362).

Connelly and Clandinin saw teacher knowledge as embedded in experience, a view having its philosophical origin in Dewey's (1938) pragmatism: knowledge comes from lived experiences; the process of constructing and reconstructing experience constitutes the essence of life and education.

As a concept cohering with teacher knowledge, they contrived the term "personal practical knowledge" (Clandinin & Connelly, 1986, 1992, 1995, 1996; Connelly & Clandinin, 1988, 1999) to capture the idea of experience and to talk about teachers as knowledgeable and knowing persons. Having an outward manifestation as practice, personal practical knowledge is the inward knowledge that a person develops from his or her experiences; it resides in the present body and mind and serves in future situations (Connelly & Clandinin, 1988).

Personal practical knowledge is situated, constructed, and reconstructed as teachers live out their stories and retell and relive them through processes of reflection (Connelly & Clandinin, 1992, p. 125). The context of teaching comprises a professional knowledge landscape composed of relationships among people, places, and things (Clandinin & Connelly, 1995). The metaphor of landscape allows teachers to talk about teacher experience and knowledge in terms of space, time, and relations. Entering a professional knowledge landscape is the same as entering a place of stories (Connelly & Clandinin, 1999, p. 2). Through the process of retelling and reliving, teachers make sense of experiences taking place in various contexts, perceive relationships among them, and reconstruct their knowledge. The reflective and iterative process of knowledge building and rebuilding corresponds to a constructive view of teacher learning and change. To make change happen, teachers need to be aware of their own beliefs, exposed to new situations, and reflect in order to develop "potentially alternative ways of thinking or acting" (Richardson & Placier, 2001).

Since experience happens narratively, educational experience should be studied narratively (Clandinin & Connelly, 2000). Using the self-study method of autoethnography, the present study takes a "narrative turn" (Bruner, 1986, 1987, 1990, 2002; Amsterdam & Bruner, 2000), using narratives to render life experiences taking place in the researcher's professional landscape in relevant and meaningful ways (Connelly & Clandinin, 1990).

5. Methodology: Autoethnography and Self-study

With the general recognition of the socially situated nature of knowledge and an increasing interest in reflectivity in doing social research, since the 1970s, autoethnography, autobiography, auto-phenomenology, and self-study have been gradually gaining popularity as a branch of research methodology in anthropology in Western academia (Davies, 2002). As a form of self-reflection and writing, an autoethnography accentuates the authority of the researcher engaged in practice, examining his or her personal experience and situating and interpreting this autobiographical experience in a wider cultural, political, and social network (Ellis, 2004; Garance, 2010). When used with a clear focus on and interest in the teacher-self, autoethnography becomes one form of conducting self-studies of teaching and teacher education practices (S-STTEP), which has been considered "the single most significant development ever in the field of teacher education research" (Zeichner, 1999, p. 8) since it was

originated in the 1990s. “Self-study” is defined as the study of one’s self, actions, ideas, and life experiences; it examines the self in terms of other people; texts; and the historical, sociocultural, and political context in which one’s self is situated (Hamilton & Pinnegar, 1998).

Drawing on an ontological stance that values what is real and integrates the role of teacher and researcher, S-STTEP is committed to creating living educational theory and aimed at understanding and improvement (Pinnegar & Hamilton, 2009). It provides a space to articulate “so what?”—the very question that most research paradigms fails to answer after reporting results and findings (Berry & Loughran, 2002).

Situated in the broad terrain of qualitative research, self-study methodology has the critical characteristics of being self-initiated and focused, improvement-aimed, and interactive, as well as possessing a validation process based in trustworthiness (LaBoskey, 2004). By prioritizing the authority of experience (Munby & Russell, 1994), its validity lies in the rigor of scholarship evident in a study and is based on strategies used to demonstrate trustworthiness (Pinnegar & Hamilton, 2009). Like other types of qualitative case studies, self-studies aim to reach transferrable understandings of one particular situation that readers might find meaningful or applicable to their own contexts (Lincoln & Guba, 1985). Self-study research takes on “a dual participant–observer role” (Merton, 1988, p. 18). It is through the interaction between the ethnographer-as-researcher, critically and theoretically informed as an outsider “other,” and the ethnographer-as-informant, with access to his or her own experience as an “insider” self, that social knowledge of general interest and significance is generated (Davies, 2002).

The “self” in self-study does not mean the self in its own sense but the self in a relation, the self and the other in practice who seeks to explore the gap between “who I am” and “who I would like to be in my practice” (Pinnegar & Hamilton, 2009). The three-dimensional narrative space is suggested to scrutinize the puzzles of practice socially (self and others), temporally (past, present, and future) and spatially (place; Clandinin & Connelly, 2000). Through the process of living, telling, reliving, and retelling, self-study teacher/researchers endeavor to uncover teachers’ personal practical knowledge.

6. Autoethnography of the Production Process

6.1 Beginning: From Have to, to Want to

The microlecture production originated from a faculty recommendation of the researcher to participate in a national microlecture contest held in late 2014. As a teacher who had been engaged with English language teaching pedagogy for years and advocated for innovative teaching practices, she felt somewhat obliged to participate so as to “walk their talk” in trying new ways of teaching. However, knowing little about the microlecture medium and lacking computer and video-making technology, she was doubtful of its value and hesitant to participate.

To better understand the microlecture, she began her exploration by reading literature on microlectures and then MOOCs and was struck by terms such as “fragmented information,” “digital world,” “the popularity of mobile terminals,” and “non-linear modes of learning” (Li, 2014). She gradually came to realize that in the information age it was possible for technology to rewrite the traditional role of teachers by altering the space and time in which teaching and learning can happen. This reading provoked an immediate association with her everyday observation that cell-phone use is rampant, penetrating every free slot of people’s lives. If this free time were transferred into learning slots with available online learning courses and microlectures, non-linear modes of learning could take place. She visited MOOC websites, including xuetang.com and Coursera, and obtained some idea of the diverse forms that a microlecture can take. The initial research enabled her to realize the value of microlectures, and she finally decided to participate in the contest, exploring the challenge of using technology in teaching.

6.2 Process of Producing the Microlecture

The process of producing the microlecture was driven by the questions the researcher explored relating, respectively, to the design of its content and form.

6.2.1 Designing the Content

The researcher had to address three questions for the content design. The first was: “Which topic shall the researcher develop into a microlecture?” To answer the question, the researcher reflected on her unforgettable teaching experiences. In doing this, she relived her teaching and finally chose the topic of media literacy due to a special moment residing within it.

On various teaching occasions, she had conducted a case study of a popular TV program related to strict Asian parenting. Produced by an American broadcasting company, the program called itself “a reality show” and had actors act out confrontations in public to generate public reactions. The episode that she chose for the case study

was about a tiger mother and her daughter. The prototypical tiger mother was Amy Chua, a tough Chinese–American mother who authored the book *Battle Hymn of the Tiger Mother* and successfully had her daughter recruited by Harvard University. In the episode, a hidden camera was set up in a busy downtown New York restaurant from which the audience saw the tiger mother criticizing her daughter fiercely and loudly. Her behavior incurred strong criticism from the nearby American diners.

When playing the program at different points of teaching to differing bodies of students, her students reacted similarly by bursting into laughter upon hearing one American woman say, “If you feel you are in danger, dial 911,” and another shout out a four-letter word. They may not have expected that Americans would react so strongly toward a tough mother. However, when the researcher asked her students, “Would you laugh so lightheartedly if you were sitting in an international classroom filled with students coming from all over the world with skin colors different from yours?” there was silence. She then asked students to talk about their own experiences growing up in Chinese families and to analyze whether there were problems related to the media construction of Asian parenting. The class was fruitful, with quite a few students reporting later in their course reflections that they gained a different understanding of the media. The reflections below were typical:

To be frank, I never think too much when watching TV or films. I just “take” them, thinking of them as reflections of real life. This is the first time I’ve thought of media products as “constructions” composed from certain viewpoints, serving someone’s interest and causing someone’s loss. This perspective is intriguing and revolutionary, changing my way of looking at the media world (Student Zhang, Course Reflection Report).

The teaching experience left a strong impression on the researcher, leading her to reflect on her responsibilities as an English as foreign language (EFL) teacher. Compared with non-English speakers, English learners have relatively easier access to world media products. Media literacy could thus be a crucial type of competence that English learners need to develop in the contemporary era of diversity to improve their understanding of and respect for differences. She then considered “media literacy” as an idea worth spreading, a topic worth being developed into an online microlecture. Accordingly, she made the objective of the microlecture spreading a thought-provoking viewpoint on media literacy.

The second question was: “Could the researcher’s regular classroom teaching be congealed into a single knowledge point?” According to the contest guidelines, a microlecture is a five- to ten-minute videotaped lesson focusing on one knowledge point. However, the researcher doubted whether “a single knowledge point” existed in her teaching. She often conducted her course in a holistic and interactive manner based on questions raised on a certain topic or issue. The time that different issues or questions took to teach depended on students’ interest and responses. Thus, the microlecture mode of teaching placed her in a strange situation: she had to make her teaching precise by cutting the original teaching flow into knowledge-point slices and focusing only on one slice. Thinking over the main themes covered on media literacy, she considered the Five Key Questions of media literacy (Center for Media Literacy, 2002) to be the most important: 1) Who created this message? 2) What creative techniques are used to attract attention? 3) What lifestyles, values, and points of view are represented in or omitted from this message? 4) How might other people understand this message differently from me? 5) Why is this message being sent?

However, it was difficult to separate these interrelated questions and to select only one to address. The researcher needed to find something that could accommodate all these questions as “one bigger knowledge point.” She then referred to Fairclough’s (2001) framework for critical discourse analysis, which places textual analysis in the social context of production and interpretation. The framework inspired her: she could recast these five questions into one knowledge framework or system of media literacy. She then reorganized these questions into “3WH” questions, i.e., three questions starting with the letter “w” (who, what, and why) and one question beginning with the letter “h” (how). The 3WH questions are: 1) Who creates the media message? 2) What is the media message? 3) How is it constructed? 4) Why is it created? The third question, “How is it constructed?” has four sub-questions: 1) What techniques have been used to attract my attention? 2) What can be seen in the frame? 3) What cannot be seen and has been left out of the frame? 4) How might other people understand it differently from me? The researcher worked out a new framework of critical viewing (Figure 1) by situating the 3WH questions into Fairclough’s original framework of critical discourse analysis:

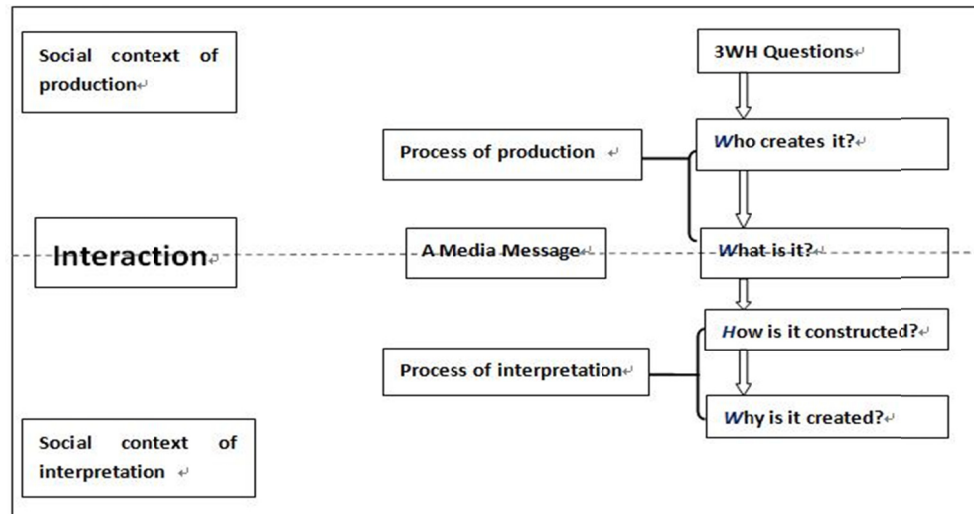


Figure 1. A framework of critical viewing (Adapted from Fairclough, 2001, p. 21)

In this way, she distilled “a single knowledge point” from her classroom teaching and recast it into one knowledge system (a framework of critical viewing) for a comprehensive analysis of media products.

The third question was, “What is the researcher’s attitude toward parenting?” With the framework established, the next crucial step was to reflect upon and be clear about the researcher’s own stances on and understandings of the topic “parenting.” Her analysis of the tiger mother TV program would essentially be shaped as teaching her thoughts through and into the framework.

As a parent born at the time of China’s social and opening-up reforms, she tried to practice toughness and democracy *in situ*. She seldom physically disciplined her child except for spanking. Threatening (raising her voice and pointing to a stick) and minor punishments (e.g., no toys, cartoons, or candies for one or two days) were the norm. She perceived these practices as being “tough” enough to create a healthy respect. Meanwhile, as a veteran English learner and teacher, she appreciated the open-mindedness, independence, and egalitarianism exercised by Western parents observed either from the media or her personal contact with Western parents. She practiced democracy with her child by creating opportunities for him to make his own choices (e.g., letting him choose his own clothes, playmates, and weekend activities) and encouraging him to share his genuine feelings and opinions. There were times when she felt like his friend.

She was not unique. Her contact with friends and colleagues, her students’ discussions of their parents, and all types of media messages produced in China revealed that many parents like her were diploma holders born after 1978 when the national policy of reform and opening up was launched. The tiger mother TV program, therefore, could be viewed problematic due to its partial and selected representation of Chinese parenting, ignoring its strengths, as well as the changed or changing circumstances of parenting in China.

Questions 1, 2, and 3 helped her work out the content of the microlecture. In the process of designing the form, challenges relating to its presentation and the use of technology needed to be sorted.

6.2.2 Designing the Form

How to realize learner/learning-centeredness through the medium of a microlecture devoid of real students was a challenge for the researcher as a classroom-based teacher. A microlecture could appear to students as a show that they could watch but not participate in, in the sense of normal classroom learning. Therefore, she interpreted “learner/learning-centeredness” realized in a microlecture learning situation as the active cognitive engagement of learners. What students saw and heard could capture their attention and help them to think step-by-step together with the teacher.

The design of the form of the audio-visual micro-class addressed the question, “How shall the content be presented effectively on screen?” or, more specifically, “How could the form presenting the content promote active cognitive engagement by the learners?” In tackling the question, the researcher considered her experience by answering two sub-questions: 1) What did the microlecture teacher intend her audience to hear? 2) What did she intend her audience to see?

As to the first question, “What did the microlecture teacher intend her audience to hear?” she wanted her audience to hear a dialogue conducted by two speakers from different cultures together analyzing the tiger mother case in a clear, concise, and fair manner. To co-teach with her, she invited a native English speaker, an overseas student from Canada who had learned *Di Zi Gui* (Note 1) in his Chinese language course. They then together worked out a dialogue script drawing on their understandings of parenting and the lessons that *Di Zi Gui* advocated, namely, teaching children to be respectful, humble, and diligent in learning, as well as to develop good life habits. When recording their reading of the script, they tried to sound natural and factual, discussing the case itself rather than showing their preferences.

Concerning the second question, “What did she intend her audience to see?” she attempted to visualize the whole process of analyzing the case. At this stage, she began to think particularly about the use of technology and asked for assistance from her students who were skillful in making PowerPoint presentations. Different animation effects were used to show the layers of analysis, and various visual modes of pictures and diagrams were adopted to convey meaning more effectively and efficiently.

Take the last slide, for example (Figure 2). She considered it an epilogue unfolding the key messages. She summed up the central message as “see what cannot be seen” and “say what has not been said.” The message was matched with two images: The first image was a picture of a woman’s face with one eye covered by her veil and her mouth closed, implying “see and not see,” “say and not say”; the second was the image of drops of water dripping down with ripples spreading around, indicating the need for people to see beneath the water and to perceive hidden depth.

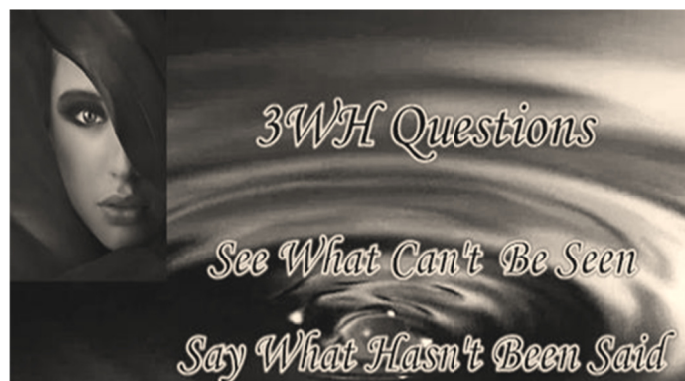


Figure 2. The last slide in the microlecture powerpoint presentation

By careful thinking, working out, and solving questions related to the content and form of the microlecture, she produced the first microlecture in her teaching career.

7. Discussion

By retelling the whole process of her production of a microlecture, the researcher has attempted to invite readers to relive her experiences and to understand how a teacher’s personal practical knowledge was employed in the process, answering her first research question. This section deals with the second research question, reflecting on what new personal practical knowledge she developed from the experience. By doing so, she attempts to uncover, understand, and improve her personal practical knowledge or “living educational theory” (Pinnegar & Hamilton, 2009, p. 7) concerning the use of microlectures, or technology in the classroom.

7.1 Teacher, Teaching, and Technology

The researcher’s autoethnography portrayed an explorative process of producing a microlecture characterized by a gradually change of attitude toward technology. From the outset, she was somewhat reluctant to participate in the contest simply because it was prescribed and she was unclear about the value of microlectures. Her desk research led her to see the value of the microlecture as one solution to cope with the urgent need to innovate new forms of teaching and learning in these digital times. This recognition provoked her intrinsic motivation to participate in the contest and, thus, transformed a top–down administrative arrangement into a self-motivated exploration of an innovative teaching practice.

The design process centered on questions related to the content and form of the microlecture. She chose the topic of media literacy due to unforgettable moments embedded in teaching the topic to her students. The process of

working out a solution to satisfy the one-knowledge-point requirement stipulated by the contest guidelines enabled her to see the problems of using a microlecture to teach complicated topics such as media literacy. For topics requiring a complicated analytical process and extended discussion, the microlecture has its limitations (David, 2009). Especially in the field of EFL teaching and learning, caution needs to be exercised in the application of the microlecture in that affection and topic-based meaningful communication play key roles in achieving effective learning outcomes (Chen, 2010; Chen, Wang, & Wu, 2014; Cui, 2013; Dai, 2015; Zhang & Long, 2013).

In analyzing the tiger mother TV program, the researcher not only followed the framework/thinking system interpreting the media message from the context of production and interpretation, but also reflected on her own parenting practices. She gleaned and employed her personal practical knowledge developed in and beyond the professional knowledge landscape of the classroom in designing her microlecture. It is crucial to understand that teaching design, rather than technology, plays a central role in making a microlecture (Hu & Zhou, 2014; Dong, 2014; Li, 2014).

With the teaching content ready, she began to think of how to teach on screen. Concern about on-screen teaching effectiveness prompted her to think about form, that is, how to use technology to visualize the process of thinking. With the use of visual and audio effects (e.g., using animation effects to show the sequence and different layers of analysis), she tried to cognitively engage learners and compress regular classroom teaching into a much shorter microlecture. The compacted microlecture functioned as a “knowledge burst” (David, 2009) distilled from her in- and beyond-classroom teaching experience. The technological application promoted the efficient and effective conveyance of information through visualization of the thinking process. Though it would be impossible for learners to fully understand and develop media literacy simply by watching a microlecture, it provides a medium where learners can preview or review information on this topic at their own pace. The process of working out a microlecture turned out to be a learning journey for the researcher to explore how her existing knowledge of teaching and teacher-selves could be re-presented with the aid of technology. The positive new understanding of the value of technology in presenting teacher knowledge indicated the enrichment of her existing knowledge of teaching and teacher-self.

7.2 Autoethnography and TPACK Development

While narrating the experiences related to her teacher and parent roles and revisiting the personal practical knowledge that she had and developed, the researcher was actually constructing and reconstructing her identities, which could be seen as “stories to live by” (Connelly & Clandinin, 1999, p. 4). She traced her changing and changed attitude toward teacher, teaching, and technology to various spaces and moments located in her professional knowledge landscape, inside and outside the classroom, by reliving and retelling her encounters with others and exploring the gap between who she is (“a classroom teacher”) and who she would like to be in her practice (“a pedagogical teacher active in exploring and practicing new pedagogy”). Through the actual practice of integrating technology into teaching and numerous rounds of rethinking and rewriting in the three-dimensional space (spatial, temporal, and relational; Clandinin & Connelly, 2000), she became more cognizant of how changes occurred in her existing personal practical knowledge.

By closely examining the process from a skeptical to a positive attitude toward the value of technology in teaching, her self-study has confirmed the observation that content-based technology learning experiences are more effective in cultivating synthesized types of teacher knowledge and leading to a deeper degree of technology integration (e.g., Chen & Jiang, 2014; Hughes, 2005). The researcher believes that teachers’ intrinsic endorsement of the value of technology in innovating teaching and learning practices is an indicator of TPACK development and can function as the best drive for further exploration of technology-integrated teaching practices.

8. Conclusion

In the present study, the process of writing a reflective autoethnography was an effective learning experience contributing to the researcher’s development of technological pedagogical and content knowledge. The actual process of producing a microlecture helped her, a veteran classroom-based teacher, to perceive the value of technology in innovative teaching practices. She argues that, in the MOOC era, what remains unchanged is the teacher’s deciding role: teaching happens through the teacher; the teacher decides what and how to teach; and the quality of teaching is predicated on the breadth and depth of teachers’ personal practical knowledge. What has changed is the way that teaching can be designed to happen: With the assistance of technology, teaching in the contemporary digital world can be designed to happen in a more imaginative and timeless virtual space with or without teachers or students being present. The content of microlecture teaching is not essentially different compared with that of classroom teaching, but it needs to be redesigned (e.g., by segmenting or compressing the content of classroom teaching) and technologically processed (e.g., by adding animation, audio, and visual effects)

to achieve effective teaching and learning in the virtual environment. These understandings can enrich and expand teachers' personal practical knowledge and directly enhance their future teaching practices.

9. Recommendations

Despite its time-honored root in anthropology, autoethnography has only recently gained momentum as a postmodernist paradigm shift, and it continues to deepen, profoundly changing and rewriting research conventions in fields, including education, business, and marketing (Gremier, Hoffman, Keaveney, & Wright, 2000; Tian, 2002; Tian & David, 2014), in which quantitative research methods used to be dominant. By breathing life into life ethnographies, autoethnography provides not only thick descriptions but also thick interpretations based on how the researcher/practitioner has actually lived an experience in a particular social cultural context (Jones, 2005). Autoethnography seeks not a context-free generalization but situated understanding and local knowledge. The meaning and value of the current in-depth single case study lie in the transferrable understandings achieved from a particular situation—how to cope with technological challenges in teaching—which readers may find meaningful or applicable to their contexts. Hopefully, insights attained from the researcher's explorative practice of technology will encourage and inspire classroom-based teachers to actively explore technology-related challenges and develop TPACK to better fulfill their mission of enhancing learning in these digital times. In the future, different types of effective learning experiences taking place in diverse contexts and featuring various stages of educational technology development need to be documented to better inform teachers and policymakers of more diverse perspectives and approaches.

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Note

Note 1. Di Zi Gui or Disciple Gauges is a Chinese classic composed of three-word sentences describing the rules and norms that disciples are expected to follow. “Di Zi” or “disciple” could be understood, in a broad sense, as people who are junior, such as students at school, children at home, and subordinates at a company.

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