

On the Development of College English Teachers' Teaching Ability Based on TPACK Framework under the Background of B-learning

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Abstract: With the effects brought by the Covid-19 pandemic, the traditional way of teaching cannot satisfy the need of the society, therefore, B-learning attained some experts' attention. The new situation means new requirements of teachers. The author will focus on finding out the improving strategies of college English Teachers' teaching ability based on TPACK framework in the context of B-learning. This paper will discuss the definition of B-learning and TPACK, followed by the current situation and problems faced by college English teachers, and then propose the strategies for college English teachers to improve their teaching ability based on TPACK.

1. Introduction

With the effects brought by the Covid-19 pandemic in early 2020, the traditional physical classroom cannot satisfy the need of the society, therefore, what the education system needed back then was wholesale reform. Thanks to the Internet and on-line teaching, despite suspension of classes, both teachers and students can continue with teaching and learning; hence during that period, the idea of "on-line learning" again attracted many experts' attention. Right now, the whole world is in the "post-pandemic era", most students and teachers can be back to school as usual, yet the changes brought by the pandemic to education are irreversible. Under these circumstances, B-learning which perfectly combines advantages of tradition way of teaching and online teaching becomes the best solution for both teachers and students to adapt to the "new normal". That is to say that teachers are in an era when new teaching abilities are required. TPACK (Technological Pedagogical Content Knowledge) provides a new framework for teachers to integrate the technology and knowledge itself. Hence, TPACK is attached significance to the upgrade of teaching ability in the new era. The author chooses college English teachers as the study object and focuses on the current situation and improving strategies based on TPACK in the background of B-learning.

2. Literature Review

2.1 B-learning

In the early 21st century, the concept of B-learning was proposed for the first time, and drew many attentions from teacher scholars immediately. According to Singh and Reed (2001) "B-learning focuses on optimizing achievement of learning objectives by applying the 'right' learning technologies to match the 'right' personal learning style to transfer the skills to the 'right' person at the 'right' time." Later, scholars' researches on B-learning were about how to combine different types of learning materials together.

In the early stage of B-learning study, experts focused mainly on the definition. In 2003, Whitelock and Jelfs defined B-learning in three different layers, including 1. The comprehensive combination of traditional learning with web-based on-line approaches; 2. The combination of media and tools employed in an E-learning environment; 3. The combination of individual study and group work. Later, Graham (2013) states that when students do not need to reduce face-to-face

course time and ensure that about 50 % of the course content is delivered online, this method is B-learning which means the mixture of online and traditional way of teaching. It was at this very moment that scholars began to put their focus on the integration of traditional learning and online learning. Under the background of “Internet plus” and “the post pandemic era, researchers in this time mainly focus on the platforms used in B-learning and the effective use of B-learning in classrooms in the new trend.

2.2 TPACK

Shulman (1986) developed the notion of PCK (Pedagogical Content Knowledge) and believed teachers can possess pedagogical knowledge (PK) -the knowledge of practices and methods required for teaching -and content knowledge (CK) -the knowledge of one's content area required for teaching. About 20 years later, with the various technologies especially computers being used in almost every traditional classroom, Mishra and Koehler (2005) brought technological knowledge (TK) and the original PCK together, becoming a new framework called TPACK. Yet, since TPACK are all consonants which make it hard to pronounce and remember. AACTE decided to add an “A” and change the name of the new framework as “TPACK” which is much easier to be read and remember. Broadly speaking, TPACK is a type of knowledge of dynamic interactive negotiation among technological, pedagogical and subject content, as well as how the interaction influences students' knowledge in classroom. In a narrow sense, TPACK refers to the interactive knowledge between technology, pedagogy and subject content in the context of teaching strategies and teaching representation of specific subjects.

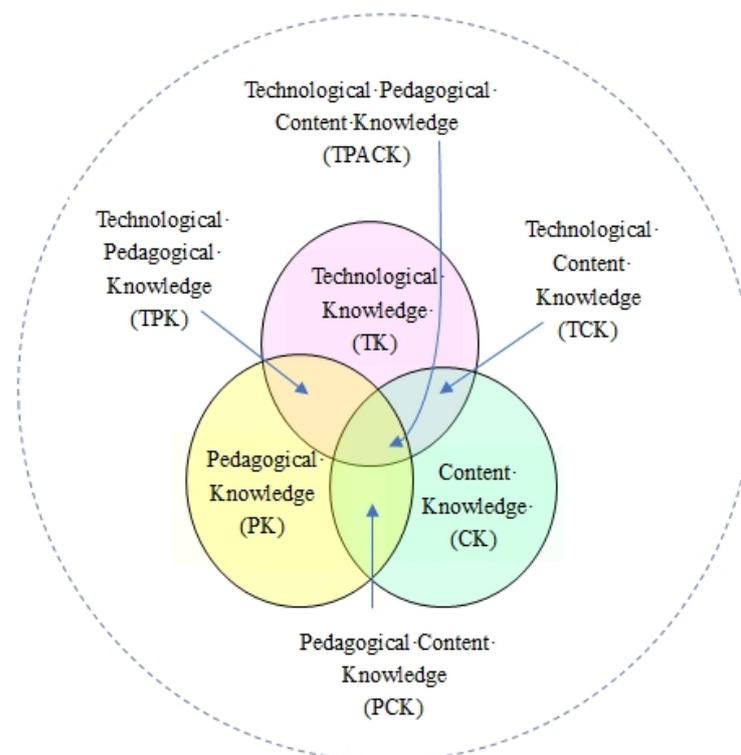


Figure 1. TPACK Framework

As is shown in Figure 1 which is also developed by Mishra and Koehler, they try to explain the relationship between the three main domains--content knowledge (CK), pedagogical knowledge (PK) and technological knowledge (TK). This framework illustrates that in addition to looking at each of these components in isolation, we also should look at them in pairs: pedagogical content knowledge (PCK), technological content knowledge (TCK), technological pedagogical knowledge (TPK), and all three taken together as technological pedagogical content knowledge (TPACK) (Mishra & Koehler, 2005).

Based on a thorough analysis of PCK framework proposed by Shulman, Mishra and Koehler

(2005) concluded 7 important elements and relationship of TPACK framework, as shown in Table 1:

Table 1. Elements and Relationship of TPACK Framework

TPACK Framework	Content Knowledge (CK)	Content knowledge (CK) refers to the knowledge of a specific subject taught by teachers.
	Pedagogical Knowledge (PK)	Pedagogical knowledge (PK), including teaching theory, teaching methods, classroom management, teaching evaluation, etc. , refers to the knowledge that teachers have about how to implement teaching, which is generally basic and applicable to various disciplines.
	Technological Knowledge (TK)	Technology knowledge (TK) is knowledge about standard technologies that can be used when conducting courses. Because technology is developing all the time, the definition of TK is changing as well. For example, in the late 1990s, technology may refer to chalk, blackboard or even projector, while nowadays when people talking about technology, they must mean computer and Internet.
	Pedagogical Content Knowledge (PCK)	Pedagogical Teaching Knowledge refers to how teachers organize knowledge in a subject field and their understanding of teaching. It is a special integration of the subject content of the teacher's unique field and pedagogy.
	Technological Content Knowledge (TCK)	Technological content knowledge (TCK) is the use of information technology to illustrate subject content knowledge.
	Technological Pedagogical Knowledge (TPK)	Technological Pedagogical Knowledge is the use of information technology to assist the knowledge of a certain teaching strategy or method.
	Technological Pedagogical Content Knowledge (TPACK)	Technological pedagogical content knowledge (TPCK) is an emerging form of knowledge that transcends all three components. This kind of knowledge is different from the knowledge of subject or technical experts, and it is also different from the general teaching knowledge shared by teachers across subjects.

Once introduced, TPACK framework was becoming popular in education industry. In recent years, scholars have launched both non-empirical and empirical studies on TPACK, with the former focusing on the study of the definition of the theory, and the latter mainly about the research of information -based application ability of teachers. Yet few of scholars combine the B-learning and TPACK framework together to study College English Teachers' teaching ability and the upgrading strategies.

3. Status Quo of College English Teachers' Teaching Ability Based on TPACK

To have a deep understanding of the Status Quo of college English teachers' teaching ability under the background of B-learning, the author will analyze the statistics of the questionnaire from three different perspective.

3.1 Content Knowledge (CK)

According to Hang Yajing (2017), she found that the content knowledge, as one of the core elements of TPACK, only ranked the second among colleges and universities in China. Based on a survey involved 272 college English teachers in Tianjin, the author finds that they are much more familiar with contents like, literature, culture, basic skills related to English language and interpersonal skills. Yet areas like specialized English and Translation and Interpretation of Chinese culture are not their expertise.

3.2 Pedagogical Content Knowledge (PCK)

According to the survey conducted by the author, during teaching, most of college English teachers know the best way to manage their classes, evaluate the teaching effectiveness and guide their students, however, they can hardly find an appropriate way to deal with multi-level students. Meanwhile, they do not know how to adapt to the B-learning situation. Some of them just use the technology as another tool to achieve “teacher-centered education” both online and in the traditional physical classroom. The ignorance of students’ unique personalities may contribute to the lack of motivation and passion which may eventually lead to low learning efficiency.

3.3 Technological Pedagogical Content Knowledge (TPACK)

Since technology is one of the crucial factors in education in the new era, information-based ability is now indispensable for qualified college English teachers. According to the analysis of the survey, the writer finds that 96.7% of the college English teachers realize the importance of information-based ability; 77.4% of the respondents are using the Internet as the auxiliary tool in education. However, since most of college English teachers lack the training specialized in the using of technology, some of them may encounter some difficulties. 60.5% of these teachers cannot solve computer-related problems by themselves. 33.5% of them lack the interest to acquire new technologies; and only a few of them can conduct an online course successfully without any help.

4. Improving Strategies Based on TPACK Under B-learning

In the past, the teaching abilities of college English teachers consisted of English proficiency and academic performance. The popularity of B-learning makes information-based ability another indispensable skill for college English teachers to get used to the post-pandemic era. To enhance the overall teaching ability of College English teachers, there are several strategies that can be used.

4.1 To Continue the Acquisition of Content Knowledge, Pedagogical Knowledge and Technological Knowledge

The humanistic quality, speech behavior and content knowledge of college English teachers may affect the students' language learning process and learning effect (Zhouyan, 2013). The extraordinary English language skills are the basic quality to ensure the class can be conducted in fluent and accurate English or target language. Thus, college English teachers must be familiar with cultures of both English-spoken countries and China; in the meanwhile, they should be equipped with the skills to introduce Chinese culture in fluent English in some intercultural activities.

Mishra and Koehler (2005) believed that “merely knowing how to use technology is not the same as knowing how to teach with it”. That is to say teachers should learn more about class-design, effective use of on-line teaching material and the management and evaluation in the B-learning class etc. through the convenience and means in the “big-data era”. Only by doing these can the new technology help teachers improve teaching effectiveness.

4.2 To Improve Teachers’ Evaluation and Assessment System

To motivate teachers’ motivation to improve their teaching ability based on TPACK, the adjustment of evaluation and assessment system is a must. When making the new system, colleges and universities should encourage college English teachers to attend some trainings that can improve their teaching abilities from the perspective of TPACK through giving some award.

Colleges and universities can also invite some experts to give related lectures to inspire college English teachers to find their own way to develop themselves.

5. Conclusion

Through this research, the author believes that it is of great significance to improve college English teacher's teaching ability based on TPACK, since the whole education is stepping into the era of B-learning. With the differences brought by B-learning, the whole society has put different requirements on college English teachers. Through the questionnaire and interview, some problems are found. The author believes that TPACK provides a new theoretical foundation to enhance college English teachers' teaching ability, which may further improve teaching effectiveness and efficiency in the background of B-learning. In order to satisfy the new need of society and students, this paper proposes some different strategies to guide college English teachers to solve the challenges under the new situation based on TPACK.

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