The Study of Meta-cognitive Strategy Training Based on Higher Vocational English Newspaper Learning under the Digital Context

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Abstract: This paper explores students' attitudes towards meta-cognitive strategy and its teaching effectiveness through training of meta-cognitive strategy for freshmen in higher vocational English course. The study shows that it is feasible to incorporate meta-cognitive strategy training into English newspaper teaching in current digital context, which can help improve students' awareness of self-study.

Keywords: meta-cognitive strategy training; English newspaper reading; self-study; digital context

1. Introduction

In social production, the replacement of production tools and the reorganization of production process will inevitably lead to the optimization and adjustment of industrial structure. Industrial transformation and upgrading thereby accelerates iterative upgrading of information-based software learning resources and platform systems. Meanwhile, the accelerated integration of digital technology and education and teaching has profoundly changed the way of higher vocational English teaching and learning. English teaching assisted with digital technology has been deeply integrated from audio-visual assistant to online student aid and now to intelligent teaching. Thus, English information-based teaching paradigm has been changed from one-way assistance to interactive support, and from teaching mode integration to intelligent learning ecological construction. Therefore, English discipline should make full use of digital technology to provide strong technical support for foreign language discipline construction and development.

In December 2021, the Central Committee on Cyber Security and Information Technology issued the "14th Five-Year Plan", which clearly proposed educational and teaching changes in promoting the integration of information technology, intelligent technology and education.

It is the national education informatization plan that has played an important leading role in higher vocational English informationized teaching and accelerated the informatization reform of foreign language education. In the newly published "English Curriculum Standards for Higher Vocational Education (2021 Edition)" by the Ministry of Education, information technology was mentioned 6 times, "informatization" was mentioned 2 times, and "information literacy" was mentioned 2 times. It is easy to find that the strategic status of information technology and higher vocational English teaching integration is in a constantly improvement.

However, what makes most teachers headache is that higher vocational students' autonomous learning ability is so weak. On the one hand, compared with primary and secondary schools, higher vocational English learning is no longer supervised by teachers; on the contrary, students need to depend on themselves with knowledge supplement and teachers' guidance. Moreover, students have weak learning ability and poor initiative awareness. Teachers need to guide students to participate in classroom teaching and daily communication, so that students can think actively, evaluate themselves and give feedback by themselves. In addition, vocational college students lack interest in further learning and proper learning methods. In English language learning, they are so used to paying more attention to one language point instead of the overall and systematical learning. Most of them only choose English textbooks to learn and few of them have the awareness of enlarging more reading materials such as keeping reading English digital newspaper everyday. They are prone

to fear difficulties, which makes them lack learning motivation. What the most important is that higher vocational students are lack of self-control ability. Especially in the network learning context of digital era, students ability in the learning process such as self-monitoring, self-reflection and self-regulation needs to be strengthened in urgent.

Therefore, in era of digital context，it is particularly important to help higher vocational students improve their autonomous learning ability and expand their autonomous learning resources by using digital English newspaper resources.

2. Theoretical Basis

2.1 Meta-cognitive Strategies

Meta-cognitive strategy, meta-cognitive knowledge and meta-cognitive awareness belong to the category of meta-cognition. It is an important part of learning strategy. It is a kind of behavior of higher-level self-management and self-regulating learning process, including setting learning goals and making plans, monitoring and regulating learning process, evaluating learning effect and reflecting. Meta-cognitive knowledge and meta-cognitive awareness are the bases of meta-cognitive strategies. The use of meta-cognitive strategies is a guarantee of understanding meta-cognitive knowledge and improving meta-cognitive awareness. Therefore, learning meta-cognitive knowledge, cultivating meta-cognitive awareness and meta-cognitive strategy training are equally important. Only when students have a good understanding of their own learning style and linguistic characteristics and laws can they set learning goals and make plans in accordance with their own characteristics, adjust the learning process, and solve learning difficulties.

2.2 Research Status of Meta-cognitive Strategy Training

Since the late 1980s, meta-cognition has gradually become a hot topic in language teaching and second language acquisition research at home and abroad and some empirical researches were carried out. Wenden (1982) conducted seven-week language learning awareness training at Columbia University for 23 students with high level of second language[1]. The results of the study showed that 7 people thought their learning methods had changed, and 5 thought they had learned something new, and most students considered this training useless. Nunan (1997) conducted meta-cognitive strategies training including goal setting, reflection, and intentional attention for 60 freshmen of Hong Kong University and found that there were significant differences in learning motivation and learning strategies but no significant differences in using strategies, reflecting learning methods and self-evaluation between students who had received training and those who hadn't[2]. Lu Fang (2003) conducted a three-semester self-cognitive training experiment on new students, proving that learners' meta-cognitive awareness training can be carried out in large classes, which can improve learners' self-study abilities and learning qualities[3].

Sun Shufen and Zhang Jianping (2007) started from the concept of self-learning metacognitive ability training and emphasized that teachers, as the initiators of ability training, should first help students establish the self-responsible learning concept, and fundamentally arouse their autonomy. Then teachers should guide students to change their learning process from teacher-centered style to students-centered style. Finally, redesign relevant training based on the practical training, that is ,"strengthen the planning, monitoring and evaluation in metacognitive strategies"[4] .

Similarly, Yang Jingyi (2011) also puts the understanding of meta-cognitive awareness as the foundation for cultivating students independent English learning paths. Based on this, students are assisted in their learning motivation. Students can clarify their learning goals, fully stimulate learning motivation, and make individualized study plans for themselves[5].

The booming development of information technology has provided new perspectives and more possibilities for self-learning metacognitive training strategies in higher vocational English teaching. Based on the multimedia teaching model and traditional model reform experiment conducted by

Shanghai University, Zhu Xiaojing (2006:87) summarized and proposed a new meta-cognitive strategy in the context of informatization[6]. First, the change should be from the traditional school, class, and teacher guided learning to a learning process dominated by students themselves, so as to cope with the discomfort caused by the changing information learning environment. Second, network resources should be taken into consideration to absorb more knowledge and information, so that we should not only be widely familiar with the network searching function, but also have the ability to make an accurate selection with the help of network information. Third, the information literacy of "information acquisition, analysis, processing, utilization and innovation" autonomy ability should be developed. Finally, the self-monitoring ability, which is introduced by teachers and self-learned by students, enables students to dynamically monitor their own learning process in a timely manner and be continuously targeted feedback. Chen Rong, on the other hand, provides a more general strategy for the development of high-vocational English learning ability in the online context from the dimension of self-learning ability training. She believes that metacognitive strategy training should be used as the basis and key to cultivating independent learning ability, and consciously guide students to master their "self-control, consciousness, purpose, planning, flexibility and understanding" of learning, and use planning learning tasks, monitoring the learning process and evaluating learning results. Second, English learning can not be limited in classroom, but to embrace the information-based e-learning environment to achieve deep learning and collaborative learning by setting up contextual training modes such as "workplace English situation simulation". Finally, it is suggested that we should take advantage of information technology and combine online and offline evaluation methods in multiple directions and perspectives to promote feedback on independent learning results (2012:120)[7].

These facts show that meta-cognitive strategy training can help learners improve their abilities of self-management and self-study to a certain extent, choose appropriate methods according to their goals and needs and study actively. However, the number of studies on meta-cognitive strategy training is limited, and the content is not deep enough, especially the research on meta-cognitive strategy training based on English newspaper teaching to explore the impact of non-intelligence factors on the training effect is still blank.

2.3 The Value of English Newspapers as Teaching Materials

Compared with traditional English textbooks, English newspapers have novel content, modern language, rich information and practical vocabulary, etc., and have become an important tool for learners to study English. By studying English newspapers and periodicals, students can not only grasp numerous new words but also understand the current affairs at home and abroad, so that they can keep up with the pace of the times in knowledge, information and language. England and America attach great importance to teaching and learning of newspapers. American scholar Fredrickson (1994) stated seven reasons for using newspapers as teaching materials[8]: easy to understand, modern language, easy to obtain, interesting content, rich vocabulary, familiar background, and long-term use. British scholar Sanderson also gave eleven reasons: access to articles of different genres, close to reality in newspaper content, favorable language to keep up with the times, interesting content, important educational value, providing necessary cultural information, and suitable for different reading levels. It can be seen that English newspapers, as language teaching materials, play a positive role in the timeliness, practicality, and development of teaching, play a positive role in the timeliness, practicality, and development of teaching.

This study uses English newspapers as teaching materials to conduct meta-cognitive strategies training, whose aim is to understand students' attitudes towards meta-cognitive strategy training and to find a suitable way for higher vocational students to use meta-cognitive strategy.

3. Research Design

3.1 Research Subjects

This study selected 34 first-year students from school of Foreign Languages of Shanghai Technical Institute of Electronics & Information. The students' English entrance test scores were higher than 60. "China Daily English Newspaper" was selected as an auxiliary teaching material. The course is adopted with blending teaching and learning mode.

3.2 Research Tools

This study consisted of three parts: pre-training survey of meta-cognitive strategy, meta-cognitive training and post-training survey of students' feedback. Case study and statistical analysis were used, including questionnaires, interviews and students' assessments.

3.3 Online Teaching Mode Design

Technological progress has not only enriched teaching methods, but also improved English teaching patterns. The effective realization of the improvement of higher vocational students English learning autonomy need to create the networked ecological environment as the starting point, take the English newspaper APP as the learning content carrier, and thus build a metacognitive strategy training implementation plan targeted on students' learning needs according to Figure 1.
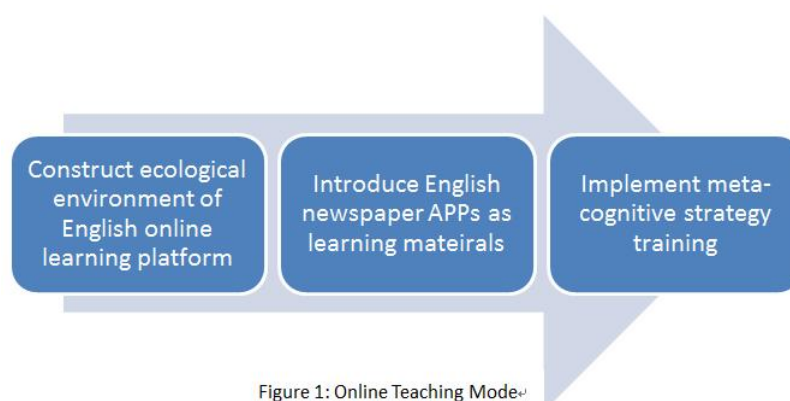

Figure 1: Online Teaching Mode

4. Meta-cognitive Strategy Training Experiment

4.1 Questionnaire

In order to confirm the necessity for meta-cognitive strategy training, researchers conducted a questionnaire survey on students' use of meta-cognitive strategies, self-study situation, and willingness to receive meta-cognitive strategy training before the training began. From statistical results, we found that 67% of students studied English for less than 1 hour a day, 72% lacked confidence in English learning, and 87% thought meta-cognitive strategy training was needed.

4.2 The Training Process

On the basis of the survey results, the study, according to Figure 2, first chose XueXiTong APP as the main online learning platform and uploaded featured materials matched with textbook contexts. Learning materials online were varied from texts, audio and video resources which were all developed and contributed by teachers. What's more, teachers introduced China Daily newspaper App and required students to complete certain tasks. Last, the study formulated a plan for implementing meta-cognitive strategy training: setting learning objectives, determining learning content, controlling learning time, place and progress, and evaluating learning effects, all of which were completed by students themselves.
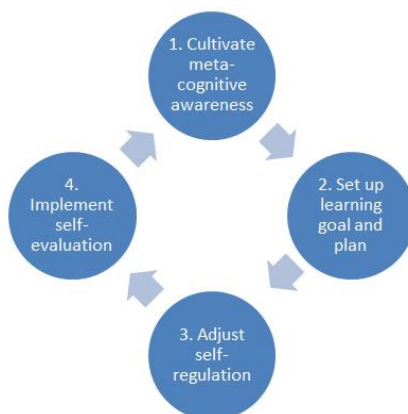
Figure 2: Training Process

4.2.1 Help students raise their awareness of meta-cognition

To improve students' ability of self-management and self-study, we needed to cultivate their meta-cognitive awareness: their own learning style, learning tasks, and learning methods respectively. In this study we made students select learning materials based on their own learning style and set their learning tasks and choose suitable learning methods. Students were divided into several groups, made discussions on XueXiTong APP and reported their selected articles every week. They could choose their favorite topics in China Daily English Newspaper APP, and it was advisable to use articles with about 900 words and 40-60 new words. Students needed to explain the reasons for choosing articles, analyze the text structure and the general ideas of paragraphs, and expound new words, difficult sentences and beautiful sentences, and answer the questions raised by others.

4.2.2 Help students set learning goals and make plans

Setting learning goals is part of using meta-cognitive strategies. In this training, the author first introduced to the students different types of English courses at higher vocational level, plans and arrangements, teaching objectives for English newspapers reading course, and English tests, and then had students discuss their purposes of English study and set their learning goals. Gave students a template of English newspaper study plan, and let students fill out their own weekly English study plan. Students then uploaded their assignments onto online homework zone in openness so that they might learn from each other. Students set their goals of learning English newspapers as: "expand their vocabulary, develop the habit of reading English newspapers and periodicals, read a lot of English materials, improve their learning methods, extract beautiful sentences from English newspapers and periodicals, read one article in the China Daily English newspaper a week, and strive to pass CET-4."

4.2.3 Help students learn self-regulation

In the learning process, helping students learn self-regulation is to let them set up an evaluation criterion for themselves to test whether learning behavior is appropriate, reflect on learning methods and effects, find difficulties and problems in learning, and correct mistakes. Every month, the author assigned a task requiring students to reflect on their achievements and shortcomings in this month's English study, whether the   study schedule was appropriate, whether the difficulty of learning content was suitable, and to make study plan and learning points for the next month. The author gave feedback on the students' reflections, and students basically completed the task. All these tasks were completed on XueXiTong APP.

4.2.4 Help students learn self-evaluation

Self-evaluation can help students develop a habit of reflecting on their own learning, so as to adjust their learning progress and improve their learning efficiency. The author took some measures: 1) had students judge their English proficiency by themselves; 2) had students select articles

suitable for themselves in English newspapers to learn according to their English proficiency; 3) had students upload their class test results to public mailboxes and make self-evaluation; 4) had students hand in reflection diaries in groups after group reports and gave suggestions for improvement; 5) had students check their deficiencies and find out how to make improvement after tests. Students in class can make some comments under their reflection area which is a good way to have a peer learning and evaluation.

5. Data Analysis

The purpose of this study is to study how students' meta-cognitive knowledge, meta-cognitive awareness, and the use of meta-cognitive strategies changed in the digital context after a semester of meta-cognitive strategies training and their evaluation of the training. Analysis of students' feedback can not only understand students' attitudes, but also judge whether this training is successful. If students' attitudes are positive, it indicates that the training is conductive to their conscious use of meta-cognitive strategies in the learning process. In order to better understand students' attitudes towards meta-cognitive strategy training, this paper conducted qualitative analysis of students' interviews and reflections.

5.1 Understand the Learning Process and Learn How to Study

Understanding the learning process refers to students' understanding of learning tasks and self-management. In the digital learning context, through reading newspaper and meta-cognitive strategy training, students' interests have been increased and their horizons have been broadened. They can see their progress and have a sense of accomplishment. Students' awareness of self-management has been raised, and they have developed the habit of setting goals, making plans, adjusting their learning progress, and evaluating their learning effects and reflecting, which lays the foundation for future learning.

5.2 A New Understanding of English Language Learning

After training, students' concepts of the purpose of English learning have changed. To students, English learning in high school is exam-oriented. After reading newspapers and training, this view has been changed essentially. Learning English is to put it into practice, not just for the purpose of exams. Reading English newspapers is a good way to test your English proficiency. On the other hand, most students think they've been benefited a lot from online-offline blending learning: having much more flexible time to learn English no matter where they are and when it is, being given more opportunities to ask teachers questions, receiving instant feedback and enjoying abundant online learning resources.

6. Conclusion

In the digital context, the value of English newspapers as teaching materials has been embodied in the training. After training, we find that it is feasible to incorporate meta-cognitive strategy training into English newspaper teaching. Helping students grasp meta-cognitive knowledge, cultivating their meta-cognitive awareness and using meta-cognitive strategies can increase their interests in English learning, change their learning concepts, improve their independent learning abilities, deepen their understanding of learning process, so that they can solve current learning problems better, set their objectives and gradually adjust and implement them. At the same time, they also realize the importance of reading a large number of newspapers and independent learning. This training is most instructive for English teaching. In the future, it should be taken into consideration to allocate some class hours in English newspaper teaching to meta-cognitive strategy training, so that students can understand the purpose and meaning of English learning.

Acknowledgment

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