

Cognitive Apprenticeship Theory's Effects on Online Learning Courses

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Abstract

The diversification of information facilitates the emergence of an array of learning methods and learning platforms. Characterized by instantaneity, openness, interactivity and share ability and more, the internet has become one of the important channels for learning, but only by combining with a correct theory can network environment better play its role. Cognitive apprenticeship theory argues that learning should be conducted in a real activity, environment and cultural atmosphere, and this theory combines people and learning environment, letting students learn and cognize in a real activity and apply what they have learned in the environment. This article will analyze the combination of cognitive apprenticeship theory and online language learning course and make use of four elements-content, methods, sequence and sociology- to create a related learning environment, and promote language learning outcome with this environment.

Keywords: cognitive apprenticeship; learning environment; application in teaching; online language learning

I. Cognitive apprenticeship theory

In the late 1980s, drawbacks of traditional schooling began to manifest themselves-what students have learned are divorced from practical application. To overcome these problems, American cognitive scientists Allan Collins and John Seely Brown were inspired by the study of traditional craft apprenticeship, extracted core elements of traditional apprenticeship such as demonstration, coaching and scaffolding, upgraded traditional apprenticeship based on a characteristic of schooling-pay more attention to developing cognitive ability, and formally proposed the cognitive apprenticeship theory in 1989. The cognitive apprenticeship theory enables learners to perceive and acquire specialized tactical knowledge, with a number of features including situated learning, demonstration, explanation, reflection, articulation and exploration.

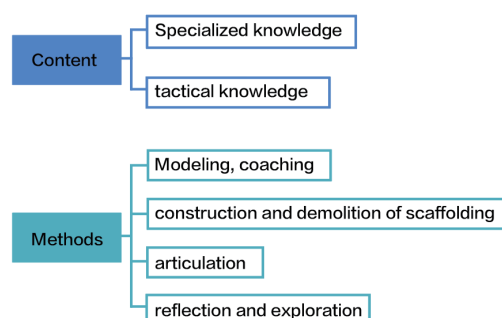
As a highly effective teaching model and learning environment, the cognitive apprenticeship theory shifts the focus from "teaching" to "learning", gradually veers the study of learning from cognition to situation, and can effectively help learners acquire advanced cognitive skills and transfer knowledge.

II. Teaching model of the cognitive apprenticeship theory

Cognitive apprenticeship theory-based distance education

apprenticeship developed by Levin and Waugh at College Education of University of Illinois was a quite successful application then. As technology and the internet are constantly developed, more advanced cognitive apprenticeship-based distance education programs emerge in an endless stream. Established in 2005 by Dr. Thomas Shuster and Dr. R. Shawn Edmondson, There Now aims at providing teachers with face-to-face coaching with the assistance of telepresence technology. In its model, teachers can communicate with learners and offer them advice and guidance just like face to face with the help of telepresence technology. A study conducted by Edmondson shows that compared with traditional face-to-face teaching, the telepresence technology-based coaching is unaffected in interactivity and liveliness, and it overcomes the limits in time and space and lowers economic cost. So, it is more effective, feasible and convenient. From the earliest telepresence technology-assisted teaching model to a variety of online courses developed by now, cognitive apprenticeship was first mainly applied in the learning of children and primary and secondary school students because one of sources of cognitive apprenticeship is the study of the social nature of cognitive development in childhood conducted by Vygotsky, and till now it is more often applied to higher education and adult learning.

Cognitive apprenticeship model consists of four basic elements: content, methods, sequence and sociology
Content: Specialized knowledge and tactical knowledge (including heuristic strategy, control strategy, learning strategy)
Methods: Modeling, coaching, construction and demolition of scaffolding, articulation, reflection and exploration
Sequence: knowledge and skills increase in complexity and diversity, and strategy of macro skills before micro skills
Sociology: situated learning, social interaction, expert practical culture, intrinsic motivation triggering, cooperation and competition



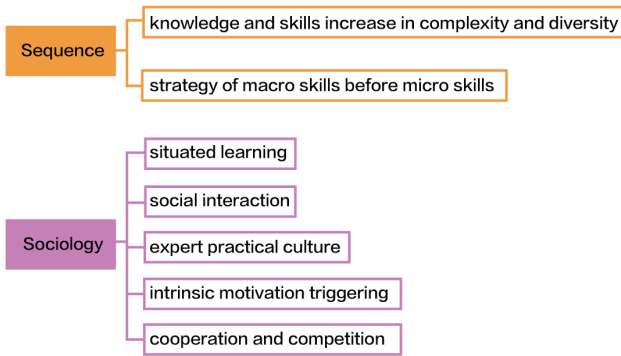


Fig.1

The cognitive apprenticeship theory is suitable for training learners in advanced cognitive skills like thinking skills and problem-solving skills.

III. Characteristics of online language learning course

Online learning course includes online language learning. In recent years, online language learning courses have become the mainstream courses for the independent study of people aged 18-30, because this model breaks the limits in time and space, allowing learners to learn anytime and anywhere in any way according to their spare time and holidays, changed traditional relationship between language teaching and learning, effectively increases the number learners and boost their interest, and achieves lifelong and socialized language learning.

The combination of language learning and computer networks brings language learning to a new stage that network can provide learners with learning materials and allow them to communicate with each other at any time, while learners learn according to their own needs and pace. Moreover, different course can meet needs of learners at different stages, regardless of beginners and advanced learners.

More and more language teachers have successfully developed various ways to enhance learners' interest and learning efficiency in the learning process, among which cognitive apprenticeship theory plays a critical role in online language learning courses.

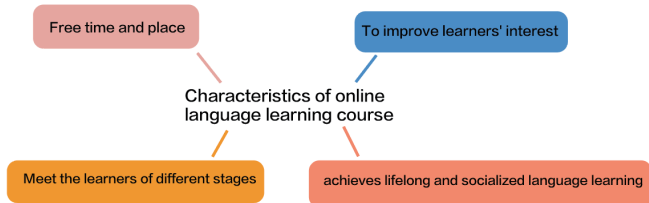


Fig.2

IV. Analysis of the application of the cognitive apprenticeship theory in online language learning course

As a new learning method, online language learning is inseparable with traditional teaching concept while improving traditional learning method. Bringing four basic elements of cognitive apprenticeship-content, methods, sequence and sociology-models to online language course can improve

teaching results.

This article puts forward the implementation strategy of cognitive apprenticeship in online language learning courses whose content focuses on effectively solve language learning problems, helping learners learn step by step and letting every learner able to be active in learning and energetically think and imitate with suitable cognitive method.

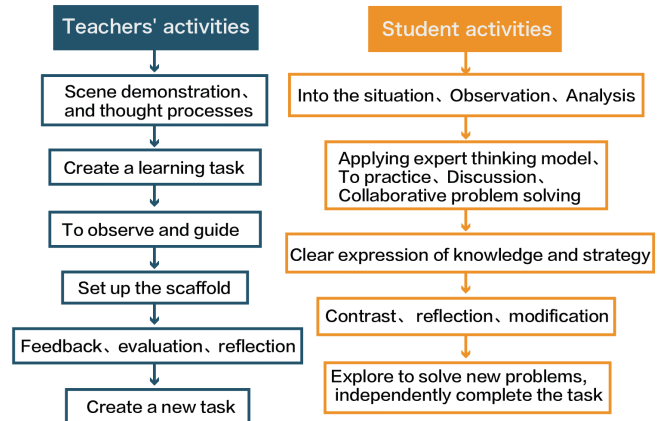


Fig.3

The element "content" in the cognitive apprenticeship theory is the first stage of teaching in language learning course. It consists of explicit industrial knowledge and implicit knowledge like expert work experience and work strategy, among which specialized knowledge and tactical knowledge should be emphasized in language courses. Specialized explicit knowledge may be spread among learners via network platforms through teaching materials, courseware, sound, animations, and photos and so on, while tactical knowledge is usually implicit knowledge, which is hard to be spread through photos, books and the like and needs to be made explicit by teachers. In an online language course, how to spread implicit knowledge is also a priority for teachers. In the process of language teaching, the heuristic strategy adopted by teachers can help learners explore the knowledge system of language learning and specific problems in learning.

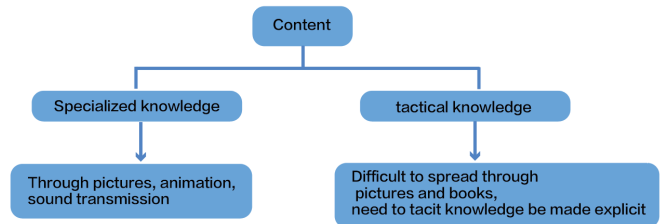


Fig.4

At the second stage, when making tactical knowledge explicit, teachers bring six approaches of cognitive apprenticeship-modelling, coaching, construction and demolition of scaffolding, articulation, reflection and exploration-into teaching, and when teaching a language online, teachers demonstrate and guide learners in real situation to let learners observe and imitate, for example, observing and imitating pronunciation and mouth movements when taking language course at first, then discuss with other learners and teachers, constantly practice and make full use of learning

resources. Besides, teachers may observe students when tutoring, including when students are working independently, provide targeted hints and set new tasks, create more opportunities for students to learn new linguistic knowledge and express their own opinions, and let learners reflect on their problems in their learning process and learn lessons from them through group presentation or asking questions in class, online communication, homework and other forms. Besides, teachers may learn about what problems that learners encounter in the teaching process through these problems and solve them, and help learners better express themselves in practice. Of course, these also have a positive influence on teachers, requiring teachers to constantly improve and perfect their knowledge and skills in the teaching process.

In the cognitive apprenticeship theory, the strategy of macro skills before micro skills means teachers help learners see the big picture and master micro skills based on a grasp of the big picture according to needs. To develop learners' skills, teachers need to design different contents of courses at different stages.

At the third stage, as learner gradually moves from the sideline of the learning to the center from a beginner or novice in the process of language learning, they will be more active. At this time, encouraged by teachers or other learners, they will become more interested in learning. Then, teachers complicate and diversify the teaching of knowledge and skills when setting courses and tasks, and let learners learn about language-related information through schoolwork such as movies, TV series, literatures, novels and ads and begin to feel and expose themselves to the language more. In the learning process, teachers ask learners to complete increasingly complicated tasks and participate in diverse cognitive activities, and make complicated cognitive process explicit through methods such as discussion, role play, interaction and group problem solving. Moreover, mastering more and more linguistic knowledge and practical skills enable learners to see things from a macro perspective, solve the problems from a micro perspective and promote the development of skills like self-correction and self-learning.

At last, "sociology" is brought to online language learning course for encouraging learners to participate in more communication and enhancing the motivation to learn, learning outcome and practical ability.

Situated interactive learning attaches importance to language learners being able to acquire effective exchange of information or more conversations with teachers. The study of the interactivity of internet communication model shows: in internet communication model, intentional communication and face-to-face communication-based learning produce nearly the same effect, teachers can provide learners with a simulated network environment for learning and communication. Online synchronous learning and communication with video function can ensure learners produces the same learning effect with face-to-face teaching. Therefore, in the process of online language learning, teachers can make use of online remote communication to contact students in different countries. While these students are studying the other side's language, learners

may set individual goals, and synchronously communicate and cooperate with each other in e-learning, as well as most clearly receive language expression of others, promoting learning outcome and cultural exchange.

V. Conclusions

The cognitive apprenticeship theory combines with the advantages of the internet, breaks through traditional teaching methods, allows learners to break the limits in time, territory and age, simulates the real language learning environment on the internet, and makes knowledge explicit in the process of language learning with its four basic elements. Then, it leads learners to the academic atmosphere, builds up a knowledge framework of learning, and helps learners master micro skills based on a grasp of the big picture. In the learning process, language learning is diversified through methods like demonstration, expression, communication and reflection, and situated interaction is employed to let learners take the initiative to learn through more communication experience and a complete learning process according to their own situation, thus helping learners develop observation, ability to think and ability to apply.

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