

Innovative Approach on the Development of Online Teaching and Learning for Linguistics in China Universities

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Abstract

Linguistics is interdisciplinary combined with other related disciplines. The positive elements, such as the background of global resource integration and sharing, interdisciplinary compatible characteristics of linguistics, and ample network education resources, are provided for the teaching innovation of the course. The paper focuses on the dominant role of micro video teaching, and as well as non-video learning as an indispensable supplement of video. Sufficient spaces can be provided for the cultivation of diverse talents by means of the innovation study on online teaching of linguistics, which promote students' learning autonomy.

Keywords

Online teaching; Linguistics; Interdisciplinary.

1. Global Education Environment and The Bloom of Network Education

The form of delivering knowledge has changed with the advent of the Internet. The channels have been diversified in and out of the virtual world with various combinations of the channels such as online learning, distance learning, and blended learning. Especially in the current COVID-19 pandemic, online teaching and learning is necessary and indispensable. Online education has experienced tremendous growth in the last two decades, in the United States at least 31.6 percent of students taking online courses in 2016, Over one-fifth of the U.S. higher education institutions (n = 280) reported that more than 50% of their courses were offered online, and that between spring 2017 and 2018, the median growth rate of enrollment in fully online courses was up to 10% [1]. In the new historic situation, the educational resources in China are gradually systematic and collaborative, with educational reform focuses on transcending the traditional classroom, collaborating comprehensively in the classroom, campus, domestic as well as the network and the growing global community, promoting MOOC, SPOC and blended teaching supported by new technologies [2]. Learning on the Internet facilitated independent learning of those who prefer learning individually as well as collaborative learning through group activities, and offered students more fruitful channels of getting linked with peers and instructors.

Massive Open Online Course (MOOC) originated from the large-scale distance education in the early and late 1990s. The purpose is to integrate superior education resources and promote the development and sharing of high-quality teaching resources. Therefore, MOOC is welcomed by learners not only for its consistence with the modern education thoughts of "student-centered", but also for its technical assurance on the teaching principle of "student-centered and learning-oriented"[3]. And also, unlike traditional courses, which content is prepared in advance by the teacher, MOOC offers a vast amount of learning content developed online in different places that can be accessed regularly by participants. Moreover, learners themselves can flexibly control the learning place, learning content and learning method according to their own

conditions, and can use newly emerging and shared content to participate in living interaction, creating an open learner network.

At present, there are more Web-based learning methods along with the widespread popularity of distance learning. The construction of the network teaching platform based on classroom management system (CMS) or learning management system (LMS) is the premise of the implementation of remote education. The "flip" teaching method combined with online and offline learning is currently well known, which requires the students at home or class to watch online video courses, to complete the corresponding project, and interact with teachers online to solve the problems encountered offline. This blended learning has a far better effect than traditional teaching.

2. Feasibility Analysis of Online Teaching of Linguistics

2.1. The Nature of Linguistics

Linguistics is an interdisciplinary that studies language and language practice. At present, the language application fields involving Computer Information Processing, Psychology, Neurology, Pathology, Sociology, Statistics, Geography and other disciplines have more and more connections with the study of ontological linguistics. From this, a series of new interdisciplinary disciplines such as computational linguistics, psycholinguistics, neurolinguistics, pathologic linguistics, sociolinguistics, statistical linguistics, geographic linguistics and so on have emerged, which all belong to the scope of applied linguistics. (See Figure 1)

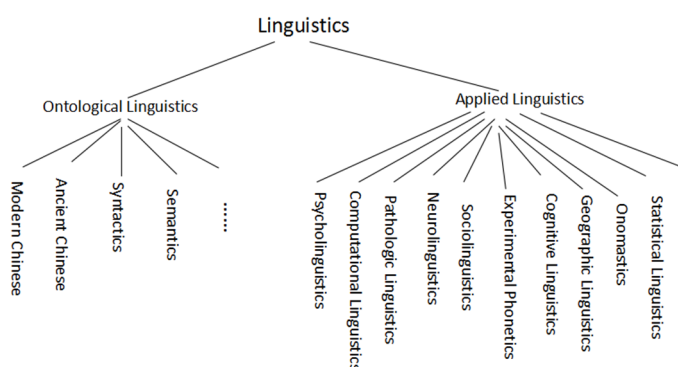


Figure 1. Interdisciplinary nature of Linguistics

The open-minded and interdisciplinary nature of linguistics indicates that its methods are compatible and comprehensive. In developing and implementing online education, the discipline configuration and achievements should be optimized, making full use of modern technology, designing scientific training scheme, enriching the content of the course, strengthening the curriculum integration and stimulating students learning interest.

2.2. Online Public Resources for Linguistics

Chaoxing (The website of Chaoxing Academic Video: <http://video.chaoxing.com/>) "Superstar", an academic group with massive databases and powerful digital teaching technology, has been allied with the top universities in the world to make videos for the distinguished teachers' lectures at recent decades, the video resources developed by Chaoxing such as Chaoxing distance courses, prestigious teachers' forum, liberal classes and online teaching platforms, are unprecedented rich for us to study conveniently, flexibly at anytime and anywhere. It is a pity that the resources in Chaoxing are not completely accessible in recent years, We logged on Chaoxing from the library access of CQUT (Chongqing University of Science and Technology) and get 56 online learning resources in the search way of "academic video - distinguished

teacher forum - linguistics", among which involves 50 online classes (literature 25, engineering 3, philosophy 2), 23 reports and 3 micro courses. At present, Chaoxing Xuexi Tong "Superstar Learning Card" is free for individual users. Download and install its APP and inputting "linguistics" in the search box of the homepage, 175 academic videos on linguistics can be retrieved.

The second public distance education platform is Higher Education Institutions Teacher onLine Training Center (The website of Higher Education Institutions Teacher onLine Training Center: <http://www.enetedu.com/>), in which some distinctive teaching modules such as centralized training course, live network course, mixed training course and online training course, have been developed, The training course takes the lecturers' training videos as the main resources, learning situations and research activities as the course essentials, and is characterized by regular online guidance from experts, independent learning by students, and emphasis on experience and resource sharing. The learning period is 90 days. Training courses are carried out through online on-demand broadcast, live video broadcast, participation in online exchanges and activities, and the training process is not limited by time and space, which effectively meets the needs of teachers who do not leave their posts and do not change their classes.

The third source of online courses is Zhihuishu (The website of Zhihuishu Online Education: <https://www.zhihuishu.com/>) "Smart Tree" Online Education launched by Chinese universities in response to the outbreak of COVID-19 in 2019. Input "linguistics" into the search box of the "Smart Tree" home page, and you will get 11 shared university courses, 3 interest courses and 4 videos.

The fourth source of online courses is China University EOCs MOOC Platform (The website of China University EOCs Platform: <https://www.icourses.cn/>), which focuses on "China University Video Open Course" and "China University Resource-Sharing Course". By inputting "linguistics" in the search box of the official website home page, 22 online class resources were obtained, including 16 MOOCs of Chinese universities, 4 resource-sharing courses and 2 online open courses.

3. Online Course Design of Linguistics

Samat et al. (2020) seek the relationship between the intention and the effective use of an ODL (Online Distance Learning) among the students, He argued that the perception of what they shall benefit from through the adoption of online learning has led the users' anticipation to be heightened [4]. In the skeleton of online course in linguistics, two parts can be designed preliminarily: video and non-video. The design in video part should be account for the most effort, and also represent the feature of the course and the charm of the instructor. Excellent teaching videos can stimulate the learning intentions of students. Exercises, discussions, experiments, reading materials etc. as powerful supplements to the videos, are non-video learning units which effectively cooperates with the teaching video explanation, enhances the sense of participation and interactivity in learning. All the teaching methods in traditional teaching can be realized through the effective connection of these learning units.

Marshall & Kostka (2020) introduced flipped learning that can maintain teachers' presence in robust and visible ways and help students remain engaged and motivated while learning online. F-L-I-P is the acronym of Flexible Environment, Learning Culture, Intentional Content and Professional Educator respectively, For the past decades, flipped learning has been implemented in a wide range of educational settings but also applicable to online instruction [5]. The production of linguistic video course should be different from traditional PPT courseware, considering the characteristics of students' online learning.

First of all, we should keep the following recording principles in mind when making a video.

Principle 1, Short videos are more attractive. Considering the focus on distance education is learning through MOOCs, informal learning, online learners' satisfaction and self-regulation [6], It is better for each learning module to be decomposed into several series of micro-videos with a duration of no more than six minutes, and the forms of each micro-video should be as diverse as possible.

Principle 2, It is better to have hand-drawn pictures and teachers' faces than PPT on screen only. This is a way of organization that imitates the classroom as much as possible, so that online learning students can reduce the boredom of robot teaching, and thus create a sense of friendliness of face-to-face teaching.

Principle 3, MOOC videos can be recorded at a slightly faster pace, without the need to deliberately slow down. Real speed allows students to stay in a state of voluntary learning for a long time.

Principle 4, Video recording should be as natural and casual as possible. Students prefer casual informal classes.

Secondly, the following three recording modes can be adopted alternately for micro-lesson recording:

Recording Mode 1: mobile phone + white paper + stand

(1) Recording tools: mobile phone, some white paper, pens of different colors, a bracket to fix the mobile phone on the top of the writing.

(2) Recording method: The teaching process of the combination of paper and pen is recorded, supplemented by dubbing.

(3) Recording steps: Step 1, preparing for a detailed teaching design and the formation of a teaching project; Step 2, using a pen to show the teaching process on a white paper that can be presented as a real classroom teaching, saying and writing while drawing. The teaching process can be filmed by a mobile phone fixed on the head.

This model is suitable for the teaching with strong logic in calculation process and emphasis on solution or teaching process.

Recording Mode 2: PPT+ Camtasia Studio

(1) Recording tools: Computers, headphones with microphones and Camtasia Studio

(2) Recording method: Using the computer for screen recording with the PPT presentation combined and dubbing supplemented.

(3) Recording steps: Step 1, Collecting teaching and media materials to make PPT courseware according to the selected teaching content. Step 2, Running Camtasia Studio and teaching PPT within an interface, and checking headset, the position and volume of the microphone, and then clicking the "recording desktop" to start recording. Teachers can make use of marker tools and other multimedia software to make the teaching process as interesting as possible while explaining and demonstrating. Step 3, Making further processing and beautification of the teaching video after finishing recording.

Recording Mode 3: writing pad +Windows drawing tools + Camtasia Studio

(1) Recording tools: Microphone, writing pad, Windows drawing tools and Camtasia Studio

(2) Recording method: The teaching process is explained and demonstrated through the writing pad and drawing tools, and Camtasia Studio is used for recording

(3) Recording steps: Step 1 is to make a detailed teaching design and form a teaching project according to the teaching task. Step 2 is done by the installation of writing board, microphone and other tools, the use of writing board and drawing tools, to demonstrate the teaching process. Step 3 is to record the teaching process and dub with Camtasia Studio. Step 4 is to make the necessary edits and beautifications.

After the above three recording modes are realized, the finished video should be compressed in common media format (.mp4/.flv/.mpg), and the size of the finished video should not exceed 100MB.

Finally, we take Computational Linguistics, one of the specific fields of applied linguistics, as an example to briefly explain the main steps of organizing MOOCs in applied linguistics:

Introduction. Briefly introduce the nature of computational linguistics, the most nature of which is the compatible and comprehensive from different disciplines, and the main content of this course is to study natural language processing, which aim is to make computer understand natural language and generate natural language automatically.

The micro-video. Teaching computer understanding for natural language from the perspective of Chinese information processing, making three micro videos respectively for Chinese orthography input, storage and output of word processing, two micro videos of word processing that requires automatic word segmentation and part of speech tagging, three micro videos of sentence processing that requires automatic analysis, understanding and generation of Chinese semantics.

Terminology. Providing appropriate text information about forward maximum matching, reverse maximum matching, ambiguous word segments, metalanguage, backtracking and parallel processing, and semantic network, etc.

Expand reading and online forums. Discussing the advantages and disadvantages of automatic word segmentation methods, such as mechanical segmentation, intelligent segmentation and statistical segmentation, as well as the grammatical and semantic bottleneck problems encountered in machine translation.

Quizzes. Simulating the human brain to process natural language, analyzing the computer's automatic word segmentation, sentence grammar and semantic processing of a certain Chinese sentence or paragraph.

4. Conclusion

The above principles and modes of recording are the preliminary technical support for MOOC teaching. And the main steps of organizing online teaching of linguistics mainly involve the above five aspects. Among them, micro-video is the main body of online teaching, which is the most time-consuming and labor-consuming for teachers. Other four aspects are consolidate and supplement, mainly with classmate message, BBS, online or offline test to discover problems, feedback and solve the problem.

Online courses with high quality should inspire the student to explore the unknown knowledge and develop students' potential. Online teaching indeed requires different instructor qualities than on-the-ground teaching, just like what March & Pedersen (2020) said "Online teaching effectiveness involves presence, engagement, expertise and facilitation"^[7]. "Presence" includes effective communication and quality instructional techniques, "engagement" includes active feedback and relationship building, "expertise" that involves academic and professional content, and "facilitation" means building thoughtful classroom and supervising learning process. In short, online courses for the interdisciplinary disciplines such as linguistics are worthy developing, only by exploring diversified growth paths can students' learning autonomy and openness be enhanced.

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