

## Design and Production of the Micro Course “Climbing High”

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### Abstract

Under the current background of rapid progress and development of information science and technology, more and more attention has been paid to the study of ancient poetry and micro-lessons. Therefore, this paper combines ancient poetry and micro-lessons to create a micro-course of Tang poetry climbing to a higher level to promote students' love for the traditional culture of the motherland. According to the design principles and design strategy of micro lesson, lesson on high and pre-production preparation, teaching design analysis to develop a work content design and script design According to the script design, to develop micro lesson climb During ascent the course design of main is to use flash to create 2 d animation scenes, work content by import author introduction After the micro-class is completed, the micro-class works are tested and the experience of the whole teaching-assisted micro-class production process is summarized. The main purpose of this paper is to produce Tang poems and climb the heights The micro class can give full play to the role of micro class in poetry teaching, and transform the abstract text into three-dimensional images, so as to enhance students' interest in learning, deepen their impression and understanding of Tang poetry, and better integrate into teaching.

### Keywords

Micro-course production; Poetry; Two-dimensional animation.

## 1. Introduction

### 1.1. Background of the Study

At the third plenary session of the 12th National People's Congress, the "Internet+" action plan was formally and explicitly incorporated into the national development strategy, and the development trend of "Internet+traditional industries" has been in full swing since then, which has transformed various traditional industries and brought about a The development trend of "Internet+traditional industries" is in full swing, and it has transformed the traditional industries and given them a strong vitality, achieving the innovative development of each industry in a new and upgraded way, and our production and life have also undergone profound changes [1]. In the context of the irreversible trend of "Internet+", "Internet+Education" also emerged accordingly. "Internet+education" has completely broken the boundaries of time and geographical space in the development of traditional education in China, and made it possible to learn anytime and anywhere, providing a carrier for the "fragmented learning" advocated at present and providing lifelong learning for people. Information technology support.

Poetry is a precious treasure of Chinese culture and plays an important role in traditional Chinese culture. The study of ancient poems by secondary school students is important for cultivating a deep love for the traditional culture of the motherland and improving the modern language literacy of secondary school students. In language teaching, micro-lessons play an important role, but nowadays, the combination of micro-lessons and poetry teaching is

relatively small and there are certain difficulties, which makes micro-lessons in ancient poetry teaching not good enough to play the role of teaching aid.

## 1.2. Significance of the Study

In the theoretical sense, as one of the important products of the integration of poetry and information science and technology, micro-lessons can be used to assist teachers in the comprehensive design of poetry teaching content in the form of videos and animations, etc. By fully integrating the teaching characteristics of intuitive, vivid image, short and concise into micro-lesson poetry teaching, it can effectively break the language comprehension barrier inevitably generated by the limitation of time and space environment and improve students' By fully integrating visual, vivid, and short teaching features into micro-lesson poetry teaching, it can effectively break the barriers of language comprehension due to the limitation of time and space, and increase students' emotional interest in learning micro-lesson poetry [2]. The use of storytelling micro-lesson format, presenting the micro-lesson content in the form of two-dimensional animation, and presenting each verse of the poem with corresponding animated images, can solve the problem of students' cognitive difficulties caused by the abstract content of the poem itself. At the same time, the story format provides students with the expanded knowledge necessary to understand the emotions of the poem, aiding their grasp of the poem's emotions and thus enhancing the teacher's teaching effectiveness.

In a realistic sense, today is an information society, people's lives are always connected with new things like WeChat, QQ, and short videos, and in this era of rapid development, people's lives are getting faster and faster, and people can get a lot of new knowledge and new information from the Internet, so people also like to learn and get what they need on some learning software, micro videos, and other software. So people also like to learn and get the information they need from some learning software, micro-video and so on. Microlearning is a new era, and it has become popular with many learners because of its short duration, concise content, and high relevance; moreover, it has the characteristics of strong dissemination and high repeatability, which attracts a large number of educators. Times are changing, technology is innovating, and people are increasingly willing to learn in new ways to improve their learning efficiency. Therefore, microlearning will play an increasingly important role in the future of education.

In middle school and high school language textbooks, ancient poetry has been added to the curriculum, and the standards emphasize the importance of traditional culture in the teaching process. However, some teachers teach poetry in a simple and clear manner with little content, and the students are not able to grasp the content of the poem and the feelings expressed by the poet. Therefore, the production of micro-lessons designed specifically for the "key points, difficulties, and doubts" of poetry teaching can provide a good room for improving the teaching of ancient poetry.

## 1.3. Current Research Situation at Home and Abroad

### 1.3.1. The Current Situation of Domestic Research

There are 33562 papers in the search term "micro-lesson" on China Knowledge Network. Among them, there are 28200 journal papers, 3515 master papers, 1598 conference reports, 208 newspapers and 41 books. By searching for the topics of "microteaching" and "poetry teaching" in the results, there were 145 papers. After analyzing the above search results, we found that the earliest research on microteaching in China was in 2011, and it has been showing an obvious rising trend since 2014, and the research on the use of microteaching in poetry teaching also started to rise in 2014. This shows that microlearning has attracted more and more attention in China, and the application of microlearning in various subject areas has been affirmed by more and more people.

Regarding the research on microlesson theory, the domestic research of Hu Tiesheng from Foshan Education Bureau in Guangzhou and Li Yuping, deputy director of the Education and Research Center of Erdos Dongsheng District in Inner Mongolia, are the vane. In 2011, Hu Tiesheng proposed for the first time the necessity and feasibility of building "micro-lesson" resources in the new development period in "Micro-lesson: A New Trend in the Development of Regional Educational Information Resources" [3].

In "A Preliminary Exploration of Geography Cooperative Classroom Based on Microcourse Theory", Gu Liumin chose "The Rotation of the Earth" as the main teaching content and used micro-media teaching resources to teach in a way that flipped the traditional classroom [4].

In the design of small micro-courses, Professor Li Jiahou has proposed 17 basic recommendations for micro-course design, such as a micro-course should only cover one basic point, should be limited to 10 minutes, should not easily skip the classroom step, should provide students with more suggestive teaching information, should have appropriate student questions, and should end with a short student question. The students should have a short summary of their learning at the end of the lesson [5]. Hu Tiesheng focuses on various aspects of microlearning course production design: emphasizing the miniaturization of knowledge points; using various audio-visual and multimedia teaching techniques; and emphasizing the importance of microlearning production design to enhance a contextual and artistic expression [6].

From the information and papers consulted, it can be seen that domestic experts have now conducted many aspects of research on the definition, concept, and characteristics of microteaching. However, most of the current research on microlessons for poetry is only at one level of theoretical research, and there are relatively few studies on the practical combination of poetry and microlessons.

### 1.3.2. Status of Foreign Research

The formal birth of micro-lessons can be traced back to 1963, when Stanford University developed a micro-formatted teaching course for teachers' skills training, which mainly contains three key words: "decomposition", "5-10 minutes" and "video". It contains three key words such as "break down", "5-10 minutes", and "video" [7].

Before the formal introduction of microlearning, short video programs have been introduced in foreign countries through radio and satellite television. In other words, a video of a few dozen words and a second or a few minutes is used to introduce some life tips and knowledge to the public[8]. In 2008, Professor David Penrose formally introduced the concept of "micro-course" for the first time, pointing out that: "Micro-course is an online or mobile learning system that is based on the concept of "micro-learning". Micro-courses are actual teaching contents for the purpose of online or mobile learning, which need to highlight the key concepts, topics and main activities of the content covered within 1-3 minutes, and guide the majority of students to fully utilize the educational network as a powerful learning platform, actively carry out online learning practice activities according to online learning resources, and construct the basic knowledge they need to learn [9]. " In 2008, David Penrose of Juan College (sanjuancollege), New Mexico, USA, formally and publicly introduced this concept of online microlearning and began to use it widely in online education courses. He analyzed that a microlearning course is a sixty-second video course recorded by playing audio or recorded video or audio-visual means with pedagogical constructivism as the main guiding idea, online video learning or adopting mobile learning as the main purpose, based on a brief and clear teaching topic or keyword concept as the main teaching content [10].

From the information and papers consulted, it can be seen that foreign research on microlearning is relatively early, and more theories have been proposed for some concepts and contents of microlearning. However, there is still a big technical gap in the development of

microlearning technology for some training courses for primary and secondary school students, and the content structure of the courses is relatively loose.

## **1.4. Research Content Methodology and Innovation**

### **1.4.1. Content of the Study**

Collecting materials and creating images. Integrate resources, post-production, and complete the production of micro-course. Combine professional video production skills, use flash, integrate network resources, and conduct professional post-production to further combine micro-lessons with poetry to preserve traditional culture. From the content about poetry that students are required to master in the high school curriculum standards, the teaching design of the micro-lesson on the Tang poem "Ascent to the Heights" was developed, focusing on writing the sub script and conducting the design of the lesson plan, as well as the post-production design and development of the micro-lesson using flash and Premiere software.

### **1.4.2. Methods of the Study**

#### **(1) Literature analysis method**

Before writing the thesis, theoretical support is essential. When writing, we rely on a large number of theoretical bases, using art, literature and other related theoretical bases as support, and watch the corresponding micro lessons and check the related papers on the Internet, so as to sort out and complete an academic paper.

#### **(2) Case Study Method**

This paper mainly focuses on the work micro-lesson "Ascent" as the basis for practice to start writing the paper, for the object designed and studied, and then summarize the application of micro-lesson in teaching poetry.

#### **(3) Experience Summarization Method**

Through the observation of many current micro-lessons and the production of the graduation work "Ascent", we can summarize the role of micro-lessons in poetry teaching, which can provide inspiration for the creation of future poetry micro-lessons.

### **1.4.3. Innovations of the Study**

Taking ancient poems and poetry as the main body, we explore the cultural characteristics of poetry, write a text script, and create a micro-lesson video of Ascent to the Heights, thus making the micro-lesson and poetry teaching well together and allowing people to experience the charm of poetry teaching.

Based on the school's resources and professional advantages, this work makes full use of the professional knowledge learned and uses computers and software such as Adobe Photoshop, Adobe Premiere, and Adobe Flash Professional CS6 to capture images and videos of the micro-lesson on ascent, and then post-processes them to create the micro-lesson video on ascent.

The design and development of ancient poetry micro-lesson content is one of the development directions of micro-lesson teaching in the future. At present, the development of micro-lesson for subject content is distributed in computer science and geography, etc., and the development of micro-lesson content for ancient poetry is relatively little researched, while students at high school level just need concise and clear micro-lesson content to help them lay a good foundation. Therefore, this paper closely combines micro-lessons with poetry teaching content, using flash animation to improve the function of micro-lessons for poetry classroom teaching, and also to promote secondary school students' personalized independent learning of poetry.

## 2. Overview of Micro-lesson

### 2.1. Definition

Micro-lesson is a newly emerged online video course different from the previous types of courses, which can support a variety of learning styles. Micro-lesson is designed for a key or difficult point of the subject, including its development, and is a situational online course for a certain part of the teaching process. The definition of micro-lesson given by Jia-Hou Lai is: "Micro-lesson" (or "micro-course") is a short content of less than 10 minutes in length, with a clear pedagogical objective, and only one problem is illustrated in a micro-lesson [11]. Therefore, a micro-lesson is a lesson plan that is designed, produced with various materials according to the requirements of the course, and played in short videos that are placed on various learning platforms on the Internet for learners to use.

### 2.2. Characteristics of Micro-lesson

#### (1) Short learning time and little teaching content

Video is the core component of micro-lesson. According to the cognitive characteristics and learning rules of primary and secondary school students, the length of "micro-lesson" is generally about 5-8 minutes, and the longest should not exceed 10 minutes. Compared with traditional classroom, "micro-lesson" is more suitable for teachers' needs and students' knowledge learning because of its focused questions, prominent theme, focus, and less teaching content [12]. Micro-lessons have prominent topics and specific contents.

#### (2) Microlearning is video-based

Microlearning is through video playback, and the video format must be a media format that supports online network playback. These micro-lesson videos can be downloaded by learners on the Internet and then stored on their computers or cell phones, so that the micro-lesson videos can be watched anytime and anywhere, and the video content can also be paused for viewing, which greatly improves the learning efficiency of learners.

Among our small class teaching design, considering the above all is students, students of different levels, to the requirement of learning content is different, so in the design of teaching content, aiming at the students' individual differences, clear every lesson "micro" video of the teaching content, to targeted, purposeful, convenient for students to choose its own study of episodic learning content, Truly "teach students according to their aptitude".

### 2.3. Strategies for Flash Animation Design in Micro lessons

In the production of micro class, flash animation is used to make each scene. The production of animation is more likely to arouse students' interest, and it is also very helpful for students to understand the content of ancient poetry. When designing scene pictures and animated characters, we should not only pay attention to the overall design of character content, but also pay attention to the overall design of scene pictures. In the overall design of teaching content, strive to be concise, just the classroom teaching of each core content and the framework of the main knowledge points fully presented and highlighted. As for the flash courseware of "Climbing the Heights", the key point is to present the reading and appreciation of this poem and the feelings the poet wants to express. In the elaborate design of each application scene in the picture, strive to do as much as possible beautiful, prominent focus. To this end, when designing in Flash, every picture should be well connected and the color of every scene should be coordinated. And, in the flash character design, is a main character throughout the part of the scene picture.



### 3. Design of MicroLesson of "Climbing"

#### 3.1. Overview of Micro-course Content

The micro lesson is mainly designed according to the Tang dynasty poem "Climbing High". The content of the micro lesson consists of five parts: introduction-author introduction -poetry creation background-poetry sorting -after-class practice, and is made into a teaching-assisted micro lesson. The purpose of this micro course is to enhance the ability of learners to learn ancient poetry, and also to teach learners the excellent traditional culture reflected in ancient poetry, so that learners can learn to appreciate the seven-character poem and feel the feelings expressed by the poet. The micro lesson "Climbing" is a text for the second year of senior high school, which is a compulsory course for senior high school. This poem is also chosen to play a certain auxiliary role for teachers in the teaching process. In the production of micro lesson, animation is used to show the content of each part. Students can better grasp the interpretation of the key and difficult words in the poem, the artistic conception displayed by the whole poem and the emotion expressed by the poet, and also better let learners experience the charm of classical culture.

#### 3.2. Teaching Design

This work is mainly based on the poetry content that students need to master in the high school Chinese class, analyzing the teaching design, designing the text script and the shooting script, and making the micro lesson of Tang poem "Climbing High", giving full play to the role of micro lesson in poetry teaching. With the help of the carrier of micro lessons, the work explores the unique charm hidden in poetry culture. Taking ancient poetry as the main body, exploring the cultural characteristics of poetry, and making the ascending micro-lesson video, so as to achieve a good combination of micro-lesson and poetry teaching, so that people can feel the charm of poetry teaching. Through analyzing the current situation of high school teaching of ancient Chinese poems and the analysis of the tang poetry "up", according to the principle of micro class design and strategy, combined with the students' learning, the micro class is mainly by the import, the author introduction, background, comb lines and after-school practice of five parts, using the vivid and interesting animation, make the students easier to understand the connotation of classical poems, "high" Feel the feelings the poet is trying to express.

#### 3.3. Work Content Design

This high school micro class from Han Yu praised Du Fu's lyric poem "only the ministry of work called the United States, the poet of the day has no analogy" to carry on the introduction, from this poem to ask students, so as to stimulate students' interest, easy to understand the course content. In the micro class, after the title of the poem is imported, the teaching session will be entered. First read the poem, let students feel the poetry, and then use a small animation to present the author's brief introduction, the author introduction is surrounding the use of flash du fu to explain characters, painted by use of du fu's life, design every scene, such a small animation, let the students can quickly understand the poet, and let students understand the author's life, In this way, it is easy for students to have empathy, so that students can better bring their own emotions into the poem, and experience the feelings that the poet wants to express. Then animation is used to present the creation background of the poem, which is also explained around the characters of Du Fu drawn in flash. By introducing the creation background of the poem, each scene is designed so that students can feel the poem with known conditions, which will make it easier for students to understand the poem. After that, I began to sort out the meaning of the words in each poem, the translation of the poem and the emotion that the author wanted to express. I used animation to present the picture that the poem wanted to express after each translation, and combined animation with the picture of the poem, so that students could better remember the content of the poem and understand the meaning

of the poem. When presenting the feelings that the author wants to express, it is also to connect the feelings that each poem wants to express with the picture, so that the picture presented is consistent with the feelings that the author wants to express, so that the students can better understand the feelings that the poet wants to express. Finally, enter into the practice of consolidation, consolidation is conducive to deepen the impression of students, so that students do not understand the knowledge points to deepen the impression, but also to make the micro class to present a better effect.

### **3.4. Pre-production Preparation**

The acquisition of animation materials in micro-lesson production: this paper is the animation video production of micro-lesson "Climbing". The sources of the materials for micro-lesson production are three aspects: one is obtained from the Panda Office website; Second, it is obtained from webmaster website. The third is to use Photoshop CS6 and Flash CS6 software to make their own materials.

## **4. Development of Micro lesson of "Climbing"**

### **4.1. Selection of Development Tools**

At present, the video production and shooting methods of micro-class can be generally divided into three kinds: external course video tool software, screen video and professional micro-class-based course video production using software [13]. We need to choose the most appropriate network micro-lesson video recording teaching method according to their actual needs, so as to achieve the best micro-lesson teaching effect.

According to the teaching design of "Climbing" and the design of shooting script, I mainly used three software to make micro-lesson tools. Use Photoshop CS6 software to make material pictures, static pictures to make dynamic pictures, and then you can also cut and beautify some pictures and other aspects of processing. Use Flash animation production software to create micro class animation video. Using Flash can produce mask animation, shape tween animation, traditional tween animation and button animation, etc., these animations can meet the design of the theme content of the work. After using Flash to make every scene and picture of animation, use Premiere to make animation material into a complete material, and add subtitles, dubbing, production transition, add background music and so on.

### **4.2. Production and Generation of Micro lessons**

#### **4.2.1. Production of Micro lessons**

The micro lesson of this work is mainly made by Adobe Flash Professional CS6 animation software. The first part of the micro lesson content is to choose Han Yu's poem praising Du Fu: "Only the ministry of Work is called the Whole Country, the poet has no imitation" to begin to introduce the topic, through the teacher's explanation to introduce Du Fu, point out that the teaching content of the micro lesson is to learn the ancient poem "Climbing high".

Then recite the poem "Climb", using the background picture plus the whole poem content and poem pinyin, so that students can feel the whole poem very well.

The second part of the micro lesson is about the introduction of the author. According to du Fu characters, the scenes and pictures of the introduction of the author run through the whole scene and make the corresponding scene pictures according to the corresponding text, and make the pictures of this part by using Flash mask animation, traditional tween animation and buttons.

The third part of the micro class is the background of poetry creation, so that students can understand the background of poetry creation, so that students can better bring themselves into poetry, experience the poet's feelings. This part also makes use of the corresponding text

in the background of poetry creation to produce the corresponding picture, and makes use of the mask animation in Flash, traditional tween animation and guide animation to produce the corresponding picture.

Micro class in the fourth part is the comb lines, combing poetry word meaning of each sentence, poem translation and the author to express feelings, using animation to present each sentence after the translation of poems to express, using animation combined with poem image, so let the students can better remember poetry content meaning and understanding of poetry. When presenting the feelings that the author wants to express, it is also to connect the feelings that each poem wants to express with the picture, so that the picture presented is consistent with the feelings that the author wants to express, so that the students can better understand the feelings that the poet wants to express. Use Flash traditional tween animation, tween shape animation, guide animation and so on to produce the corresponding picture.

The last part is the after-class exercise, the exercise is to explain the words in the poem, mainly by using the Flash button and the corresponding code to achieve.

#### **4.2.2. Generation of Micro-lessons**

PremiereCC2018 software is mainly used to complete the production and generation of the late micro lesson. After Adobe Flash software is used to make each scene, bumblebee screen recording software is used to record it as video material. Then all the recorded videos are imported into Premiere media library and placed on the timeline to start editing and splicing.

After all the video materials are edited, the next step is to edit the dubbing materials of the micro class. Import the sound materials already matched into Premiere material library, and then beautify the dubbing materials, and connect the dubbing and every picture of the poem, and finally import the background music materials, edit the background music, so that you can complete the editing of the sound part of the micro lesson.

#### **4.3. Test of Micro Class**

After the production of the micro lesson in PremiereCC2018 software, the work will be exported as a video in MP4 format, and then use Tencent video to watch the effect of the work, and modify if there is any unsatisfactory place.

### **5. Conclusion**

Combined with the design and development research of the micro lesson, it is found that the micro lesson and the design and development of tang poetry appreciation in high school Chinese have unique advantages. In the teaching of ancient Chinese poetry in senior high school, students have great problems in learning ancient Chinese poetry because many words and meanings of ancient Chinese poems are difficult to understand and the feelings expressed by poets are not well understood. The development of micro lessons of ancient poetry presents all the pictures of ancient poetry with vivid and interesting videos and animations, which facilitates students' understanding of ancient poetry and improves their interest in learning ancient poetry. Based on the definition, characteristics, principles and strategies of micro-lesson, this paper designs the micro-lesson of Tang poem "Climbing High". Such animated micro-lesson can enable students to learn ancient poetry well. Micro-lesson videos can be watched repeatedly or suspended, which brings great convenience for students to learn ancient poetry, and also for teachers in the teaching process, and can promote the professional development of teachers.

With the progress of society and the development of science and technology, the role of micro-lessons in teaching will become more and more important. People will need more and more kinds of micro-lessons to learn all kinds of knowledge. The production of animated micro-lessons and story-based micro-lessons will also receive more attention and become the focus



of micro-lessons research. In the future, the application of animated micro lesson in Chinese teaching will be more extensive, and the form of development will be more extensive.

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