

# Innovation and Exploration of Course Practice of Animation Major under the Background of "Internet+"

## -- A Case Study of "3D Animation Maya" Course

Peng Chen<sup>1, a</sup>

<sup>1</sup>Anhui University of Finance and Economics, Anhui, China

<sup>a</sup>120081798@aufe.edu.cn

### Abstract

In allusion to the analysis of the poor performance of animation students in "Internet+" events with more innovation and practice, it is proposed that the "Internet+" event ideas is introduced into the practice link of animation specialties, and try to use Internet thinking run through the teaching and practice of the whole course. Students are trained to have crossover integrated Internet thinking via the exploration and reform of the practice link of the "3D Animation Maya" course, which promote students' innovation, pioneer and creativity in the incubation phase of practice results.

### Keywords

Internet +; Animation; 3D animation; Course practice; Innovation.

## 1. IMPORTANCE OF "INTERNET +" IN PROMOTING THE REFORM OF ANIMATION MAJOR

In recent years, the China Internet College Student Innovation and Entrepreneurship Event (short for "Internet+" Game) has successively set off a new round of innovation and entrepreneurship among college students across the country, which male many college student teams of different majors actively participate in the exploration and development activities of various innovative projects. This event is an important platform to fully exercise the abilities of college students; the ability to "discover problems, analyze problems and solve problems" is no learned via specialties alone, it requires college students to constantly think and try in practice, and get "true knowledge" in constant failure and exploration". The "Internet +" event is the all-round simulation of products from creativity development to production promotion, etc., so that college students can get rid of the theoretical "paper talks" and fully display professional abilities. Moreover, in the process of entry practices; make the college students understand the new trend of national economic development, and master the Internet form evolution under the internet crossover, integration concept and innovation 2.0.

The "Internet +" event has played frontier directive role for the development of college disciplines, and further set the direction of the teaching reform of animation major. As far as animation major is concerned, according to the idea of the "Internet+" event, this requires conducting crossover integration of anime originality, expressions with the entity industry and field, use professional overall ability achieve new innovation. After experiencing new changes from traditional animations to digital animations, it can be said that in the "Internet +" era, static teaching modes cannot meet students' dynamic learning needs [1]. The emergence of "Internet +" is a new opportunity for the course practice teaching of animation major, and it is a new challenge.

## 2. SITUATION ANALYSIS OF PRACTICE TEACHING OF ANIMATION MAJOR

According to the characteristics of animation major and discipline development, in order to check the teaching practice effect of animation major, it is necessary to participate in some discipline events to learn and exercise, learn more professional innovation development concepts and professional curriculum practice experience in the process of entries, learn more excellent professional innovative development ideas and practice experience of practice link. In the past three years, the students and teams of animation major in our school actively participated in the domestic college student events and achieved more excellent results. However, it must be said that these events are the traditional college students' major discipline, but in more technological, integrated and actual "Internet +" events, student team of animation major in our school never broke through the range of the province, which will inevitably reflect the deficiency and shortcomings of the course practice. In order to actively promote the teaching reform of animation major, lay down scientific and reasonable coping strategies of course practices, this project research team analyzes practice teaching links of the animation major via two aspects after investigation and research.

### 2.1. Advantages of Practice Teaching

As digital art major, the characteristics of animation major is to conduct practice and creation, on the basis of interesting creativity and ideas, relying on various soft and hardware teaching equipment, and achieving the quiet, dynamic effect is the core expression of animation. Students of animation major will experience a lot of course practice links in the learning process of the specialties-from static state to dynamic state, from surface to three-dimensional. These practice links will make students gradually improve their professional thinking and effectively integrate with practices.

In order to better build the characteristics and highlights of practice of animation major, from 2015, the animation majors grasp the "Practice Teaching and Discipline Event" this "Learning and Event Means", sum up the experience of to build practice teaching characteristics of this major, make the practice link of each specialties correspond to the corresponding discipline event, respectively, encourage students to be bold in blazing new trails in the practice link of specialties. Taking major practice as the core, striving to achieve "doing in learning, practice in doing, competition in practice", and effectively promote and enhance the comprehensive strength of teachers' teaching research and students' professional practice.

### 2.2. Disadvantages of Practice Teaching

#### (a) Single form of work output

Although the expressions of the practice works of the course are different, they all have a common characteristic - they must be based on some kind of display device or output as a printout, so that people can observe these works. Otherwise, the "virtual" two-dimensional or three-dimensional cartoon images and shapes created would be truly "illusory" and completely invisible to the human eye. It should be said that this output means should be the obvious feature of digital art works, but the inability to materialize has become the biggest shortcoming instead. Objectively speaking, in the early new media era, animation is one of the important representatives of new media art field, deeply influenced by new media technology, the creation idea, production methods and dissemination means of animation have undergone profound changes [2]. In the current "Internet+" era, the original way has tended to be traditional, and innovation is inevitable.

#### (b) Shortcoming of students' expression ability

During the research, the project team members found that many students with strong professional practice could make excellent works, but they were unable to express their creative

ideas, thoughts and expressions through words. Students think that their creativity only needs to be expressed through their works, but they are not "ready" to express their creative expressions and feelings in their minds and hearts. In fact, the ability to express and explain creativity is very important, and it is part of the overall professional strength. If students are too shy and introverted to express their personal views and ideas in front of people, then, over time, their ability to express them will be even more lacking.

In recent years, more and more college discipline activities and college discipline competitions and other fields have also put forward new requirements for the overall professional ability of college students, and have successively added the work explanation link and road show link, encourage college students to analyze project works via expressions rich in professional thinking, aim to further enhance the overall professional competitiveness of college students, stimulate their language expression ability and thinking according to circumstances, and then effectively improves the innovation-driven standard and quality of university students. In this context, the practice links of the course must also be changed from the original "do but not say" to "think, do and say".

#### (c) Lack of channels for displaying students' works

According to the current research conducted by the project team members, the works of students of animation major are mainly displayed through several channels, such as on-campus gallery exhibitions, corridor displays, classroom postings, LED screens and LCD TV displays. Strictly speaking, these display channels generally still belong to the traditional on-campus display form, dissemination effort is very limited, which cannot attract more audience popularity and attention; this will also cause student creators and creative teams to not obtain more sense of achievement and performance motivation. Therefore, it is necessary to create an innovative platform for displaying works students of animation major based on the actual needs of course practice.

### **3. REFORM MEASURES AND COUNTERMEASURES IN THE PRACTICE TEACHING OF ANIMATION MAJOR**

Under the leadership of "Internet+", Internet of everything and technological innovation, in order to better make the practice teaching of animation major have innovation, integration and crossover, so that more works and creations can be effectively combined with social development, people's needs and economic drive; further enhance the scientific and technological innovation and entrepreneurial practice of students of animation major in colleges and universities, on the basis of major characteristics and discipline development of animation major, in the past two years, members of the project team have explored and innovated the following aspects of the practice teaching of "3D Animation Maya" course of animation major based on research, analysis and learning, and achieved certain reform effects.

#### **3.1. Conduct Innovative Integration for "Internet Thinking" and Course Practice**

For colleges and universities, the students we train are the future talents of various industries, so teachers should pay more attention to the combination and application of "Internet thinking" in major teaching and practice teaching, so as to fully enhance the innovative thinking mode of college students in the Internet era.

Taking the core course of animation major "3D animation Maya" as an example, besides the conventional teaching means, teachers can scientifically integrate "Internet thinking" with the teaching contents of the course, so that students can understand the possibility of combining professional knowledge with the Internet of everything in learning and practice, enhance the whole ecological world view, and deeply understand the importance and significance of the combination of creative innovation and real industry. Moreover, students will be guided to

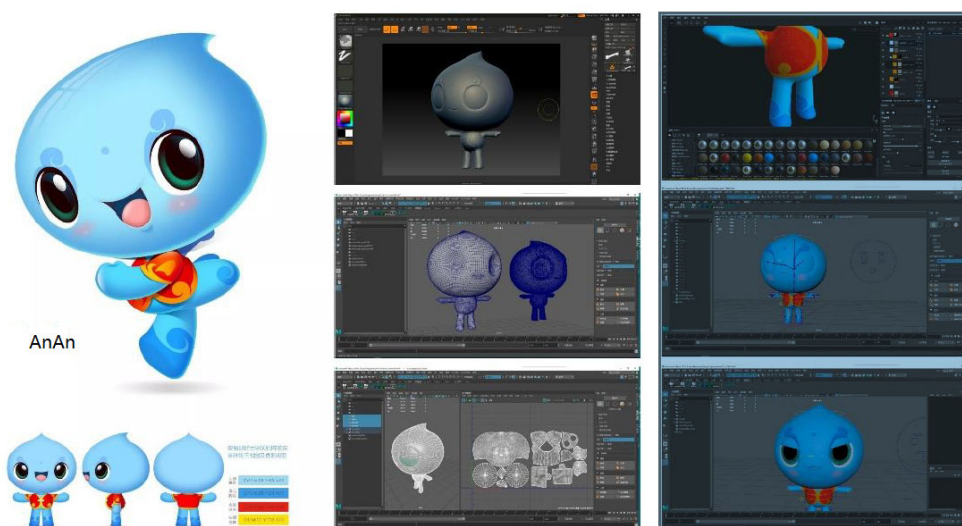
understand more deeply the meaning of "Internet+" and fully understand the connection between their professional courses and the Internet, innovation and entrepreneurship, as well as the operation mode of the project, so that they can gradually form a crossover integration of thinking and creativity, and fully prepare for the subsequent practical reform program of the course. In addition, students will be able to understand the possibility of combining professional knowledge with the Internet of everything in their learning and practice, enhance the world view of the whole ecology, and deeply understand the importance and significance of combining creative innovation with the real industry.

### 3.2. Enhance Diversified Creation and Presentation Forms of Works

In today's era with rapid development of mobile Internet, "Internet+" optimizes and upgrades the transformation of traditional industries through its own advantages, so that traditional industries can adapt to the new development of the present time, thus ultimately promoting the continuous development of society [3]. The presentation ways of existing works lacks the support of innovative ideas and cannot effectively form resonance with creativity and the Internet, as well as crossover platforms and other fields. Therefore, it is necessary to make the output and presentation ways of course practice works more diversified through effective methods, and realize the crossover upgrading of ideas and forms.

Taking "3D animation Maya" course as an example, in addition to maintaining the original animation image, video, still frame work presentation form, the teaching team can guide students to form their own works into entities, but also combine school-enterprise cooperation resources, use 3D printing technology, 3D sculpture technology can transform 3D cartoon shape into plastic, wood and metal and other materials of solid shape. When these virtual images and shapes originally exist only in the computer become solid, which not only will greatly enhance the students' sense of creative achievement and self-confidence, but also in this transformation process, teachers and students work together to innovate, use 3D creative ideas, techniques to model, structure and reconstruct the physical products, and conduct innovative design for a specific function or shape, give it new connotation and meaning, so that the course practice results are more innovative.

In this reform study, Liu Xiaofeng, one of the teachers of "3D Animation Maya" course, led the students to design our school cartoon mascot "An An", and first conduct 3D design, and is currently working with school enterprises to develop 3D printing design plan, In the future, he will place the finished physical product in our university history museum for public display.



**Figure 1.** Cartoon mascot and 3D design effects of Anhui University of Finance and Economics

### 3.3. Integrate Multiple Channels for Creative Product Co-creation

At present, various industries and fields are competing for technological innovation and crossover integration; try to create a more diversified industrial ecology. As the animation major who trains creative and innovative digital art talents, it should also have crossover thinking, get rid of the traditional teaching and practice forms, rely on the characteristics of disciplines, integrate the advantages of multiple channels, and explore scientific and cutting-edge professional course practice programs.

On the basis of the characteristics of the practice works of the course "3D Animation Maya", in addition to enhancing the diversified creation and presentation forms of works, it is also necessary to pay attention to the transformation of the practical results of the course. The traditional form of work presentation ways obviously lacks the possibility of further transformation and development. In today's fast-developing Internet era, especially the "Internet +" such an innovative technology event has put forward higher requirements for the construction and reform of majors and disciplines of many colleges, not only have a sense of innovation, but also need to give creative support based on the network, technology and other platforms.

In order to carry out the exploration at this stage, the students and teachers of the animation major jointly created meme of the cartoon mascot "AnAn", it has already been put into use and has received enthusiastic praise from the students, teachers and alumni. Taking this exploration and innovation as an opportunity, the teachers and students of the animation major will create more animation works based on the Internet platform by relying on the practice part of the course in the future.



**Figure 2.** Dynamic meme of "AnAn", the cartoon mascot of Anhui University of Finance and Economics

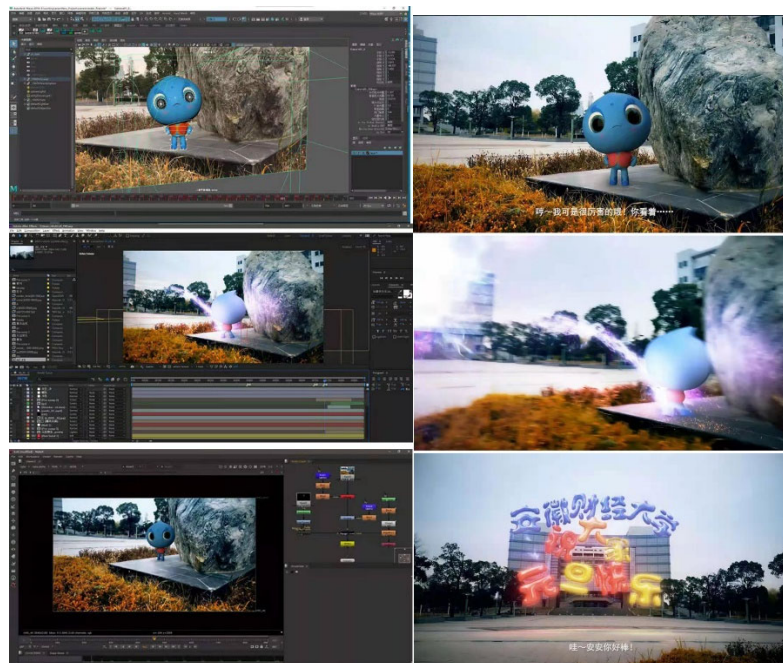
In addition, animation works and animation images also need to have matter, entity, and virtual reality, augmented reality demonstration operations to interpret the creative ideas. This is precisely the shortcoming of the animation major course practice, namely, although there are creative audiovisual display works, but there is a lack of secondary and deep creative extension. In order to solve the current bottleneck, it is necessary to combine the two aspects of "cross-major cooperation" and "school-enterprise cooperation" to solve the problem.

#### (1) Cross-major cooperation

The students of animation mainly use digital art software for applications, but they do not know much about the deeper development and architecture of the program, which are the specialties of computer science and technology major. Therefore, if the cartoon image and dynamic effects designed by the animation major are "in front of the screen" technology, then

the program development and interactive programming conducted by the computer science major are "behind the screen" technology. Therefore, the cooperation between the animation and computer science two disciplines will inevitably resonate, one is the "visual responsibility" and the other is the "technical responsibility", make the cartoon images and dynamics that could only be presented according to the plot to be interacted with keyboard, gesture, camera, touch screen, voice, etc., the cartoon images can be interacted with by keyboard, gesture, camera, touch screen, voice, etc., so that these cartoon images can be interacted with "jumping" in the real environment, web pages and intelligent terminals and other platforms, thus creating unlimited possibilities.

At present, animation major and students under the leadership of Liu Xiaofeng, are cooperating with our computer science and technology major in augmented reality exploration of cartoon images, and has achieved preliminary progress and results so far. The future will further explore the application of deep-level animation VR virtual reality



**Figure 3.** Animation majors and computer science and technology major cooperate to study augmented reality(AR) effect of animation

## (2) School-enterprise R&D co-creation

There will be a lot of original animation images produced in the practice link of "3D Animation Maya" course, and the IP (intellectual property) of these animation images should focus on the innovation, applicability and market applicability of the practice results. In the era of "Internet +", with the gradual strengthening of IP awareness, the IP business opportunities of domestic animation films are becoming more and more prominent, and the value of copyright is also attracting attention [4]. Therefore, it is necessary to effectively strengthen the connection between schools and enterprises, and hire enterprise experts to teach teachers and students the experience and ideas of animation IP application, product design and fusion design. Animation image design requires higher level of innovation and creativity, and students must be able to design an impressive image to have market, otherwise everything is empty [5]. On this basis, the practice team of teachers and students on campus can modify the practice works and make innovative designs again in accordance with the suggestion and solutions given by

enterprises and experts, report patent products, subject competitions and commercial promotion of practice achievements based on actual check, tests and follow-up plans.

At present, animation major has already linked with school-enterprise partners and started to design commercialized products of animation IP images, which will be tested and produced and promoted after successful development.



**Figure 4.** Animation major and school-enterprise cooperation units use animation IP to cooperate in developing desktop doll modeling (demonstration effect)

### 3.4. Create New Platforms to Show the Innovative Achievements of the Course

In the roadshow links of the school and provincial events of the "Internet+" in recent years, the animation student teams did not perform well in the field, and did not show the proper state of elaboration and infectious power. For creative and innovative works, the creators need to grasp the problems and solutions on the spot to analyze the realism and feasibility of their works, products or projects, fully communicate and deepen their understanding with the judges and investors of the events, and get more recognition from the professional field. This kind of field performance is not something that can be achieved overnight, but requires long-term accumulation and exercise of the students.

At present, according to the requirements and objectives of this study, under the joint efforts of many parties, the animation major has built an H5 display platform of professional innovation achievements called "no creation, no new, no animation", this platform will be linked with the official QQ, official WeChat, official homepage and other outreach network platforms of the College of Art and Anhui University of Finance and Economics. The platform will be synchronized with the official QQ, official WeChat, official homepage of Anhui University of Finance and Economics and other outreach network platforms. The H5 display platform makes students' innovative works to show the learning achievements of our animation students to all walks of life through pictures, GIF, video streaming media and text, etc.

Moreover, under the encouragement and guidance of the lecturers, more and more students of animation major actively participated in the recording of the introduction and presentation videos of their works, in the process of such practice and exercise, the students grew from initial timidity to later confidence, and were able to face the crowd and the camera to explain their own or the team's creative ideas and innovative features. With the development of this exercise form, students will accumulate more language expression ability; it not only enhances students'

self-confidence in creation, but also makes students get sufficient and effective exercise of the realistic roadshow of the event, laying a solid foundation for future participation in the roadshow of the "Internet+" event.

After exploring and building the WeChat display platform, it has been recognized by many sides. More people pay attention to the students' professional ability and creative style via the "window" of this display platform, also concern about the innovation and construction of practice teaching of animation major. In the future, we will make this display platform link with more internet platforms, web pages and APP inside and outside the university, and strive to create innovation and practice display system with more connected ecological animation major course.

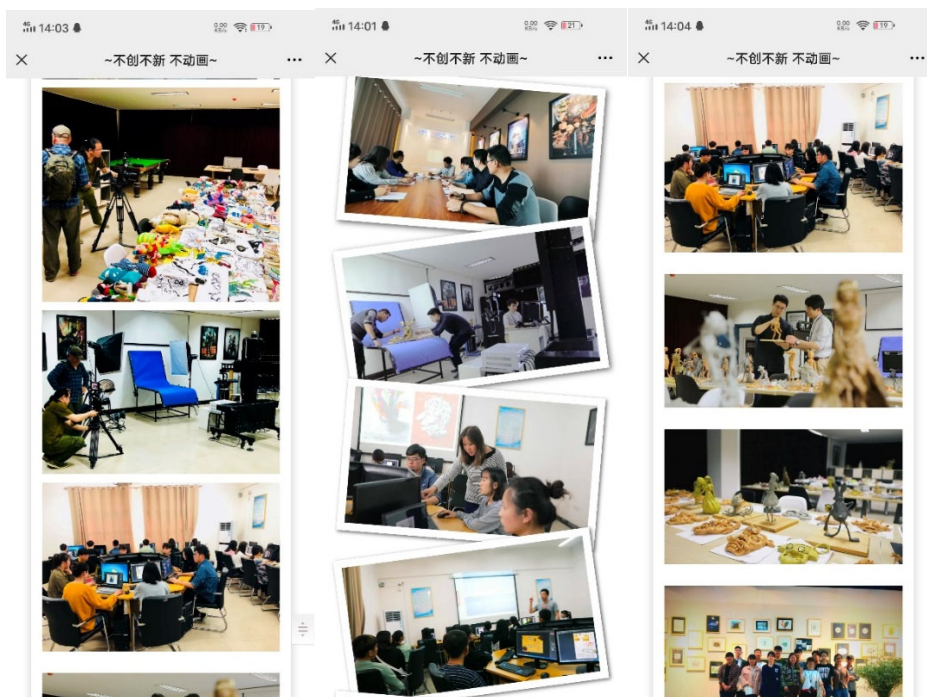


Figure 5. H5 display platform of "no innovation, no new, no animation" innovation results of animation majors (part)



Figure 6. Animation students explain the creative ideas of their works through videos (part)



## 4. CONCLUSION

With the gradual development of the national innovation 2.0 strategies and "Internet+" action plan, the exploration based on the Internet and innovation in various majors in universities nationwide has already begun, and the integration of the course practice links with "Internet+" is bound to become a new form of teaching development, however, it is still in the exploration stage for teachers of animation major in many colleges and universities.

Applying the concepts and standards of "Internet thinking" and "Internet+" to the practice teaching of the course can make the teachers continuously improve their teaching practices and ideas, and continuously promote the integration and practice of "Internet thinking" with the course practical teaching via regular recording, thinking and summary of teaching practices, then students will be guided to innovate and create based on the requirements and concepts of the "Internet+" event in a targeted way, make works created and developed by them have stronger practicality, creativity and vitality, contain the connotation of experiential and open Internet thinking. Thus, they have better innovation and execution in the "Internet+" competition and related innovation and entrepreneurship events. In the future, the project team members will strive to record more data and information during the practice teaching links in order to get more progress and gains in the next deep research plan.

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