

Teaching Design of Knowledge and Intelligence: Lead Students into the Course

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Abstract: Today is an era of knowledge and intelligence. It is very necessary for students to have an in-depth understanding of knowledge and intelligence during their university life. In order to allow undergraduates to learn and understand knowledge and intelligence-related content better, we have offered knowledge and intelligence topics in some related course for them. Leading students into the course is very important. If students can be deeply attracted from the first lesson of each course, the subsequent teaching process will be smoother, and the teaching effect will be better. We lead students into the course attractively by using a question "When did humans separate from other animals?" and a science fiction novel called *Heard the Truth in the Morning*. We selected content related to the question from the novel and make a video. After watching the video, the students were inspired in thinking about that question. After a series of reflections, the students had a deep understanding of the great significance of walking upright. Next, we can organize students to debate whether "walking upright" or "using tools" can better distinguish humans from animals. The students were lead into the course in a lively and interesting way by using the approach propose in the paper.

Keywords: Teaching Design, Knowledge, Intelligence.

1. Introduction

Today is an era of knowledge. Today is also an era of intelligence. It is very necessary for students to have an in-depth understanding of knowledge and intelligence during their university life, especially for the students majoring in artificial intelligence and computer science. In order to allow undergraduates to learn and understand knowledge and intelligence-related content better, we have added knowledge and intelligence topics to the machine translation course and the intelligent data and knowledge engineering course.

From 2018 to now, these courses have been offered for five years. In these five years of teaching practice, we have continuously adjusted the teaching design according to the teaching implementation status. The teaching effect has been continuously improved, and a lot of experience has been accumulated. In order to summarize these experiences and prepare for our future plans to offer a general elective course on knowledge and intelligence for all undergraduates of our university, we plan to write a series of papers. This is the first paper in such series, the teaching design of leading students into the course.

2. Lead Students into the Course

Leading students into a course is very important. If students can be deeply attracted from the first lesson of each course, the subsequent teaching process will be smoother, and the teaching effect will be better.

There are many ways to engage students in the classroom. According to our teaching experience, leading students into the course lively and interestingly is more likely to attract students. Therefore, we lead students into the course attractively by using a question "When did humans separate from other animals?" and a science fiction novel called *Heard the Truth in the Morning*.

3. About *Heard the Truth in the Morning*

This book tells such a story. Humanity has built a world's largest particle accelerator to explore the super unified model of the universe. At the moment when the particle accelerator was about to start, the cosmic troubleshooter appeared and vaporized the particle accelerator. The troubleshooter told the scientists if they turn on particle accelerators it will lead to the destruction of the universe.

Scientists asked the troubleshooter to directly tell humans the truth about the super unified model of the universe. The troubleshooter could not tell the truth about the super unified model because of the "Knowledge Sealing Criterion". So, scientists came up with a "best of both worlds" approach: tell the scientists the ultimate secret of the universe and then destroy the scientists. The troubleshooters agreed to the scientists' request. The scientists have created an "altar of truth". They took turns going to the altar of truth to get the truth they want to know. And then they were destroyed.

4. Filtering of the Content

Heard the Truth in the Morning itself is a very interesting story, and the first half of the story can just inspire students to think about the question asked at the beginning of the course: "When did humans separate from other animals?" We selected content related to the question from the story and make a video. This video contains the following content.

Humanity has built a large particle accelerator to explore the super unified model of the universe. The accelerator is 40,000 kilometers long and orbits the Earth at the equator. Suddenly one day, the scientists at the Global Accelerator Control Center found that the accelerator had disappeared. Accelerators located above ground, underground and in the sea have all disappeared.

It turns out that the cosmic troubleshooter vaporized the accelerator. The troubleshooter explained that if this accelerator is operated at maximum power, the energy will be close to the energy of the Big Bang, which may bring disaster to the universe. The resulting decay of the universe will expand at the speed of light. The decay will destroy the earth in 0.03 seconds, the solar system in five hours, the nearest stars in four years, and the Galaxy in 100,000 years... Nothing can stop the expansion of the decay sphere. As time goes by, the entire universe will be destroyed. The troubleshooter's job is to monitor the universe in order to stop these dangers before they arrive.

Scientists feel that the universe is too big to fully monitor. The troubleshooter explained that it only needs to monitor the civilized world that has evolved to a certain level in the universe. The operating mechanism of the cosmic risk elimination system is as follows: it first monitors worlds where life has appeared through a large number of sensors scattered in the universe. When it is found that civilizations capable of producing high energy level energy have appeared in these worlds, the sensors will emit alerts; After receiving the alert, the troubleshooters will go to those worlds to monitor the civilizations in these worlds. But unless these civilizations really want to conduct experiments on the high energy level, they will never interfere with them.

Scientists ask the troubleshooter when they first started to notice humans. From the Planck era? The troubleshooter said that will be earlier than that. Scientists ask whether it is from Newton's time? It's also earlier than Newton's time. Could it be that it dates back to the time of Aristotle? Neither. The alarm was raised 370,000 years ago.

The troubleshooter showed the scientists surveillance video of 370,000 years ago. There are several black spots on the African continent. After the image is zoomed in, it can be seen that they are several human beings. The image is zoomed in again, and A person's upturned face fills the image. On the face was a pair of deep-set eyes. There were some silver spots in the dark pupils, which were the starry sky reflected by the eyes. At this time, a sharp siren sounded, and the troubleshooter told people that the precaution system had sounded the alarm. This primitive man has been looking up at the stars for longer than the warning threshold and has shown full curiosity about the universe. So far, ten such over-limit events have been observed in different locations, meeting alarm conditions.

Scientists don't understand. Because the troubleshooter has said that the early warning system will only sound the alarm when a civilization capable of generating high level energy appears. The troubleshooter explained that what they saw on the monitor was exactly such a civilization. When life becomes aware of the existence of a mystery of the universe, it is only one step away from finally solving it. For example, it took life on earth more than four billion years to realize the existence of the mysteries of the universe for the first time, but at that moment it was less than four hundred thousand years before human built the accelerator, and the most critical acceleration period of this process was less than five hundred years. If that primitive man stared at the universe for a few minutes and saw a gem, after that the entire human civilization just bent down to pick it up.

Scientists finally understood and realized how great the primitive people were who looked up at the stars.

5. Inspiration from *Heard the Truth in the Morning*

"When did humans separate from other animals" is an interesting question, and also a difficult question. We use *Heard the Truth in the Morning* to inspire students thinking about that question.

After watching this edited video, students are thinking about why "the primitive people who looked up at the stars were great?". Then think about "How can a human being look up at the stars?" and so on. After a series of reflections, the students had a deep understanding of the great significance of walking upright. Next, we can organize students to debate whether "walking upright" or "using tools" can better distinguish humans from animals. All these lead students into the course in a lively and interesting way.

6. Conclusion

Leading students into the course is very important. If students can be deeply attracted from the first lesson of each course, the subsequent teaching process will be smoother, and the teaching effect will be better. we lead students into the course attractively by using a question "When did humans separate from other animals?" and a science fiction novel called *Heard the Truth in the Morning*. We selected content related to the question from the novel and make a video. After watching the video, the students were inspired in thinking about that question. After a series of reflections, the students had a deep understanding of the great significance of walking upright. Next, we can organize students to debate whether "walking upright" or "using tools" can better distinguish humans from animals. The students were lead into the course in a lively and interesting way by using the approach propose in the paper.

Acknowledgment

We would like to thank "The 2021 3rd Demonstration Courses for Thought of Northeastern University (Machine Translation Course)," and "The 2021 Ministry of Education Industry-University Cooperation Collaborative Education Project (Machine Translation / Natural Language Processing Course)."

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