# Teaching Presentation

Part 1: Teaching Introduction

ONE

Teaching Context

TWO

Teaching Methodology

THREE

Teaching Design

Part 2: Teaching Demo

FOUR

Teaching Demo

# ONE Teaching Context

# ONE Teaching Context

# **Target Students**

ТWО

Teaching Methodology

THREE Teaching Design

FOUR
Teaching
Demo





Freshmen
Computer Science
Major



Good at information processing and interacting



Weak in output,
especially writing
and critical thinking

ONE
Teaching Context

## Textbook

TWO
Teaching
Methodology

THREE Teaching Design

FOUR
Teaching
Demo



# TWO Teaching Methodology

#### ONF

Teaching Contex

## **OBE** (Outcome Based Education)

#### TWO

Teaching Methodology

THREE Teaching Design

FOUR
Teaching
Demo

#### Clarifying

All objectives
should be clarified
to what students
will be able to
understand and
perform.

#### Reverse Design

The students' final intended outcomes should be the start of the teaching design.

#### High

Teachers should set high and challenging standards of performance.

#### Expanded

Expanded opportunities should be offered to students.

Teaching Contex

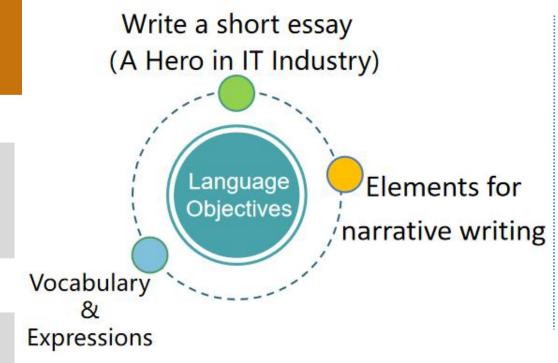
### **Unit Teaching Objectives**

TWO

Teaching Methodology

THREE Teaching Design

FOUR
Teaching
Demo





# THREE Teaching Design

Teaching Contex

TWO
Teaching

THREE
Teaching
Design

FOUR
Teaching
Demo

# **Teaching Process**

	Session 1 (periods)	Before Class	Conduct interviews on different dreams of different generations.	Motivating
	1-2	In Class	Present and discuss the interviews. Skim and scan Text B on page 184.	Output and Assessment
		After Class	Read Gen-Z Talk Spot on 162 and do exercise on page 164 and 165.	Assessment
1	Session 2 (periods) 3-4	In Class	Watch the video about the most important features of different generations. Listen to Episode 2 on page 168. Talk about your future.	Input, Output and Assessment
		After Class	Preview Text A on Page 178 and do Task 2 on Page 180.	Input and Assessment
	Session 3 (periods) 5-6	In Class	Prepare for the essay writing A Hero in IT Industry based on analyzing Text A Sky-high ambition to fulfill an "unreachable" dream again. (Demo)	Input and Assessment
		After Class	Write the short essay A Hero in IT Industry.	Output and Assessment

Teaching Contex

## Demo Objectives

 $\mathsf{TWC}$ 

Teaching Iethodology

THREE Teaching Design

FOUR
Teaching
Demo



- 1. To know the elements of narrative writing and the use of chronological order
- 2. To know the use of past tense and acronym
- 3. To write a short essay A Hero in IT Industry



- 1. To form critical thinking and comprehensive thinking
- 2. To cultivate integrated competence
- 3. To enhance the sense of values

Teaching Context

#### Demo Procedure

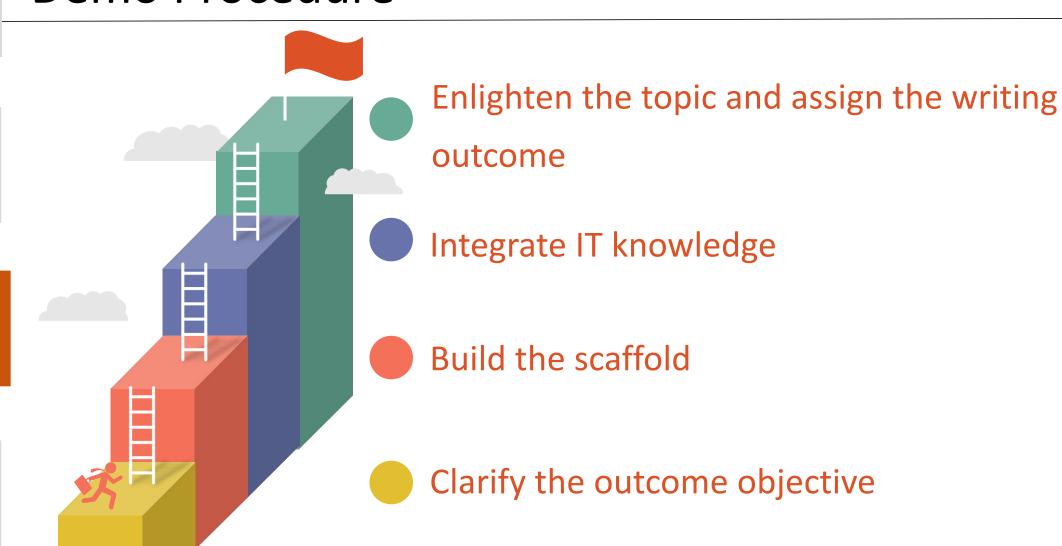
TWO

Teaching Iethodology

THREE

Teaching Design

FOUR
Teaching
Demo



**Teaching Contex** 

## **Teaching Assessment**

#### Formative Assessment



#### **Summative Assessment**

TWO

Teaching Methodology

THREE Teaching Design

FOUR
Teaching
Demo



Language exercises



Interview shooting



Essay writing about A Hero in IT Industry



Students' interaction and performance



Achievement test

# FOUR Teaching Demo



# Sky-high ambition to fulfill an

Nan Rendong (1945-2017)

"unreachable" dream

# **Story Structure**





1. It's important in life to have dreams. Whether these are dreams for your future, your family's future, or for the future of your country, having dreams can give people the motivation to succeed and make the world a better place.

- 2. When talking about dreams, many people naturally think back to their childhood dreams, which may have been destroyed by the passing of time. However, there are some who are persistent in pursuing their dreams. One of these people was Nan Rendong, the chief scientist for the world's largest radio telescope, FAST. He fell in love with the universe when he was a boy and spent more than two decades trying to fulfill a dream that many described as "unreachable".
- 3. Nan was working as a visiting professor at the National Astronomical Observatory of Japan in the early 1990s when a bold idea came to him.

This was to build a radio telescope 500 meters in diameter to explore the origins of the universe. At the time, the biggest such telescope in China was less than 30 meters across. Giving up his well-paid position at one of the world's top scientific research institutes in Japan, Nan returned to China in 1994 to pursue his "unreachable" dream.

The first challenge Nan and his team had was to find the right location. After 12 years of searching, Nan discovered the perfect place hidden away in a mountainous area of Pingtang County, Guizhou Province. He knew immediately that he had finally found what he was looking for.

In March 2011, construction of the giant telescope began. As the chief scientist and engineer, Nan had to deal with some tough engineering problems. He had to climb up and down 100-meter-tall towers countless times and assess the firmness of the subsoil with his own feet.

# What is "FAST"? (Acronym)

FAST: Five-hundred-meter Aperture Spherical

Radio Telescope

500 米口径球面射电望远镜



From calculating the necessary length of each cable to the precise installation of the reflective panels, Nan personally took care of many technical details. Most of the scientists working on FAST specialized in different fields, but Nan seemed to know everything. This giant, complicated radio telescope project seemed to be made for him.

The construction of the telescope's dome was another challenge Nan had to take on. His team had no reference points to turn to, and no one to ask for help. Nan himself always led his team during the construction process, overcoming one failure after another.

When Nan was 70, he was diagnosed with lung cancer. Although his health was getting worse, he insisted on being present and on site to see the telescope being completed on September 25, 2016. One year later, he died.

- 9. FAST can receive electromagnetic signals from 10 billion light years away, and with it Nan had hoped to discover the origins of the universe, the origins of planets, and the origins of life. Nan believed the primary reason that humans stood out and were able to become such a complex and sophisticated civilization was that we had always kept alive the spirit of exploring the unknown.
- 10. Nan Rendong lived a simple life, with little concern for reputation or wealth. But as a dream-chaser, he thought big and ran at full speed toward achieving his "unreachable" dream. In the end, his career and personal success made an extraordinary contribution not just to China's astronomy research, but to the Chinese Dream as well. (563 words)

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#### Critical thinking

#### 4 Think-Pair-Share

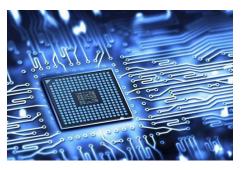
Step 2 PAIR

Work in pairs and compare your lists. Choose the most important events and then draw a timeline of Nan Rendong's story.

#### Milestones when Childhood Falling in love with the universe Hitting on the bold idea to build a radio telescope to explore the Early 1990s origins of the universe when working in Japan 1994 Returning to China to pursue his dream 2006 Finding the ideal place for construction in Guizhou March 2011 Beginning the construction 2016 Completing the construction 2017 Passing away

## Some Challenges in IT Industry for China

微电子与光电子 Microelectron & Photoelectron



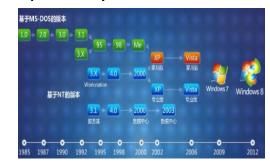
感知 Perception



计算机应用 Computer Application



计算机系统与软件 Computer Systems and Softwares



网络与通信 Network and Communication



网络安全 Network Security



工业软件系统 Industrial Software Systems



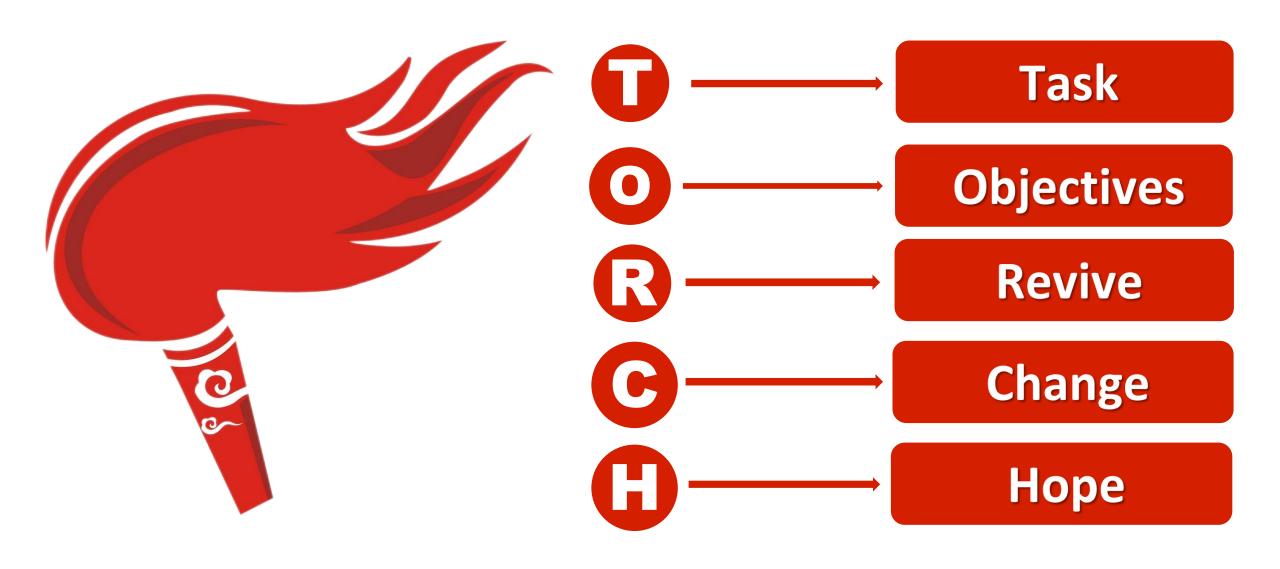
重大突发事件 (属信息领域的部分) Major Emergencies (The information field)



Previous New Next

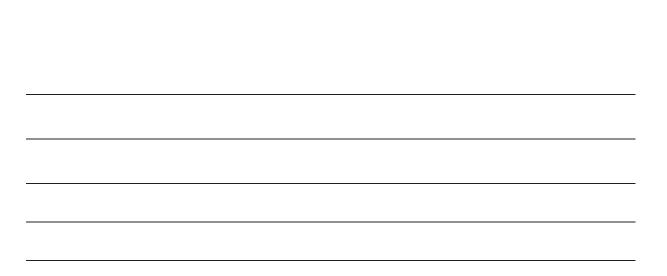
Generation Generation

# What is "TORCH"?



#### Intercultural writing

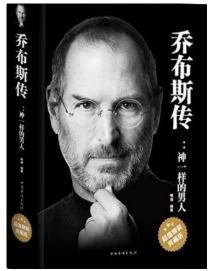
**5** Every culture has its own heroes who are held up as models for others to learn from. They could be scientists, entrepreneurs, athletes, or everyday people who show virtues like perseverance (毅力), courage, kindness, etc. Write a short essay describing the characteristics of a hero from other countries.











# We will be faster!

