

Changes and Trends



Warm Up

When analyzing social changes or business trends, **line graphs** are highly effective tools for examining changes over a period of time or for predicting future trends. Learning how to explain information presented in line graphs in English can help us make effective comparisons and conduct trend analyses.

In Unit 4, we will learn to:

- Describe changes over time shown in line graphs in English;
- Describe future trends shown in line graphs in English;
- Integrate graphical and textual information with everyday life experiences and thereby express personal opinions.

Useful Strategies and Language

1

Line Graphs (1): Analyzing Social Changes Over Time

Mr. Kelvin, a teacher at Hampton College, has noticed that in recent years, the number of students taking summer jobs seems to be decreasing year by year. He searched the school's statistics on summer employment from 1974 to 2024, and the following line graph shows the changes he found.

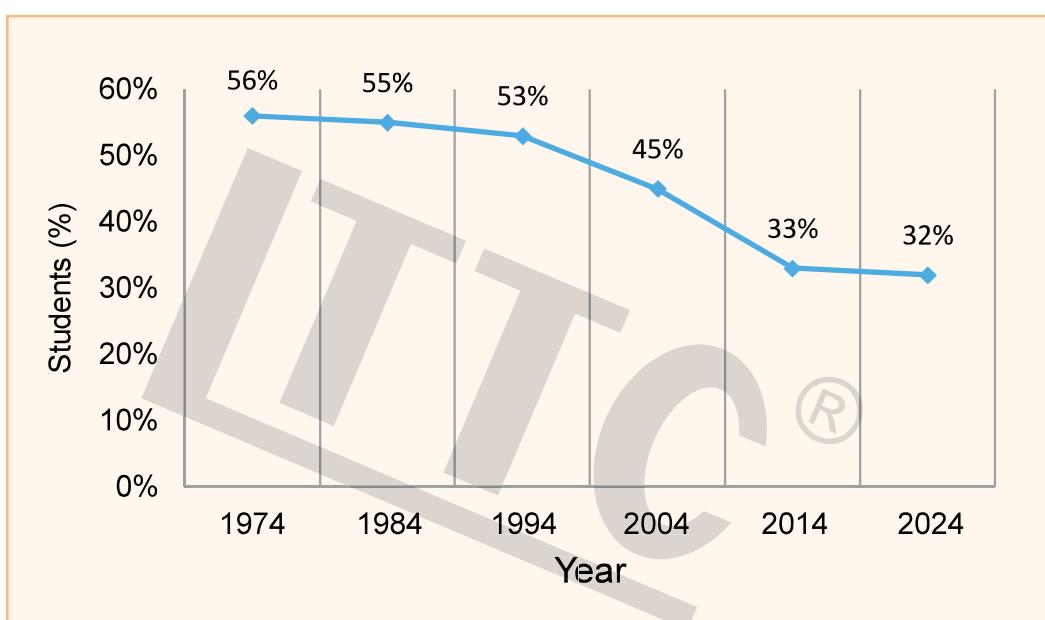


Figure 1 Percentage of Hampton College students with summer jobs (1974–2024)

Explanatory Techniques and Sample Sentences

(1) Describing overall changes over time

- The graph shows that fewer students have summer jobs now than 50 years ago.
- This graph shows how the percentage of Hampton students having summer jobs **declined** between 1974 and 2024.
- The line graph shows the **decline** in the percentage of Hampton students having summer jobs during the past fifty years.



Vocabulary for describing **decreases or declines**
decline (v., n.), **decrease** (v., n.), **fall** (v., n.)



Vocabulary for describing **increases or rises**
rise (v., n.), **increase** (v., n.)

(2) Describing sharp decreases and increases

- The percentage fell **sharply** between 1994 and 2014.
- By looking at this graph, you can see that **the sharpest fall** occurred between 1994 and 2014.
- The line graph shows the percentage of Hampton students working in summer jobs **plunged** from 56% in 1974 to 32% in 2024.



Vocabulary for describing **sharp drops**

sharply (adv.) e.g. fall sharply; drop drastically

sharp (adj.) e.g. a sharp fall; a drastic drop

plunge (v.)



Vocabulary for describing **sharp rises**

shoot up (v. phr.)

surge (v.)

(3) Describing slight changes

- There was almost no change between 2014 and 2024.
- There was only a **slight** decline between 2014 and 2024.
- The percentage **remained** relatively **stable** between 2014 and 2024.
- In the last decade, the figure has **leveled off**, with only a slight decrease in the number of Hampton students working in summer jobs between 2014 and the present day.



slight (adj.)



remain (v.)



stable (adj.)



level off (v. phr.)

2

Line Graphs (2): Predicting Future Trends

Devon City Hospital recently conducted a study forecasting the future use of AI robots in the medical field. The line graph below shows the research team's projected market growth trends for **care robots** and **surgical robots**.

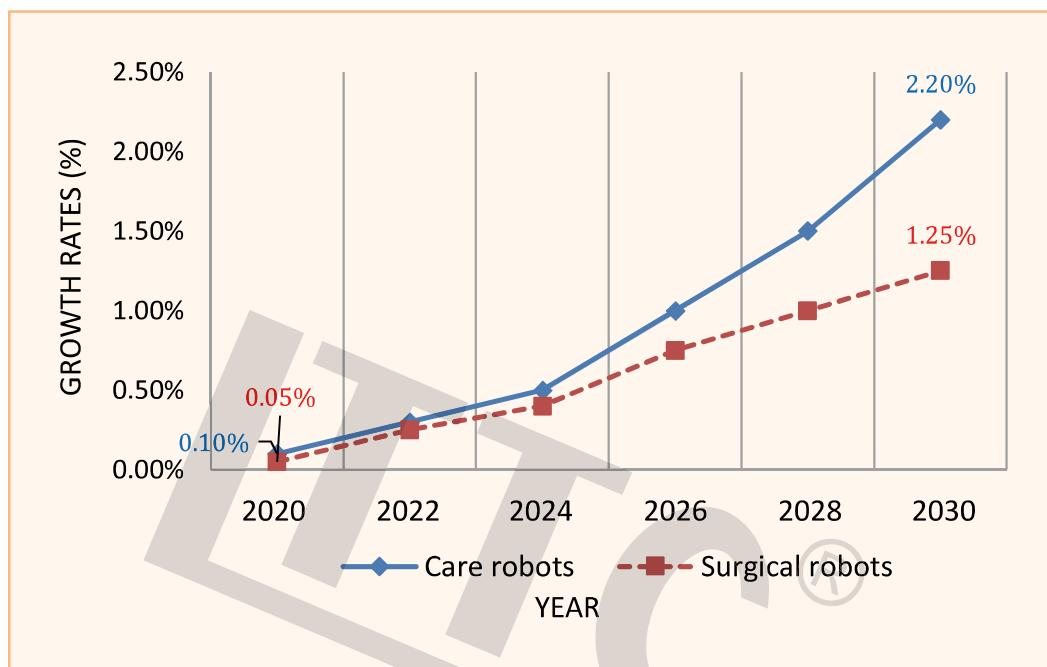


Figure 2 Devon City Hospital: Projected market growth in health related AI technology

(1) Describing overall trend predictions

- Devon City Hospital's market for both surgical robots and care robots **is expected to grow** throughout the rest of this decade.
- Growth is expected** in Devon City Hospital's market for both surgical robots and care robots throughout the rest of this decade.



be expected to grow



growth is expected

(2) Describing projected rapid growth

- Devon City Hospital **predicts rapid growth** in sales of care robots after 2024, with an increase of over 400% by 2030.
- Meanwhile, the market for surgical robots will also grow, though at a slower rate.

 **predict** (v.)

 **rapid growth**

Advanced Explanation Techniques: Comparing Oral and Written Communication

Native English speakers often use different vocabulary and sentence structures in oral and written communication. Using Figure 1, “Percentage of Hampton College Students with Summer Jobs,” as an example, the following section presents one oral explanation and one written explanation to illustrate how the two differ in their use of vocabulary and sentence structure.

Oral Explanation

The graph shows that fewer students have summer jobs now than 50 years ago. You can see a steady decline over the years, starting at 56% in 1974 and decreasing to 32% in 2024. The sharpest drop was between 1994 and 2014. However, there was only a slight decline between 2014 and 2024.

Written Explanation

This graph shows how the percentage of Hampton students working in summer jobs declined over the past five decades, from 56% in 1974 to 32% in 2024. This trend indicates a significant reduction in the number of students taking summer jobs during this period. Nevertheless, it is noticeable that the percentage remained relatively stable between 2014 and 2024.

From the two paragraphs above, we can see the main differences between oral and written explanations:

- 1) Sentences in oral explanations are generally shorter and structurally simpler, whereas sentences in written texts tend to be longer and more complex. Taking the first sentence of each paragraph as an example, the first sentence in the oral explanation contains only 14 words and includes one noun clause. In contrast, the first sentence in the written explanation contains 27 words and, in addition to a noun clause, also uses adjective and prepositional phrases.
- 2) In terms of vocabulary use, oral explanations tend to employ more informal expressions, such as “*You can see ...*,” whereas written explanations use more formal wording, such as indicate and noticeable.

Below, using the trend changes shown in Figure 2 as an example, we again present one oral explanation and one written explanation to examine how their use of vocabulary and sentence structure differs.

Oral Explanation

Looking at this graph, we can see how much health-related AI technology at Devon City Hospital is expected to grow from 2020 to 2030. Rapid growth is expected in the sales of care robots from a rate of 0.1% in 2020 to 2.2% in 2030. Surgical robots are also on the rise, though at a slower rate. This suggests a big increase in AI tech being used in healthcare over the next ten years.

Written Explanation

The graph illustrates the projected market growth of health-related AI technology at Devon City Hospital from 2020 to 2030. Care robots are expected to see a substantial increase from 0.1% in 2020 to 2.2% in 2030. Similarly, surgical robots are projected to grow from 0.05% in 2020 to 1.25% in 2030, indicating a significant rise in the adoption of AI technology in healthcare over the decade.

Speaking Task

1 Task Content

Hampton College has noticed that fewer of its students have been taking summer jobs. It published the graph below in a recent edition of its student magazine.

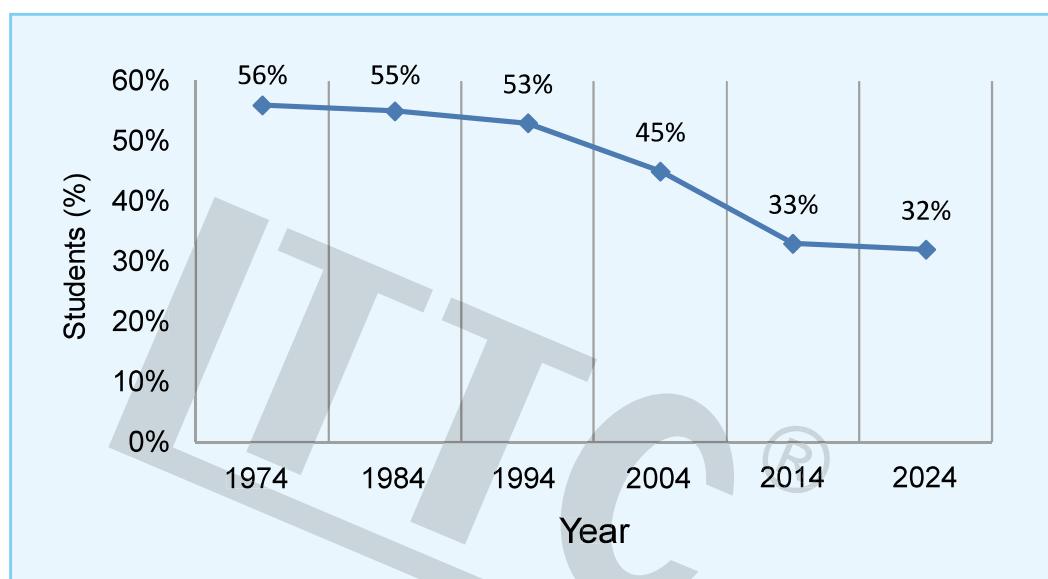


Figure 1 Percentage of Hampton college students with summer jobs (1974–2024)

2 Task Requirements

You have 3 minutes to answer the following 3 questions based on Figure 1.

- (1) Do you think the number of students in your college with summer jobs is changing in a similar way to that shown in Figure 1? Please explain.
- (2) Do you like to work during summer vacation, or do you prefer to take a break?
- (3) In your opinion, is it a good idea for students to take on jobs during their summer vacation? Why or why not?

Writing Task

1

Task Content

Jin Tai University wants to evaluate the effectiveness of the optional **Professional Development (PD) courses** offered to undergraduate students. Therefore, it conducted a survey among recent graduates to find out their current employment status. The figure below shows the results of this survey. Jin Tai University also interviewed some professors and students about the Professional Development courses. Opinions of one professor and one student are also given below.

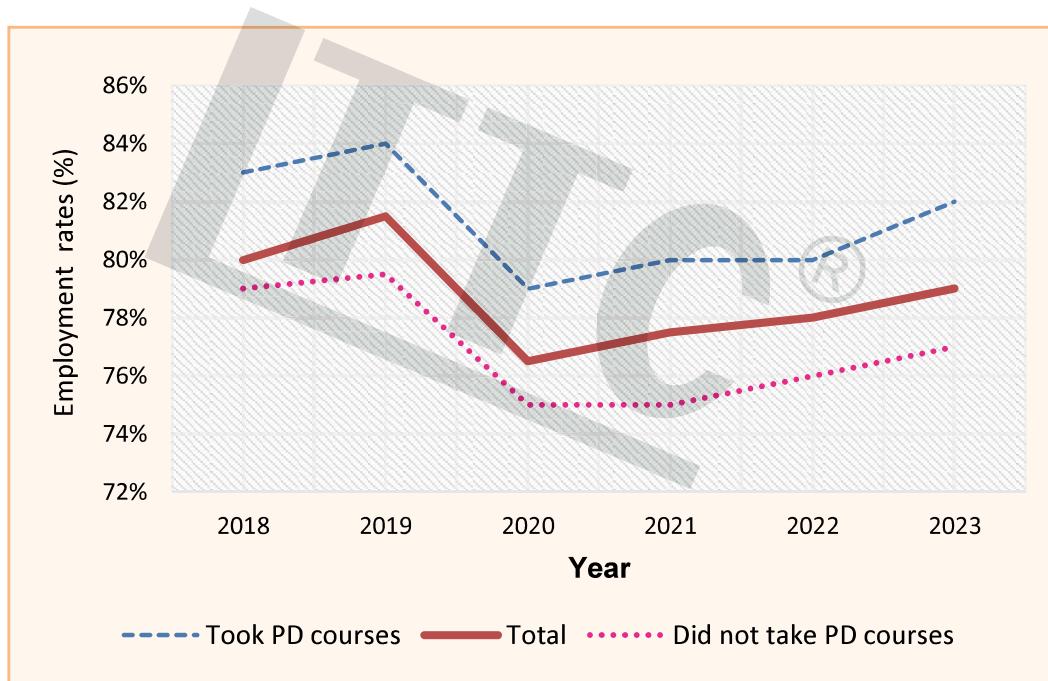


Figure 1 Employment rates of Jin Tai University graduates (2018–2023)

Table 1 Teacher and student interviews

 <p>Professor Dolly Hsu, Jin Tai University</p>	<p>The Professional Development courses offered by Jin Tai University teach students essential interview techniques. Focusing on presentation skills and the ability to present oneself confidently, these courses help our students stand out from other candidates with similar educational backgrounds. I believe they make a big difference in enabling our students to attain the employment they are attempting to secure.</p>
 <p>Greg Chen, former student at Jin Tai University</p>	<p>The Professional Development courses at Jin Tai University did not prepare me well for the working world. While I learned to write a good résumé, I was unprepared for the routine tasks and early mornings. The tasks unrelated to my specialist knowledge left me bored and tired. I wish the courses had better equipped me for the regular workplace environment.</p>

2 Task Requirements

Based on the figure and interview extracts above, write an essay to discuss the following topic:

Colleges should do more to prepare their students for life after graduation

In your essay, you should:

- (1) summarize the main points shown in the graph and interviews;
- (2) explain whether you think you will experience feelings similar to those that Greg describes when you enter the workplace.

Your essay should be 120–150 words in length.