

## Unit 3 Writing an abstract

By the end of this unit you will be able to

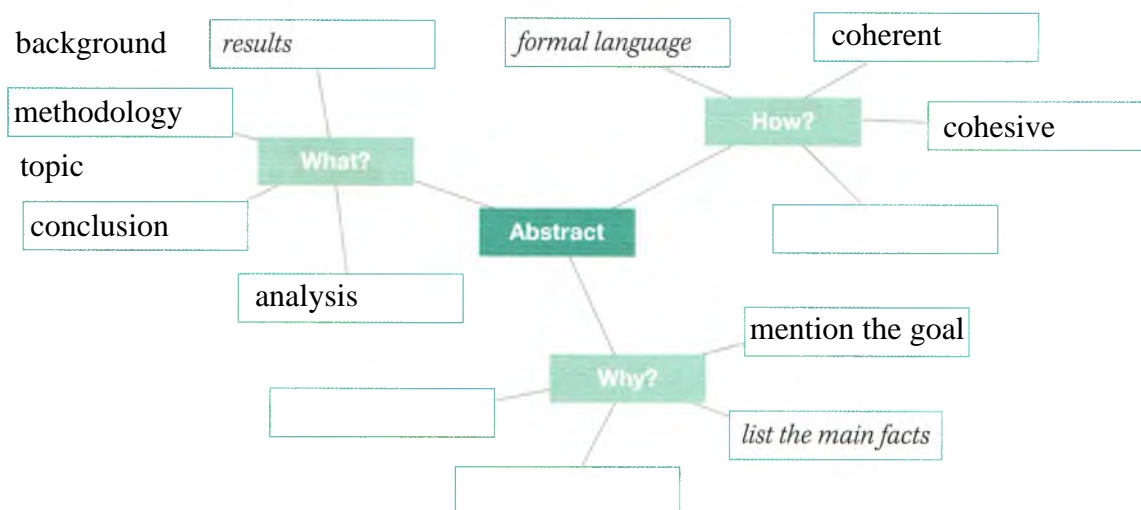
- structure an abstract
- connect parts of an abstract using linking words
- notice particular features of abstracts from different fields of study
- write an abstract for an article

### Lesson 1 Make your abstract cohesive

#### Lead-in

**1** How often do you write articles? What else do you have to write when you submit an article?

**2** Work in groups and complete the spidergram about your experience of writing abstracts.



#### Structure of an abstract

**3** Match the parts of an abstract (1–5) to the questions they answer (a–e).

- |              |              |   |
|--------------|--------------|---|
| 1 background | <del>→</del> | a What was the purpose of the research?       |
| 2 aims       | <del>→</del> | b What were the main findings?                |
| 3 approach   | <del>→</del> | c What did the research lead to?              |
| 4 results    | <del>→</del> | d What was the context of the work?           |
| 5 conclusion | <del>→</del> | e What were the methods used in the research? |

## Module 4 Writing

### 4 Match sentences a–e to abstract parts 1–5 in Activity 3.

- a The findings of the research illustrate how / show the impact of ...; We can predict/foresee that ... **results**
- b We conducted the studies of / experiments on...; We employed the following methods ...; The research explored ...; We tested this hypothesis using ... **approach**
- c This article is motivated by ...; ... is a fundamental question in ...; Previous research indicates / has shown that / has focused on ... **background**
- d This article has the following goals/objectives ...; The article examines/studies ...; The main purpose of the article is to ... **aims**
- e The findings support the prediction/model ...; Theoretical contributions and practical implications are discussed/presented ... **conclusion**

### 5 Read this article abstract and say if the authors agree that having more computers at school leads to changes in teaching.

#### Your notes

Most policy makers, corporate executives, practitioners, and parents assume that wiring schools, buying hardware and software, and distributing the equipment throughout will lead to abundant classroom use by teachers and students and improved teaching and learning. This article examines these assumptions in two high schools located in the heart of technological progress, Northern California's Silicon Valley. Our qualitative methodology included, **firstly**, interviews with teachers, students, and administrators, **secondly**, classroom observations, review of school documents, and, **finally**, surveys of both teachers and students in the two high schools. We found that **although** teachers used computers for classroom work, access to equipment and software seldom led to widespread teacher and student use and most teachers were occasional users or non-users. **As a result**, more often their use sustained rather than altered existing patterns of teaching practice. We offer two interrelated explanations for these challenges to the dominant assumptions that guide present technological policy making. **In general**, traditions in high schools will influence the slow revolution in teaching practices.

### 6 Divide the abstract into the five parts listed in Activity 3. Write the names of the parts in the left-hand column.

#### Language focus

### 7 Find the following words in the abstract.

- 1 the word that is close in meaning to these verbs: *to believe, to imagine, to suppose*
- 2 the word that is opposite in meaning to these verbs: *to collect, to gather*
- 3 the verb that is close in meaning to these verbs: *to investigate, to study*
- 4 a noun that comes from the verb *to assume*
- 5 a pair of verbs, one of which means *continued*, and the other means *changed*

background  
aims  
conclusion  
results  
approach

Most policy makers  
This article examines  
In general  
We found that  
Our qualitative methodology  
assume  
distribute  
examine  
assumption  
sustained, altered

### 8 Underline the phrases which helped you identify the parts of the abstract. Explain your answers, e.g.:

*The phrase 'Most policy makers' shows that the author has read a number of papers and now presents this information as a background of the research.*

### 9 Work in pairs. Decide what functions the highlighted words in the abstract have.

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**10** Read the examples of linking words in the Language Support box. Say what the underlined words mean. Fill in the gaps with the highlighted words from the abstract.

**Language Support: linking words**

- Words used to enumerate: *initially*, \_\_\_\_\_, \_\_\_\_\_, *third(ly)*, *next*, \_\_\_\_\_.
- Words that express causation: *thus*, \_\_\_\_\_, *because*, *therefore*.
- Words that express contrasts and comparisons: \_\_\_\_\_, *however*, *whereas*, *likewise*, *in contrast*.
- Words used to generalise: *overall*, \_\_\_\_\_, *in short*, *to conclude*, *generally*.

**11** Put the letters in order to make a word with the same function as the linking words in the right-hand column.

1 _____ (utsh)	in this way, hence, so
2 _____ (eeortfrh)	as a result, for that reason, consequently
3 _____ (iivsklee)	also, similarly, additionally
4 _____ (ehewrov)	but, still, nevertheless, nonetheless, although
5 _____ (frthomueerr)	in addition, moreover, besides
6 _____ (iiiytnall)	at first, at the beginning
7 _____ (llrvaoe)	on the whole, generally

**12** Read the abstract below and say how the use of technology in university classes influences the way students study.

The trend toward technology **enhanced** classrooms has **escalated** quickly during the past five years as students have become increasingly tech savvy. <sup>1</sup> \_\_\_\_\_ classrooms across the nation have become 'wired' and textbook publishers now offer a wide variety of computerised teaching supplements. In fact, some may argue that the use of technology is now **expected** in the college classroom. The **objective** of this research is to **examine** whether the use of technology in university classes **impacts** student behaviour and student perceptions of instructional quality. This paper summarises the results of a survey **administered to** students enrolled in business courses at a mid-sized Midwestern university. The results suggest that adding technology in courses where it is not currently used **is likely to have** a positive impact on student perceptions of the instructor and on student behavior. <sup>2</sup> \_\_\_\_\_, removing technology from courses that already use it would not appear to have a negative impact on all **aspects** of student behaviour. <sup>3</sup> \_\_\_\_\_ there are certain aspects of student behaviour which appear to be technology neutral: firstly, the amount of time that students study, <sup>4</sup> \_\_\_\_\_ the quantity of notes they take, <sup>5</sup> \_\_\_\_\_ their attendance, and, <sup>6</sup> \_\_\_\_\_, their **interaction** with the instructor. <sup>7</sup> \_\_\_\_\_, technology tends to have a meaningful impact on student preparation for class, attentiveness, quality of notes taken, student participation in class, student learning, desire to take additional classes from the instructor or in the subject matter, and <sup>8</sup> \_\_\_\_\_ the overall evaluation of the course and the instructor.



## Module 4 Writing

**13** Fill in the gaps in the abstract in Activity 12 with a suitable linking word/phrase from the list. There is one extra word which you do not need to use.

also   however   as a result   secondly   initially  
thirdly   in contrast   finally   overall

**14** Match the highlighted words in the abstract to their synonyms 1–10 below.

- |                         |                 |
|-------------------------|-----------------|
| 1 assumed               | 6 became higher |
| 2 influences            | 7 aim           |
| 3 communication         | 8 given to      |
| 4 improved, made better | 9 parts         |
| 5 will probably have    | 10 study        |

**15** Complete the sentences below with the highlighted words/phrases from the abstract.

- The main purpose of the article is to describe the enhanced procedure of the research.
- This article is motivated by a series of experiments on the \_\_\_\_\_ between peers in a group.
- Previous research indicates that the tension between the two countries has \_\_\_\_\_.
- The article aims to \_\_\_\_\_ some aspects of the problem described.
- We conclude that a wider use of the gadget can be \_\_\_\_\_.
- We can foresee that the study \_\_\_\_\_ to have similar results in other settings.
- The poll has been \_\_\_\_\_ a group of University teachers.
- The \_\_\_\_\_ of the study is to examine the reasons for such behaviour.
- It is demonstrated how global warming \_\_\_\_\_ the environment.
- The paper presents moral \_\_\_\_\_ of the biotechnological experiments.

### Describing research

**16** Think about the research you are carrying out or have already completed. Finish the sentences below to describe it.

- We conducted a study of \_\_\_\_\_.
- Numerous research in the area show \_\_\_\_\_.
- Our objective was to examine \_\_\_\_\_.
- Firstly, \_\_\_\_\_ used.
- Secondly, \_\_\_\_\_ was examined.
- In addition, \_\_\_\_\_ was/were demonstrated.
- Overall, \_\_\_\_\_.
- Finally, the following conclusion was drawn: \_\_\_\_\_.

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## Lesson 2 Abstracts from different fields of study

### Lead-in

1 There are eight words connected with abstracts hidden below. Work in pairs to find them. Say what each word means.

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M	B	V	P	A	D	B	I	I	J	N	Q
N	A	T	P	Z	P	R	P	M	H	Z	M
R	F	O	R	M	A	L	K	S	N	G	S
H	K	J	O	I	M	O	L	M	T	R	I
G	G	B	A	C	K	G	R	O	U	N	D
C	O	N	C	L	U	S	I	O	N	H	R
C	O	Z	H	B	S	T	R	A	C	T	E
K	U	L	I	N	K	E	R	S	S	C	E

### Spot the difference

2 Match abstracts A–C to fields of study 1–3.

- 1 Pure Science
- 2 Social Sciences
- 3 Humanities

A

Humanities

In this article I consider whether Hegel is a naturalist or an anti-naturalist with respect to his philosophy of nature. I adopt a cluster-based approach to naturalism, on which positions are more or less naturalistic depending how many strands of the cluster *naturalism* they exemplify. I focus on two strands: belief that philosophy is continuous with the empirical sciences, and disbelief in supernatural entities. I argue that Hegel regards philosophy of nature as distinct, but not wholly discontinuous, from empirical science and that he believes in the reality of formal and final causes insofar as he is a realist about universal forms that interconnect to comprise a self-organising whole. Nonetheless, for Hegel, natural particulars never fully realise these universal forms, so that empirical inquiry into these particulars and their efficient-causal interactions is always necessary. In these two respects, I conclude, Hegel's position sits in the middle of the naturalism/anti-naturalism spectrum.

## Module 4 Writing

Social

B

This research assessed phonological and morphological awareness in dyslexic university students. We tested 44 dyslexic university students in phonological and morphological awareness tasks and compared their performances. In the phonological awareness tests, the dyslexic university students performed at the same level as their reading level controls. In contrast, they systematically outperformed their reading level controls in the morphological awareness tasks and almost reached the proficiency level of the chronological age controls. The results show that dyslexic university students develop their morphological awareness more than their phonological awareness. These findings add to the evidence indicating that morphological awareness is not deficient in dyslexia and could instead play a beneficial role in the development of literacy skills in this population.

Pure

C

A process capable of producing large amounts of energy by a nuclear fusion process between nickel and hydrogen, occurring below 1,000 K, is described. Experimental values of the ratios between output and input energies obtained in a certain number of experiments are reported. The occurrence of the effect is justified on the basis of existing experimental and theoretical results. Measurements performed during the experiments allow for the exclusion of neutron and gamma ray emissions.

3 Read the abstracts again and match them to statements 1–8.

The abstract ...

- 1 includes the following parts: Aims, Results. C
- 2 includes the following parts: Aims, Approach, Conclusion. A
- 3 includes the following parts: Aims, Approach, Results, Conclusion. B
- 4 discusses the approach of a well-known theorist. A
- 5 is written in the passive voice. C
- 6 is written in the first person singular. A
- 7 presents opinions. A
- 8 describes objective results.

### Language focus

4 In the abstracts, find words/phrases similar in meaning to definitions 1–7. The letters show you in which abstract the word is used.

- 1 think about, reflect, give attention (A) consider
- 2 in connection with something (A) with respect to
- 3 accept, use (A) adopt
- 4 component, aspect, feature (A) entity / strand
- 5 judge the importance or value of something (B) assess
- 6 reasons for believing that something is or is not true (B) evidence
- 7 show that something is right or reasonable (C) justify

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**5** Use the words from Activity 4 to complete the gaps in sentences 1–7.

- 1 There is no scientific evidence that a person's character is reflected in their handwriting.
- 2 It's too early to assess the long-term consequences of the experiment.
- 3 We consider two factors which determine the most appropriate way of planning the project.
- 4 We adopt a well-known model of the economy development.
- 5 The attempt is made to justify the existence of this science to professional and academic communities.
- 6 There are a number of strands in feminist thinking.
- 7 I am writing \_\_\_\_\_ your letter of 15 June.

with respect to

**6** In abstracts A–C, find words/phrases that are used to do the following.

- 1 to describe the research (e.g. *I focus on, this paper presents*)
- 2 to write about actions (e.g. *tested, a comparison is carried out*)
- 3 to describe the results (e.g. *the results show*)

**7** Underline the passive constructions in the abstracts. Why is the passive voice used? To make it seem less personal and therefore more formal.

**8** In Abstract C, in the sentences in the passive voice, find the parts of the sentences which name the object of the research. Are they individual words or phrases?

**9** Underline the phrases in these sentences which describe the object of the research. Then rewrite the sentences in the passive voice.

- a We examine the impact of social networks on society.
- b We consider the ways of interaction in the modern academic environment.
- c We focus on the process capable of producing large amounts of energy.
- d We justify the use of the approach described.
- e We perform the measurements of output and input energies.

**10** Edit the following abstract.

- 1 Complete gaps 1–5 with the correct words from Activity 4.
- 2 Rewrite underlined sentences a–d using the passive voice.
- 3 Add linking words where appropriate.

The expansion of higher education systems, new demands on institutions and growing pressures on resources have become common trends across most developed countries. (a) This paper explores the early career paths of academics. (b) It makes initial comparisons between different higher education systems. (c) We have written this paper with <sup>1</sup> \_\_\_\_\_ to the *Changing Academic Profession* study. This study <sup>2</sup> \_\_\_\_\_ s the following facts: respondents' degrees, age at which they qualified, disciplines they studied and now teach. The conditions of academic work are <sup>3</sup> \_\_\_\_\_ ed. The collected data <sup>4</sup> \_\_\_\_\_ various degrees of flexibility and mobility required of academics in the early and later stages of their careers. The study provides <sup>5</sup> \_\_\_\_\_ that academics are becoming more mobile domestically and internationally. Academics from the 17 countries in the study are quite satisfied with the technical resources provided by their institutions. (d) They criticise the personnel and funds available to support teaching and research.



## Module 4 Writing

**11** In abstracts A–C, find sentences written in the first person. Why is the first person used in these cases? Finish the sentences below to express your own opinions and describe your research.

- 1 I/We consider \_\_\_\_\_ to be \_\_\_\_\_
- 2 I/We adopt a \_\_\_\_\_ approach to \_\_\_\_\_
- 3 In my paper I/we focus on \_\_\_\_\_
- 4 I/We argue that \_\_\_\_\_
- 5 I/We conclude that \_\_\_\_\_

### Writing an abstract

**12** Put these steps for writing an abstract in order.

- a 1 Read through the paper and choose sentences with key ideas.
- b \_\_\_\_\_ Give the abstract to a colleague and ask him/her whether it makes sense
- c \_\_\_\_\_ Check that your abstract conveys only the essential information.
- d \_\_\_\_\_ Read your rough draft and delete extra words and phrases (examples, jargon, opinions and detailed descriptions).
- e \_\_\_\_\_ Organise the information you have gathered into an initial rough draft.
- f \_\_\_\_\_ Check to see if it meets the guidelines of the targeted journal. Count the words.
- g \_\_\_\_\_ Read the abstract as if you were another researcher deciding whether to read your paper.
- h \_\_\_\_\_ Write the final version of the abstract.

**13** Write an abstract for one of the following.

- 1 an article you have written (the article may be written in your native language)
- 2 an article you studied in the Reading module, Unit 3

**14** Work in pairs. Read your partner's abstract. Think about the questions below. Then give feedback.

- 1 Why did he/she do this study or project?
- 2 What did he/she do and how?
- 3 What did he/she find?
- 4 What do his/her findings mean?
- 5 If he/she suggested a new method, how well did it work?
- 6 Did he/she use formal vocabulary?
- 7 Did he/she use linking words to connect ideas?

**15** Rewrite your abstract, using your partner's suggestions.

## Unit

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## Lesson

### Lead-in

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