Session 8
Writing the Abstract and Acknowledgements Sections
Coherence, Cohesion and Signposting

Learning Outcomes:

By the end of this session, students should be able to:

- write the abstract and acknowledgements sections using appropriate organizational structure and linguistic features
- use appropriate rhetorical devices to enhance cohesion and coherence in academic writing

Warm-up Task

Form a group of 2-3 students and discuss the following questions.

1. Why is the abstract necessary for academic research articles?

2. What kind of information do you think should be included in an abstract?

3. Is there a structure for research article abstracts?

4. When is an abstract usually written? At the beginning of the research stage or near the final stage of the paper /after completion? Why?

Task 1

Read the following example abstracts in the fields of Sociology and Biology. Analyse the move structure and the linguistic features.

Example 1

Low-income parents have long been demonised in both political discourses and mainstream media, portrayed as lacking in parenting skills not just financial resources. Using the Millennium Cohort Study (MCS) this article examines to what extent there are differences in the parenting of low-income mothers by examining parenting behaviours of low-, middle- and high-income mothers. The findings show that where there are negative differences in the parenting of low-income mothers these are often part of a broader income gradient that extends all the way up the distribution, rather than unique to low-income mothers. Furthermore, there are some positive differences in parenting among low-income mothers compared to middle-income mothers. These findings have

important implications: low-income parents are not an unusual or deviant group parenting differently to everyone else. The findings suggest more attention ought to be given to parenting differences higher up the income distribution. In focusing on low-income parents only, existing evidence exaggerates differences and wrongly identifies low-income parents as problematic.

Source: Cooper, K. (2020). Are poor parents *poor* parents? The relationship between poverty and parenting among mothers in the UK. *Sociology*, 1-35. https://doi.org/10.1177/0038038520939397

Example 2

Background

Patients with pelvic malignancies often receive radiosensitising chemotherapy with radiotherapy to improve survival; however, this is at the expense of increased normal tissue toxicity, particularly in elderly patients. Here, we explore if an alternative, low-cost, and non-toxic approach can achieve radiosensitisation in mice transplanted with human bladder cancer cells. Other investigators have shown slower growth of transplanted tumours in mice fed high-fibre diets. We hypothesised that mice fed a high-fibre diet would have improved tumour control following ionising radiation (IR) and that this would be mediated through the gut microbiota.

Results

We investigated the effects of four different diets (low-fibre, soluble high-fibre, insoluble high-fibre, and mixed soluble/insoluble high-fibre diets) on tumour growth in immunodeficient mice implanted with human bladder cancer flank xenografts and treated with ionising radiation, simultaneously investigating the composition of their gut microbiomes by 16S rRNA sequencing. A significantly higher relative abundance of *Bacteroides acidifaciens* was seen in the gut (faecal) microbiome of the soluble high-fibre group, and the soluble high-fibre diet resulted in delayed tumour growth after irradiation compared to the other groups. Within the soluble high-fibre group, responders to irradiation had significantly higher abundance of *B. acidifaciens* than non-responders. When all mice fed with different diets were pooled, an association was found between the survival time of mice and relative abundance of *B. acidifaciens*. The gut microbiome in responders was predicted to be enriched for carbohydrate metabolism pathways, and in vitro experiments on the transplanted human bladder cancer cell line suggested a role for microbial-generated short-chain fatty acids and/or other metabolites in the enhanced radiosensitivity of the tumour cells.

Conclusions

Soluble high-fibre diets sensitised tumour xenografts to irradiation, and this phenotype was associated with modification of the microbiome and positively correlated with *B. acidifaciens* abundance. Our findings might be exploitable for improving radiotherapy response in human patients.

Source: Then, C.K., Paillas, S., Wang, X.D., Hampson, A., & Kiltie, A.E. (2020). Association of Bacteroides acidifaciens relative abundance with high-fibre diet-associated radiosensitisation. *BMC Biology, 18*, 102. https://doi.org/10.1186/s12915-020-00836-x

1. What do you notice about the move structure of the abstracts above?

Moves	Example 1 - Sociology	Example 2 - Biology
1		
2		
3		
4		

2. What language features (e.g. tense, voice, cohesive devices, hedging devices) are found in the example abstracts?

Task 2

Have a look at the following two abstracts. Do you think they are well-written? Why?

Example 1

In this article, research as "mass media" is appraised. "Videocy" or videoed research results are examined. A form of video research with its roots in action research, Cabalistic methodology and oral anthropology is reported on. The counterparts it produces, wherein disclosure loops are used to produce an effect similar to the fractalizations of reality, achieves a powerful simulation of reality. But is it a "responsible" form of (research) practice?

Example 2

This paper presents and assesses a framework for an engineering capstone design program. We explain how student preparation, project selection, and instructor mentorship are the three key elements that must be addressed before the capstone experience is ready for the students. Next, we describe a way to administer and execute the capstone design experience including design workshops and lead engineers. We describe the importance in assessing the capstone design experience and report recent assessment results of our framework. We comment specifically on what students thought were the most important aspects of their experience in engineering capstone design and provide quantitative insight into what parts of the framework are most important.

Hyland (2000)[1] examines the abstract structures across disciplines and identified five common moves:

Philosophy	I-P-Pr	P-Pr		
Sociology	P-M-Pr	I-P-Pr	I-P-M-Pr	
Applied Linguistics	I-P-Pr	P-M-Pr	P-Pr	I-P-M-Pr
Electronic Eng.	P-M-Pr	P-Pr		
Mechanical Eng.	P-M-Pr	P-Pr	I-P-Pr	
Physics	P-M-Pr	P-Pr		
Biology	P-M-Pr	I-P-M-Pr/I-P-Pr/P-Pr		

I = Introduction

P = Purpose

M = Method

Pr = Product (findings)

C = Conclusion (Optional)

Task 3

Analyse the move structure and the linguistic features of an RA abstract in your own field. Make notes in the table below.

1. Download one or two research articles that you think are well-written in your own field. You can also use the research articles that you have collected.
2. Follow the steps that you have been through with the example abstracts above, highlight different parts of the abstract and identify the moves in each part.

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[1] Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. London: Longman.

3. Identify the typical words/phrases and grammatical patterns that are used in the abstract. Pay attention to the moves/steps these words/phrases and grammatical pattern fulfil. You may ask ChatGPT to help you analyse the moves and language features of the abstracts of the journal articles in your discipline.

	Abstract 1	Abstract 2
Moves identified		
Typical words/phrases and grammatical patterns observed		

Writing the Acknowledgements Section

Hyland and Tse (2004)[2] studied thesis and dissertation Acknowledgements section in detail. Their work has shown not only that there are typical ways in which these texts are organized but also how students use these texts to display their disciplinary memberships and networks at the same time as they thank the people that helped them in their academic undertaking. Hyland points out that these short and seemingly simple texts "bridge the personal and the public, the social and the professional, and the academic and the moral".

Hyland and Tse highlighted 3 stages in the Acknowledgements section:

1. Reflecting – some introspective comment is made about the writer's research experience.
2. Thanking – credit is given to individuals and institutions.
3. Announcing – responsibility for any flaws or errors is accepted and the thesis is dedicated to specific people.

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[2] Hyland, K. & Tse, P. (2004). "I would like to thank my supervisor". Acknowledgements in graduate dissertations. *International Journal of Applied Linguistics, 14*(2), 259-275.

The moves are illustrated in the table below:

Move	Example
Reflecting move	*The most rewarding achievement in my life, as I approach middle age, is the completion of my doctoral dissertation.*
Thanking move	
Presenting participants	*I would like to take this opportunity to express my immense gratitude to all those persons who have given their invaluable support and assistance.*
Thanking for academic assistance, intellectual support, ideas, analyses, feedback, etc.	*In particular, I am profoundly indebted to my supervisor, Dr. James Fung, who was very generous with his time and knowledge and assisted me in each step to complete the thesis.*
Thanking for resources, data access and clerical, technical and financial support, etc.	*The research for this thesis was financially supported by a postgraduate studentship from the University of Hong Kong, The Hong Kong and China Gas Company Postgraduate Scholarship, Epson Foundation Scholarship, two University of Hong Kong CRCG grants and an RCG grant.*
Thanking for moral support, friendship, encouragement, sympathy, patience, etc.	*I'd include those who helped including my supervisor, friends, and colleagues. It is also appropriate to thank for spiritual support, so I'd also include my friends in church and family members.*
Announcing move	
Accepting responsibility for flaws or errors	*Notwithstanding all of the above support for this project, any errors and/or omissions are solely my own.*
Dedicating the thesis to individual(s)	*I love my family. This thesis is dedicated to them.*

Task 4

Analyse the structure of the following Acknowledgements section and identify the ways the writer has expressed gratitude.

Life has no rehearsals, only performances. Sometimes the performance is good and other times an undesirable outcome occurs. No matter how good or bad it is, each performance is recorded in our unique "life book". The past four years during which I concentrated on research towards obtaining a PhD degree has been one of the most important chapters in my "life book". It is a story full of strength, passion, courage and will-power, which is definitely a huge treasure for me. This chapter of my life would not have been possible without support and help from the following people.

Foremost, I am deeply grateful to my supervisor, Professor Kenneth M. Y. Leung, Swire Institute of Marine Science (SWIMS) and School of Biological Sciences, University of Hong Kong (HKU) for offering me this opportunity, for guiding me, for encouraging me and for being my role model in

Structuring your Thesis: Coherence, Cohesion and Signposting

The organisation of a thesis can be studied from the perspective of macrostructure and microstructure. Does the text have a clear macrostructure that suits the overall communicative intent of the thesis? Are the ideas properly linked to enable the text to have internal unity? These are questions you should ask as a writer and your reader will ask as someone who needs to comprehend your work.

Coherence

Coherence is concerned with the connection and logical flow of ideas in a text to create unity.

Cohesion

Cohesion is concerned with the links between words and sentences.

Signposting

A thesis should have an informative title, headings, and subheadings. It should present information in a logical order; include all essential steps in any argument and make any implications clear; give sufficient evidence; give examples where appropriate; and explain why any point is particularly important.

Signposts signal key aspects of the work, such as purpose, structure, author's stance, main points, direction of the argument, conclusions.

Signposting is a particular kind of meta-narrative which allows the reader to understand the intentions of the writer, and to understand the way(s) in which the text will proceed.

The first signpost in a thesis is the title and this needs to be as informative as possible. Include all necessary key words to correctly and fully convey the content of the study. Delete all words that are redundant or do not contribute to the essential meaning. Order the words to reflect accurately the meaning you intend to convey.

Task 5

Creating an Effective Title for a Research Paper/Thesis

Part 1: Have a look at the titles of a few research papers that you have been reading. What are some features of a good title?

1. Choose a journal article title that you think is effective. Put the title in the shared document created by your teacher.

2. Discuss in pairs. What makes a research paper/thesis title effective?

Read the advice given by a journal publisher Springer: Title, Abstract and Keywords | Springer — International Publisher

Part 2: Watch a video about the steps for creating a research paper title. https://blog.wordvice.com/best-title-for-journal-manuscript/

Note down the steps below:

1.

2.

3.

4.

5.

Coherence

Techniques for enhancing the **coherence** of writing include:

1. A **macrostructure** that provides a pattern characteristic and appropriate to its communicative purpose (e.g. using a chronological approach to tell a story, explaining the problem before suggesting the solutions in a problem-solution essay)
2. An **information structure** that guides the reader in understanding how information is organized and how the topic of text is developed (e.g. giving old information before new information)
3. **Connectivity of the underlying content** evidenced by relations between propositions (e.g. giving supporting evidence and examples to support a proposition)
4. **Connectivity of the surface text** evidenced by the presence of **cohesive devices** (e.g. pronoun references – he, she, it, this, that; conjunctions – but, also, therefore, however) and content lexical ties (e.g. repetition, synonymy/antonymy, and superordinates/hyponymy – animals/cats)
5. **Appropriate metadiscourse features**: Some examples are logical connectives (e.g. therefore, but), sequencers (e.g. firstly, secondly, finally), certainty markers (e.g. certainly, no doubt) and hedges (e.g. can, may)

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Task 6

Now, let's focus on how to improve coherence in academic writing!

New

Example 1: The problem is the lecturer's inability to speak loudly enough.

Theme

Theme

Example 2: The problem with holding the lecture in such a large lecture theatre is the lecturer's inability to speak loudly enough.

New

The **Theme** of a sentence or clause tells the reader what the sentence is about.

> • It sets up an expectation that the rest of the information in the sentence (the New) will be related to the Theme in some meaningful way.

The **New** of a sentence generally introduces new information about the Theme.

Effectively developing coherence: strategy 1

<u>Text 1:</u>

Rocks were originally used to carry carved or pained messages (Benson 1990)… **Scrolled leather, onto which messages were crudely scratched**, was used in later Neolithic times (Hardy 1984)… **Heavy hand-copied parchment** took over in the Middle Ages // when monks had the leisure to embellish them with fine inks and costly gold leafing (Santos 1996).

The themes in this paragraph focus the reader's attention on: **The media use for writing**

<u>Text 2:</u>

The amount of available literature on the causes of obesity in children has snowballed in recent years. While **American studies** (Smith 2002, Benson 2004) have, not surprisingly, focused on the impact of junk food on children's eating habits, // **European research** has tended to place more emphasis on the increasingly sedentary lifestyle of most 2-15 year olds. Although the conclusions differ in respect of the role of parent modelling, // researchers and nutritionists from both sides of the Atlantic **are unanimous** in their isolation of television and computer games as the main culprits in childhood inactivity.

What is the **theme** of this passage? _____

Effectively developing coherence: strategy 2

Example 1:

Poor education is **associated with economic disadvantage**.

Economic disadvantage helps to ensure // that the next generation of children is also deprived **of opportunities to better themselves**.

Since self-betterment is a constant expectation of our society, those who fail to engage in it will always be at a psychological as well as a financial disadvantage.

> **Logical flow of ideas:** Economic disadvantage → economic disadvantage → better themselves → self-betterment

Example 2:

The issue of educational disadvantage has been widely studied **in the developing world**.

Countries such as Bangladesh, Afghanistan and many African nations have **extremely poor levels of education compared to the developed countries**.

However, the Western world seems little concerned **with its responsibility to shoulder the economic and humanitarian consequences of continued poverty as a result of stagnant educational achievement**.

> **Logical flow of ideas:** Developing world → Bangladesh, Afghanistan and many African nations → developed countries → the Western world.

Which text is more coherent? Why?

Text A

Attracting customers to buy your products and services needs a great deal of research and planning to ensure the money you invest in gaining customers pays off. This is normally achieved through market research and involves finding more about the people you hope to sell to. Armed with this information you can then formulate an effective plan of action based on your evidence. Once you are aware of the needs of your potential customers you need to examine your product in detail, fix a suitable price which will help your product sell, ensure you choose the correct method of distribution and select an appropriate promotion to attract your audience. This is known as the marketing mix and can help your business to spend money wisely with the best results.

Text B

Attracting customers to buy your products and services needs a great deal of research and planning to ensure the money you invest in gaining customers pays off. Firstly, there is market research and involves finding more about the people you hope to sell to. Secondly, formulate an effective plan of

action based on your evidence. Furthermore, it is important to examine your product in detail. Moreover, you should fix a suitable price which will help your product sell, ensure you choose the correct method of distribution and select an appropriate promotion to attract your audience. So this is known as the marketing mix and in summary it can help your business to spend money wisely with the best results.

Note:

Themes can be repeated in many different ways. For example, they can be:

- Repeated using the same wording
- Repeated using synonyms or near synonyms
- Assumed or understood rather than explicitly repeated
- Repeated using pronouns

Cohesion

All languages provide a certain number of lexico-grammatical elements which highlight, on the sentence and paragraph level, the sense relation of one textual unit to those preceding or following it. Such formal or stylistic devices have a guiding function for the reader. They support and speed up the cognitive processes by which a reader constructs the overall meaning of the linearly incoming textual information. This is why an author must take care that there is a tight fit of meaning and form. The cohesive elements which languages offer for the structuring and ease of understanding of texts can best be illustrated by some examples.

Strategies for making a text more cohesive include the use of:

I. Transitions or connectives
II. Referencing
III. Lexical chains
IV. Anaphoric nouns
V. Substitution and ellipsis

I. Transitions

- One of the ways of comprehensibly presenting and structuring information is the **chronological presentation of facts or events**. There are a few options for making clear the order in which 'things' happened. A straightforward way of making clear their sequence is the use of lexical items like *first … second … third ….finally*. In certain types of stories or reports a similar effect is achieved by the use of lexical items like *in the beginning/at the start/to start with/after that/and then/in between/before that/following on that/in the end …*

- In other texts the sense relations among the individual parts of a text may be that they **compare, contrast, or evaluate facts or events or ideas** by using words like *similarly/in the same way/in a different way/on the one hand … on the other hand/in contrast/though/however/moreover/in addition/on top of …/whereas…*

- When authors **present arguments or cause and effect relations** they typically use words and phrases like *because/consequently/ therefore/ as a result/ … Conditional truths may be announced by words like depending on/ given that/ assuming that…*

Here is a brief list of some common discourse markers:

Types	Examples
To add	also, and, again, and then, equally important, finally, further, furthermore, too, next, lastly, what is more, moreover, in addition, first (second)
To compare/contrast	whereas, but, yet, on the other hand, however, nevertheless, on the contrary, by comparison, compared to, although, conversely, meanwhile, in contrast, notwithstanding, alternatively, otherwise, instead,
To show effect	because, for, since, that is, due to, thus, therefore, hence, accordingly
To sequence	first(ly), second(ly), finally, previously, formerly, next, then, later, lastly, and so forth, following, afterwards, subsequently, concurrently, simultaneously
To repeat	in other words, in brief, as noted, that is
To emphasize (use sparingly)	definitely, extremely, obviously, indeed, absolutely, never, emphatically, unquestionably, without doubt, certainly, undeniably, without reservation
To provide example	for example, for instance, to demonstrate, to illustrate, as an illustration
To conclude	in brief, on the whole, summing up, to conclude, in conclusion, as a result, consequently, all in all

II. Referencing – pronouns, demonstratives, or other expressions to refer back to something previously mentioned or to point forward to something that will be mentioned later

1.   Personal and possesive pronouns

Be careful when using pronouns (words such as it, they, them, he, him, she and her). If pronouns are overused, the focus can be hard for the reader [What is 'it' or 'they'?].

There is often confusion over whether the use of pronouns is singular or plural.

The company embarked on an unrelated diversification strategy. **They** had decided that previous strategies had been ineffective.

The company is actually singular. The second sentence should also start with "The company" or "it".

Another mistake involves using a pronoun which could refer to more than one subject.

A number of people support the new systems and new processes. They (?) might be considered to increase organisational effectiveness.

A pronoun must agree with its antecedent (i.e. the noun to which the pronoun refers) and the relationship between the two must be clear and unambiguous. Vague pronoun reference occurs when this relationship is not clear.

A pronoun can only be used to replace a noun if its reference is immediately obvious and not confusing. Check that if you are referring to a person, you use the correct pronoun, i.e. 'he' or 'she', and generally that your use of pronouns is not misleading.

2. Demonstratives of the definite article 'the' + a signaling noun

e.g. this, that, these, those, such, the + NOUN

- However, the researchers also conducted a subsequent study. **This study** strongly confirmed the results of the previous one.
- The qualities of a good critic are clear perception, fine sensibility and eloquence. **These** same qualities are needed by lecturers.
- He was faced with a difficult choice. **The choice** he made demonstrated his ability to make sound decisions under extreme pressure.

3. Comparatives

e.g. another, other, both, similar, the same, better, earlier, previous, later, subsequent

- The research has undoubtedly revolutionized thinking in the field. **The same** could be said of Druy's (2003) later research.
- …it has been shown that in the absence of another meal, **the previous one** may be kept in the stomach for more than twice as long as usual (Chitty, 1938), presumably with a gradual increase in stomach acidity, …
- The algorithm could in principle reduce crime but aggravate… Yet, **the opposite** appears to be true in our data.
- The more precise terms that he uses are 'isotropic' and 'Quinean'. **The former** means that anything in the domain of belief is potentially relevant to what is being considered; **the latter** means that the falsification or verification of propositions is done relative to their status in a scientific theory (and, by extension, in a belief system).

Task 7

1. What does 'they' refer to?

> Traditional extraction methods have many benefits, including producing oils with a low moisture content, but mechanical extraction methods produce higher yields. Chemical and nutritional analysis has shown that **they** vary widely depending on the variety of nut used.

2. Look at the pair of sentences below and decide whether the italicised pronoun is used correctly or not.

> I am particularly interested in examining the reasons why people speak differently in different social contexts, how the social functions of language are realised and how language is used to convey meaning. ***These*** will enable me to develop a deeper understanding of the problems that students face when learning a new language.

III. Lexical Chain

1. **Synonyms or antonyms**

   - HIV AIDS is a **disease** which affects the immune system. Until recently, this **condition** was little understood.
   - **The way in which money is currently allocated for research** encourages poor quality research submissions. **This funding mechanism** is in urgent need of overhaul.
   - The **mental well-being** of these children is equally important. **Unhappiness** and **instability** impact significantly on their chances of long-term survival.

2. **Categorisation (part to whole; or whole to part)**

   - The majority of **percussion instruments** entered Western **orchestras** and the orchestral repertoire in the late 19th century.
   - Although **drums** of various kinds had long been a feature of Western orchestral music, **mallet percussion instruments** were only present from the mid-1800s onwards.

IV. Anaphoric Nouns

Another useful way to show the connection between the ideas in a paragraph is what Gill Francis calls anaphoric nouns (or summary nouns). Look at the following text:

> Moulds do not usually grow fast, and conditions had to be found in which large quantities of Penicillium notatum could be produced as quickly as they were wanted. The solution to this problem was helped by N. G. Heatley, a young biochemist also from Hopkins's laboratory in Cambridge, who had been prevented by the outbreak of war from going to work in the Carlsberg laboratories in Copenhagen.

The phrase "**this problem**" summarises the text in the first sentence and thus provides the connection between the two sentences.

> Reports of original work, headed often by the names of many joint authors, became too full of jargon to be understood even by trained scientists who were not working in the particular field. This situation persists today, though strong movements towards interdisciplinary research help to avoid total fragmentation of scientific understanding.

Again, the phrase "**This situation**" summarises the first sentence.

The phrase: This (or These) + noun(s)
   - is very useful in showing the connection between sentences and therefore in making sure that the paragraph flows.

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Task 8

Now look at the following sentences and fill in each blank with an appropriate summary noun.

1. According to a recent survey, 32% of adults in Hong Kong, down from 39% twenty years ago, now smoke. This _____ can be partly attributed to the mounting evidence linking smoking with fatal diseases such as cancer.

2. Nowadays, notebook computers are lighter, more powerful and easier to use than they were five years ago. These _____ have led to an increase in the sales of these machines.

3. Ozone levels in the world increased 3% from 1990-92, another 4.5% from 1992=94, and an additional 6% from 1994-96. Environmental protection organisations are concerned that if this _____ continues, serious environmental damage may occur.

4. The local manufacturers have decided they will more strongly support the pollution control of the Environmental Protection Department. This _____ was a major factor in the drafting of new regulations.

5. Research has revealed that 20 of the 320 known toxic chemicals in the air probably cause more than 2000 cases of cancer annually. While this _____ may not seem high, it is still a cause for concern.

6. English teachers know that students need to understand the differences between formal and informal language. However, this _____ cannot usually be acquired quickly.

IV.   Substitution and Ellipsis

Substitution is the replacement of one item by another and ellipsis is the omission of the item.

Substitution is one of the methods of cohesion examined by M.A.K. Halliday and Ruqaiya Hasan in their influential text Cohesion in English (1976).

- Substitution in text can be of a noun/noun phrase or clause. We replace countable nouns or noun phrases with the pronouns one/ones after adjectives or demonstratives, e.g. The first book was critical, the second *one* was not.

- Verbs or verb phrases can be substituted by 'do', e.g. The first interviewee responded emphatically to the question, the second one *did not*.

- A verb or verb phrase can also be substituted by 'do so/it/that', e.g. Many people would like to smoke in public places, but they are banned from *doing so*.

- If clauses can be replaced by 'if so' or 'if not', e.g. This paper expects subjects to be more confident in English after an academic writing course; *if not*, suggestions will be given to improve individually.

- Ellipsis is the omission of a noun/pronoun, verb, infinitive or wh- clause. The noun or pronoun is often left out in the second of two coordinate clauses, e.g. I investigated climate change and *(I)* examined the impact on land resources.

- Although not the case for modals and auxiliaries, verbs can be omitted to avoid repeating them, e.g. Coffee appeals to some, tea *(appeals)* to others.

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