

AE Academic English UK



Research Report Writing General

EXAMPLE

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Teacher's Notes

EXAMPLE

Aim: To help students understand the key components of a research report. This lesson focuses on the six main components: abstract, introduction, methods, results, discussion and conclusion, and the focus is on secondary data.

Time: 90 -120 minutes.

Delivery: This lesson can be delivered face-to-face or online. For online delivery, each worksheet could be placed in a class document on OneDrive.

Lead in

- Students discuss the five questions with their partner(s).
- Whole class feedback: Take students' ideas but do not give away too much at this stage.

Task 1

- Students match the components of a research report with the corresponding definitions.
- Feedback: Students compare with a partner or a small group before being nominated to give answers to the whole class.
- Display **ANSWERS**.

Tasks 2-14

- There are a good variety of tasks to keep the students engaged and the exercises are organised in the following way:
 1. Students consider what they already know through completing a task.
 2. Students read a section of a research report and complete a task.
 3. Students summarise what they have learned.
- After each task, students should be given time to compare with a partner or a small group before being nominated to give answers to the whole class.
- **ANSWERS** can be displayed after each task.

Tasks 15-18

- These last tasks are related to the language of research reports. Students read through the complete research report and firstly, identify the tenses and modals used; secondly, identify the relative clauses; thirdly, identify the integral and non-integral in-text citations; and fourthly, select useful fixed phrases.
- After each task, students should be given time to compare with a partner or a small group before being asked to give their answers for the whole class.
- **ANSWERS** can be displayed after each task.

* **ANSWERS** are at the end of the worksheets.

Task 19: Extension (not included in timing)

- Students research and write a mini research report using secondary data. The instructions included on the student's worksheet are: Write a 1500-word research report on the following: 'Mind vs. Much on AI?'

Differentiation Options

- Students work in pairs to complete the report.
- Focus the methods section on the student's library search rather than the methods of the researchers.
- Students write one section only and receive feedback before writing the next section.
- Provide students with one key text as a starting point.
- Decrease the word limit to 1000 words.

Research Report Writing **EXAMPLE**

Lead in

Discuss these questions with your partner(s).

1. Have you had any experience writing a research report?
2. Why do students [redacted]?
3. What are the key features of an effective research report?
4. What are the [redacted] report?
5. Can you suggest a relevant research topic for your current course?

Task 1

Although there are many different types of research report, many include similar components and follow a similar format. Match the following components with the corresponding definitions and then compare with your partner(s).

	Feature		Definition
1.	Title Page	a.	This section displays all the sources you have used in your work [redacted] school.
2.	Abstract	b.	This tells your readers exactly where they can locate specific sections.
3.	[redacted]	c.	This [redacted] and visuals.
4.	Introduction	d.	This is a critical evaluation of your findings.
5.	Literature Review ([redacted] and theses)	e.	This provides [redacted], the aims and objectives, and what is already known about the topic.
6.	Methods	f.	This [redacted] suggestions or recommendations based on your findings.
7.	Results	g.	This is a short summary of the context, methods, findings [redacted] report.
8.	[redacted]	h.	This discusses how you collected your data.
9.	Conclusion	i.	This in [redacted] have not included in the main report.
10.	Reference List	j.	This [redacted] thinking about your subject area.
11.	[redacted]	k.	This should state the topic of the report concisely.

1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.	
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Tip: Always check with your teachers which features you need to include before you start research and writing.

Important Information

The following tasks will [redacted] of a research report by thinking about [redacted] knowledge and analysing a student's [redacted] the tasks, look at the following [redacted] task brief:

Student's Task Brief

- Write a 1500-word research report on the following: *'The impact of AI on academic performance'*.
- Include the following components: abstract, [redacted] discussion and conclusion.
- You are NOT [redacted] data.
- You are expected to use secondary data.
- You need [redacted] the Harvard Referencing System.
- You do NOT need to include a separate literature review.
- You do NOT [redacted] or any appendices.

Abstract

Task 2

What do you think are the key features of an abstract of a research report? Complete the gaps in the sentences with words from the box. Compare with a partner(s) when you have finished.

	audience	concisely	[redacted]	research	[redacted]
1.	This introduces the importance of the _____ from your viewpoint.				
2.	It _____ the _____ paragraph.				
3.	It needs to be written clearly and _____.				
4.	The _____ should _____ the whole _____.				
5.	_____ main _____ of the report.				

Task 3

Read and analyse the abstract of a student's [redacted] the following [redacted].

The impact of AI on academic performance	
<p>The aim of this report is to determine the extent to which the integration of artificial intelligence (AI) tools [redacted] student academic performance.¹ Secondary [redacted] two studies wherein the use of AI assistants [redacted] (SAC) was implemented.² The findings [redacted] that the utilisation of AI can positively affect student grades, motivation, creativity and confidence.³ However, there [redacted] and ethics of [redacted].⁴</p>	

Identify the function of each sentence by selecting the appropriate option from the box. Compare with a partner(s) when you have finished.

	To explain the [redacted]	To highlight the limitations	To explain the [redacted]	To summarise the results
1.				
2.				
3.				
4.				

Now answer these questions:

		Yes	No
1.	Is the abstract [redacted] ?		
2.	Can you understand the whole report from the abstract?		

Summary

What have you learned about the introduction of a research report?

Methods

Task 6

What are some of the key features of the methods section of a research report? Match column A with column B to make full sentences. Compare with your partner(s) when you have finished.

	Column A		Column B
1.	It [redacted] approach	A.	is appropriate for addressing the research questions/hypothesis.
2.	It explains why the chosen design	B.	[redacted] used.
3.	It details [redacted]	C.	conducted including the data collection method and duration of the study.
4.	It lists tools, equipment or	D.	data [redacted].
5.	It [redacted] was	E.	and structure of the research.
6.	It explains how the collected	F.	were [redacted] size.

1.		2.		3.		4.		5.		6.	
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Task 7

Read and analyse the methods section of a student's research report and complete the following exercises.

Hanshaw, Vance and Brewer's (2024) study involved 92 [redacted] 19 and 64, of which [redacted] all attended the Los Angeles Pacific University, United States.¹ 52 of the students had access to an AI assistant called Nectir in [redacted], with [redacted] on how the [redacted].² The assistants were designed to do more than a basic chatbot but did not complete tasks for students.³ [redacted] to ask the AI [redacted] content and assignments around-the-clock and would receive an immediate response.⁴ Moreover, the AI assistants [redacted] and encourage reflection on students' work.⁵ Academic performance was measured through overall course grades, [redacted], encouragement and [redacted] for both sets of students in order to assess the success of the AI assistants.⁶ In addition, Kim and Lee's (2023) [redacted] involved 20 [redacted] between 22 and 25 from different universities in and around Seoul, South Korea.⁷ Both students' drawing skills and attitudes to [redacted], which [redacted] groups – group 1 with positive attitudes towards AI and high-level drawing skills (PAHD), group 2 with positive attitudes towards [redacted] (PALD), group 3 with negative [redacted] drawing skills (NAHD) and group 4 with negative attitudes towards AI and low-level drawing skills (NALD).⁸ All groups completed [redacted] advertisement via AutoDraw, one with AI suggestions and one without.⁹ Their drawings were then [redacted] was [redacted] in their mother tongue for approximately 60 minutes to ascertain what effects the use of [redacted].¹⁰

Can you identify any of the key features from task 6 in the student's report? Compare with your partner when you have finished.

	Key Features	Yes	No	Sentence number(s)
1.	The overall approach.			
2.	design.			
3.	Participants and/or subjects.			
4.	software.			
5.	Data collection.			
6.				

Task 8

Another student has written their methods section in a different way. Read and analyse how it differs.

The investigation into the impact of AI on student performance involved reviewing studies by Hanshaw, Vance, and Brewer (2024) and Kim and Lee (2023).¹ These an academic such as “AI in education,” “student motivation and AI,” “academic performance and artificial intelligence,” and “AI-assisted learning tools.”² Each study by analysing its methodology, sample size, participant demographics, and data collection techniques.³ Hanshaw, Vance, and Brewer’s (2024) study influenced .⁴ The research examined participant selection, survey methods, and the role of AI assistants in promoting .⁵ Additionally, Kim and Lee’s (2023) repeated-measures experiment offered a comparative perspective and drawing skills.⁶ The study on attitudes toward AI and skill levels, assessing -assisted drawing tools through expert evaluations and individual interviews.⁷ By conducting this review, refining , evaluating study methodologies, and synthesising findings to understand AI’s role in education.⁸ This approach analysis of on student performance and engagement.⁹

Make some notes here to share with the class.

Can you identify any of the key features from this student’s report? Complete the table with your partner(s).

	Key Features	Yes	No	Sentence number(s)
1.	The overall approach.			
2.				
3.	Participants and/or subjects.			
4.				
5.	Data collection.			
6.				

Summary

What have you learned about the methods section of a research report?

Tip: Always check with your teachers to determine which method you need to include in your research report.

Results

Task 9

What are the key features of the results section? Rejumble the following sentences with your partner(s) to find out.

1.	bias or [redacted] any/ as they are.
2.	research questions or objectives/ structure [redacted] order.
3.	research [redacted] highlight the key results/ to the/ succinctly.
4.	ensure they are labelled/ if using tables or [redacted] / to illustrate your data.
5.	relevant [redacted] redundant descriptions/ only focus on.
6.	in this section/ do not explain why/ only [redacted] it means.

Task 10

Find the ten errors the student has made with verb forms in their results section. Complete the table below and then compare with a partner.

The findings from Hanshaw, Vance and Brewer's (2024) research [redacted] effect [redacted] had access to AI course assistants and the group who did not (See figure 1). More specifically, the students [redacted] have had both higher-grade point average scores and percentage scores than the control group. In terms [redacted] in the [redacted] to 3.77 in the control group. Regarding intrinsic motivation, there were a noticeable difference between the two groups, [redacted] 356 [redacted] (See figure 2). [redacted] significant differences were observed between the two groups regarding encouragement and support. [redacted] Kim and Lee's (2023) study [redacted] respect to creativity, expressivity and public utility varied greatly (See figure 3). Firstly, scores for creativity for PAHD and PALD [redacted] points respectively, yet for those in the [redacted] by 0.33 points, and by 0.85 points [redacted] concerning expression, there were statistically significant differences for groups PALD and NALD, with scores [redacted] respectively after [redacted] dropped by 1.3 points. Overall, the use of SAC will improve group PALD's performance by 2.35 points, PAHD's [redacted] performance by [redacted] group by 2.17 points. Students with a positive attitude towards AI are more active in problem-solving and developing other [redacted] reflective and [redacted] options. Furthermore, PAHD and NALD groups are appreciated the continuous task evaluation during [redacted] AI's suggestions [redacted] interaction to achieve more refined public utility. Although many students report that AI's ability to understand [redacted] original sketches [redacted], high-level drawers were [redacted] style.

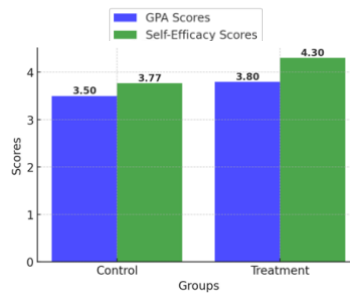


Figure 1: Mean grade point average (GPA) and self-efficacy scores for students with and without AI course assistants. (This figure was produced by ChatGPT based on data from Hanshaw, Vance and Brewer (2024)).

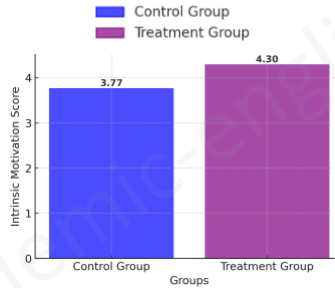


Figure 2: Mean intrinsic motivation scores for students with and without AI course assistants. (This figure was produced by ChatGPT based on data from Hanshaw, Vance and Brewer (2024)).

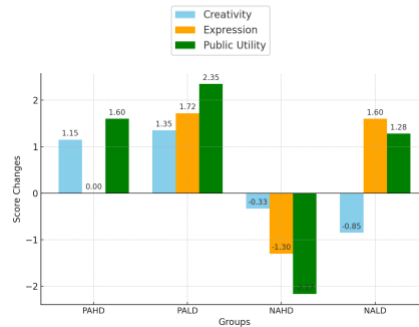


Figure 3: Changes in creativity, expressivity, and overall performance scores across different student groups after using SAC. (This figure was produced by ChatGPT based on data from Kim and Lee (2023)).

	Language Errors	Correction
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Summary

What have you learned about the results section of a research report?

Discussion

Task 11

What are some of the key features of the discussion section of a research report? Read the following paragraph and complete the gaps with words from the box below.

outcomes longest findings limitations

As the _____ part of the _____ section interprets the study's results _____ questions and existing _____. It _____, highlights implications and acknowledges _____. It compares the _____ highlights how _____ as addressing any unexpected _____.

Task 12

Read and analyse the discussion section of the student's research report and complete the following exercise.

Based on the results from both Kim and Lee (2023) and Hanshaw, Vance and Brewer (2024), it would _____ performance, as _____ efficacy in a range of academic disciplines.¹ As greater self-efficacy can lead to increased motivation, which are both _____ reasonable _____ and continuous personalised assistance and feedback offered via the AI assistant can help students to become _____ course material and more able to face challenging course-related tasks (Hanshaw, Vance and Brewer, 2024).² Interestingly, the findings _____ did not _____ support, which Hanshaw, Vance and Brewer (2024) attribute to the high-touch support model already _____ did not consider students' attitudes towards or previous experience with AI, which could have potentially _____ and _____ Lee (2023).⁴ Their findings suggest that a negative attitude towards AI did indeed impact upon their _____ for the _____ and a prior pessimistic view of AI.⁵ This could be due to the perception that AI lacks originality or creative _____ students who _____ high-level drawers may have viewed AI as a limiting rather than an enhancing tool, feeling that its suggestions constrained their artistic freedom rather than expanding their creative possibilities.⁷ _____ be related to AI-aided _____, who were open to new ideas, improved their scores in this area, but as expressivity increased for the low-level _____ to AI's constant task _____, which were often used in combination with their own ideas.⁸ This level of automation is a key factor in _____ to the _____ detailed instruction from AI, rather than the AI tool converting their images for them.⁹ Therefore, a student's _____ skills _____ to show more critical and creative thinking and understanding, but also to show more autonomy and _____ (2023) suggest _____ and actively reflect on both the task process and the content of the task, be it as an individual or in a team, during collaboration with AI tools.¹¹

Match each sentence with its corresponding function and then compare with your partner(s) when you have finished.

Sentence Number	Sentence Function	
1	a	To explore how [redacted] student engagement and creativity.
2	b	To identify [redacted] Hanshaw, Vance, and Brewer (2024).
3	c	To present a recommendation based on Kim and Lee (2023) regarding active reflection in AI-assisted learning.
4	d	To [redacted], highlighting differences between both groups.
5	e	To highlight the role of AI [redacted] in learning outcomes.
6	f	To state a general conclusion based on previous research.
7	g	To present an unexpected [redacted] with its lack of influence on encouragement and support.
8	h	To advocate for [redacted] thinking in AI-assisted learning.
9	i	To explain a key finding from Kim and Lee (2023) showing how attitudes [redacted].
10	j	To suggest a possible reason why students may [redacted] creative tasks.
11	k	To explain AI might improve engagement by [redacted] and student success.

1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.	
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Summary

What have you learned about the discussion section of a research report? Put your ideas in the box and be prepared to share with the class.

Conclusion

Task 13

What are the key features of the conclusion of a research report? Decide if the following sentences are true or false and then compare with your partner(s) when you have finished.

	Key Features	True	False
1.	This should be a short section with no new information.		
2.	[redacted].		
3.	It analyses the limitations in the methods used.		
4.	[redacted]		
5.	It explains why the findings matter.		
6.	It [redacted]		

Task 14

Use the key information provided to write the conclusion to the same student’s research report with your partner.

1.	AI use can improve academic performance, [redacted], self-efficacy, and grades.
2.	Further research [redacted] to explore accessibility, authenticity, responsible use, and equal opportunities.
3.	AI should be integrated appropriately [redacted] (Hanshaw, Vance & Brewer, 2024).
4.	[redacted] workers for tasks requiring unique skills and attributes (Tan, Lee & Lee, 2022).
5.	More research is needed on [redacted] in education.
6.	AI should complement, not replace, existing support systems to enhance student success.

Write approx. 150 words in the box below and then compare with the student’s conclusion.

What are the similarities and differences between your conclusion and the student’s conclusion?

Similarities	Differences

Summary

What have you learned about the conclusion of a research report?

Task 15

Read through the student’s complete research report (excluding the abstract). Highlight examples of the tenses and modals that the student used in the colours suggested below and analyse the reason the student used this language. Compare with your partner(s) when you have finished.

1. Introduction

There has been a rapidly growing interest in the use of AI in educational contexts. This can be seen not only in the onset of a new research field known as artificial intelligence in education, or AIED for short (Tan, Lee and Lee, 2022), but also in the one million users who subscribed to the OpenAI

WHOLE TEXT INCLUDED IN PAID VERSION....

Tenses and Modals	Example	Reason for Use
Present simple active		
Present simple passive		
Present continuous		
Past simple active		
Past simple passive		
Present perfect simple		
Passive infinitive		
Modal verbs active		
Modal verbs passive		

Task 16

Read through the student's complete research report again. Highlight examples of the relative clauses that the student used in the colours suggested and analyse the reason the student used this language. Compare with your partner(s) when you have finished.

1. Introduction

There has been a rapidly growing interest in the use of AI in educational contexts. This can be seen not only in the onset of a new research field known as artificial intelligence in education, or AIED for short (Tan, Lee and Lee, 2022), but also in the one million users who subscribed to the OpenAI

WHOLE TEXT INCLUDED IN PAID VERSION....

Copy and paste one example of each type of relative clause in the table provided and be prepared to share your analysis with the class.

Relative Clause	Example	Reason for use
Defining relative clauses		
Non-defining relative clauses		

Task 17

Read through the student’s complete research report again and identify the following in-text citations. Complete the table with the reason this language was selected with your partner(s).

In-text Citations		
Examples of integral citations		Reason for use
1.	Similarly, Tan, Lee, and Lee (2022) discovered that...	
2.	██████████ (2024) study involved ...	
3.	The findings from Hanshaw, Vance and Brewer’s (2024) research revealed ...	
4.	The findings from Kim and Lee’s (2023) study ██████████	
5.	Based on the results from both Kim and Lee (2023) and Hanshaw, Vance and Brewer (2024), ██████████	
6.	Hanshaw, Vance and Brewer (2024) attribute to ...	
7.	Kim and Lee (2023) suggest ...	
Examples of non-integral citations		Reason for use
1.	(Tan, Lee and Lee, 2022).	
2.	(Hanshaw, Vance and Brewer, 2024).	

Task 18

Read through the student’s complete research report again. What fixed phrases could you use in your research report? Complete the table with the following information and then compare with your partner(s).

	Fixed Phrase	Section
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Extension

Task 19

You are now ready to write your own research report using secondary data. Read through the following information carefully and ask your teacher when your deadline is and where you should submit your report.

Student's Task Brief

- Write a 1500-word research report on the following: *'Mind vs. [REDACTED] Relying Too Much on AI?'*
- Include the following features: abstract, introduction, methods, results, discussion and conclusion.
- You are NOT [REDACTED] own data.
- You are expected to use secondary data.
- You need [REDACTED] Referencing System.
- You do NOT need to include a separate literature review.
- You do [REDACTED] or any appendices.

Research Report Writing **ANSWER KEY**

Task 1

	Feature		Definition
1.	Title Page	a.	This section displays all the sources you have used in your work in a format that has been decided by the school.
2.	Abstract	b.	This tells your readers exactly where they can locate specific sections.

1.	<i>k</i>	2.	<i>g</i>	3.		4.		5.		6.		7.		8.		9.		10.		11.	
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Abstract

Task 2

	<i>past audience concisely summarises research sections</i>
1.	This introduces the importance of the <i>research</i> from your viewpoint.
2.	It <i>summarises</i> the research report in one paragraph.

ALL ANSWERS INCLUDED IN PAID VERSION...