

# Technical Writing and Speaking in English

## Finishing the Introduction (Stages 3, 4, and 5)

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## **Research Gaps (Stage 3)**

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- Stage 3 indicates **an area that is not treated** in the previous literature, but that is important from the point of view of your own work
- It moves the reader logically from the literature review to the purpose of your study

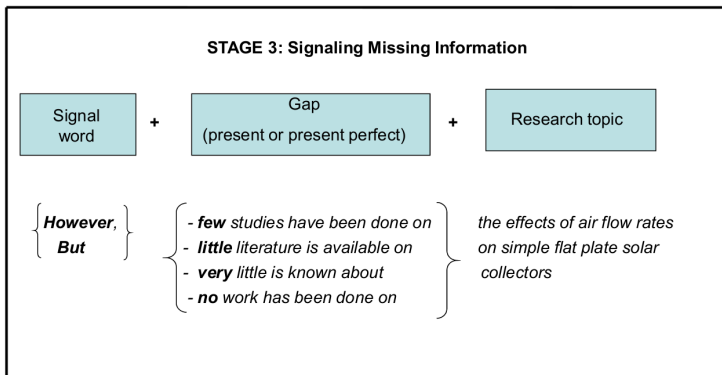
# Research Gaps (Stage 3)

## Writing strategies:

- ❶ **Inadequate/ignored aspect:** You may indicate that the previous literature described in Stage 2 is **inadequate** because an important aspect of the research area **has been ignored** by other authors
- ❷ **Unresolved conflict:** You may indicate that there is an **unresolved conflict** among the authors of previous studies concerning the research topic. This may be a theoretical or methodological disagreement
- ❸ **Extension/new research question:** You may indicate that an examination of the previous literature (Stage 2 content) suggests an **extension** of the topic, or raises a **new research question** not previously considered by other workers in your field

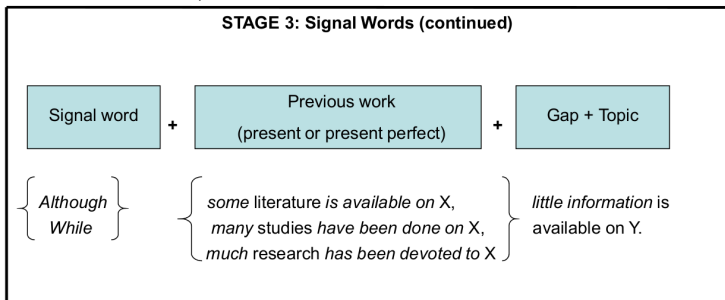
# Stage 3: Signal Words

- Special signal words are commonly used to indicate the beginning of Stage 3.
- Connectors such as **however** are used for this purpose. The connector is followed immediately by a **gap statement** in the present or present perfect tense, which contains modifiers such as **few, little or no**.



## Stage 3: Signal Words

Subordinating conjunctions like **although** and **while** can also be used to signal Stage 3. If you use these kinds of signals, you must write a complex sentence, using modifiers like **some**, **many** or **much** in the first clause, and modifiers like **little**, **few** or **no** in the second clause.



Notice that nouns like **literature**, **research** and **work** are uncountable and are therefore followed by singular verb forms.

# Exercise 1

Open Exercises/5-finishing-introduction.pdf and follow the instructions of **Exercise 4.2**.

## **Statement of Purpose (Stage 4)**



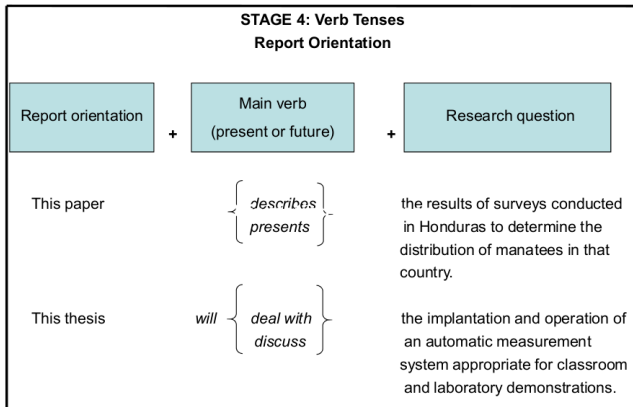
# Writing Stage 4: The Statement of Purpose

- Stage 4 serves to state as concisely as possible the **specific objective(s) of your research report**.
- This stage, the statement of purpose, thus follows directly from Stage 3 because **it answers the need expressed in Stage 3 for additional research in your area of study**.

Two kinds of orientation : (1) towards the report/paper/thesis/manuscript itself, and (2) towards the research activity/work/study.

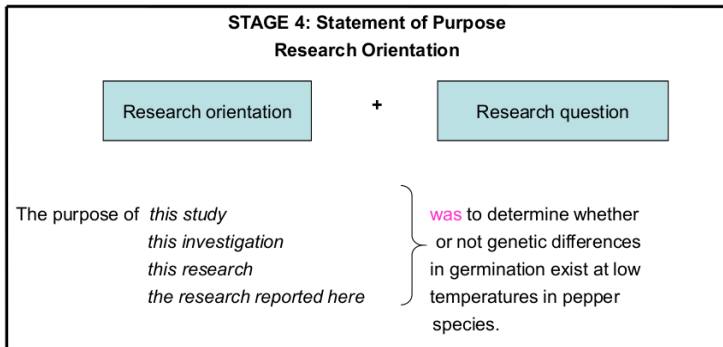
# Orientation 1: towards the report itself

- The orientation of the statement of purpose may be towards the **report itself** – that is, it may refer to the paper (thesis, dissertation, or report) that communicates the information about the research.
- If you choose to use the report orientation, use the **present** or **future tense**.



## Orientation 2: towards the research activity

- The orientation of the statement of purpose may also be towards the **research activity**, in other words **the study itself**, rather than the written report.
- If you choose the research orientation you should use **the past tense**, because the research activity **has already been completed**.



## Exercise 2

Open Exercises/5-finishing-introduction.pdf and follow the instructions of **Exercise 4.3**.

## Exercise 2 answers

- Sentences: **C, E, F, A, B, D**
- Stages: **1, 2, 2, 2, 3, 4**

## Exercise 3

Open Exercises/5-finishing-introduction.pdf and follow the instructions of **Exercise 4.4**.

## Exercise 3 answers

- ① Report → This study developed ...
- ② Research → The aim of this report is to examine/ describe...
- ③ Research → This report is an attempt to provide ...
- ④ Research → The purpose of this paper is to further examine/describe...
- ⑤ Report → This study examined...

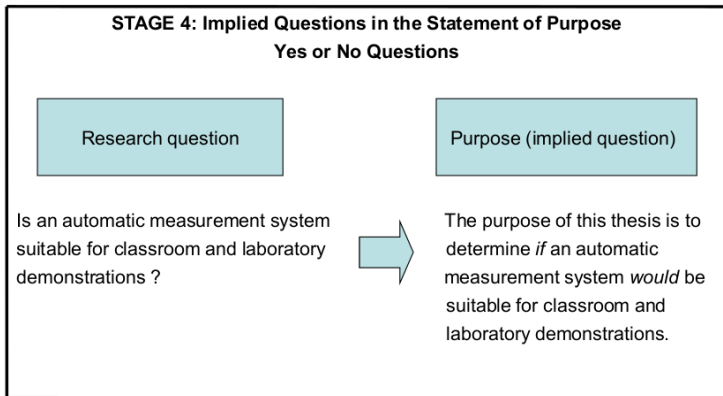
# Stage 4 and Your Research Question

- Stage 4 should be **directly related to the research question** upon which you based your study.
- You may not need to include the research question explicitly in your report. **However**, the statement of purpose should be written so that your reader can **infer the research question** behind your study.
- Two strategies: (1) for **yes/no** (closed) questions, and (2) for **information** (open) questions.



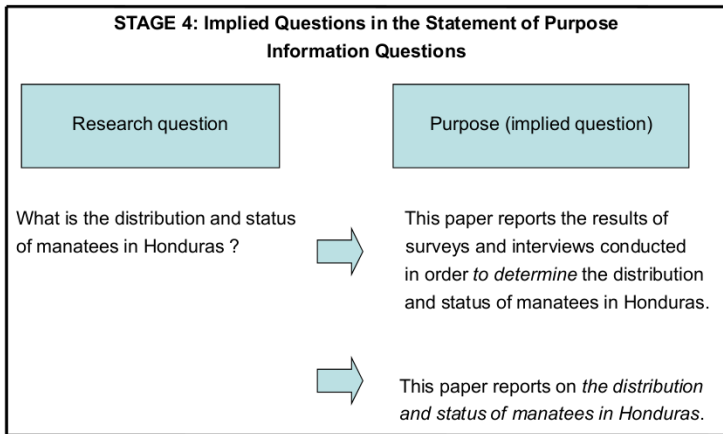
## For **yes/no** (closed) questions

- If the implied research question is a yes or no question, the connecting words **whether** or **if** are used in Stage 4, and a modal auxiliary like **would** or **could** accompanies the verb.



# For **information** (open) questions

- When the implied question is an information question, if/whether is **omitted** and an **infinitive or noun phrase** is used.



## **Statement of value (Stage 5)**

# Writing Stage 5: The Statement of Value

- In Stage 5 you justify your research on the basis of **some possible value or benefit** the work may have to other researchers in the field or to people working in practical situations.
- Stage 5 is not always present in the introduction:
  - Often present in a **thesis, dissercation, or thesis proposal**.
  - Often present in research reports that describe a **project conducted with money from outside sources**.
- Two points of view regarding possible value or benefit : (1) **practical** or (2) **theoretical**.

## Stage 5: practical benefit point of view

- The statement of value may be written from the point of view of the **practical** benefits which may result from **applying the findings of your research**.

### Example 1

**This research may provide an alternative solution** to the problem of manually demonstrating instrumentation principles in classroom environments.

### Example 2

**The results of this study could be useful** to educators responsible for planning course work in consumer education.

## Stage 5: theoretical benefit point of view

- Or you may write the statement of value to emphasize the **theoretical** importance of your study in **advancing the state of knowledge** in your specific area of research.

### Example 1

Both of the factors under investigation in this study **may be of importance in explaining** the irregular occurrence of this disease.

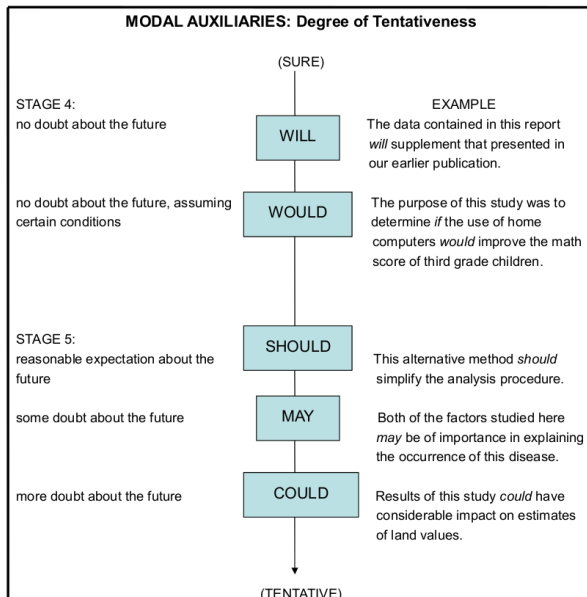
### Example 2

Results of this study **may suggest a broader hypothesis for further research** into the effects of atmospheric chemicals on rubber.

## Stages 4 and 5: Selecting the Best Modal Auxiliaries

- Selecting the most appropriate modal auxiliary is often a problem because the meanings of some of these words differ only slightly from one another.
- The modals are listed here in order of their **degree of tentativeness**.

# Stages 4 and 5: Selecting the Best Modal Auxiliaries





# Stage 5: Model Auxiliaries and Tentativeness

- Stage 5, the statement of value, is usually written in a way that suggests an attitude of **tentativeness** or **modesty** on the part of the author. When reporting your own study, **you should not sound too sure of the benefits**, either practical or theoretical, of your work. It is conventional **to sound more cautious**. This is accomplished in Stage 5 by using modal auxiliaries, principally **may**.

STAGE 5: Statement of Value Using Modal Auxiliaries				
Your research	+	Modal auxiliary	+	Value
The application of the strategies described here		$\left\{ \begin{array}{c} \textit{may} \\ \textit{should} \end{array} \right\}$		increase the proportion of drug abusers who can be identified.
The system described here		<i>could</i>		serve as the basis for a study of automatic measurement system in an instrumentation course.
This study		<i>may</i>		lead to a better understanding of phosphorus in natural systems.

## Exercise 4

Open Exercises/5-finishing-introduction.pdf and follow the instructions of **Exercise 4.6**.

## Exercise 4 answers

- ① closed question → would/could
- ② closed question → would/could/might
- ③ information → could
- ④ information → should/may/could

# Checklist for stages 3, 4, and 5

## Information

- Include all three stages in their proper order
- Indicate a gap in the research in Stage 3
- Choose research or report orientation for Stage 4
- Choose theoretical or applied perspective for Stage 5

## Language

- Use appropriate signal words and modifiers in Stage 3
- Use present or past tense in Stage 4, depending on orientation
- Use modal auxiliaries to indicate tentativeness in Stage 5