

# A! Appendix 5

## Topic Sentences (Move 1-3)

When reviewing previous literature – either as part of your *introduction* or a *literature review*, the writer needs to relate what has been done (or proposed) with who has done (or proposed) it. However, before starting to list individual studies and their authors (who), it is important that you first introduce the topic area (what). For this purpose, good writers use the following three sentence patterns as strategies for introducing a topic area.

**Strategies 5-7** can serve as **(1) a topic sentence** that sets the scene for a listing of previous research work, in which each subsequent sentence uses an *author-prominent* strategy to support a claim made in the topic sentence; **(2)** as a “**bridge**” between two major topics; **(3)** as a quick summary describing the **current focus** of a research field [Move 1-3]; or **(4)** as the **first part** in a description of a **gap** [Move 2-1] by introducing a topic area that has already been filled by previous research, before going on to identify neglected areas that have received “little” or “no” attention in the literature.

### Strategies for introducing previous research:

5. {TIME} [INTENSIFIER] [RESEARCH ACTIVITY] has [VERB -ed] | [TOPIC]  
[PURPOSE]

Recently, much research has been devoted to improving the solubility and retrogradation of starches by reducing their molecular weight through chemical, physical, or enzymatic treatments (Becktel, 1959, Carrol et al., 1987 and Hebeda et al., 1990).

6. {TIME} [INTENSIFIER] progress has been [VERB -ed] in [TOPIC]

In recent years, much progress has been achieved in the development of biodegradable products using agricultural materials.

7. {TIME} [QUANTIFIER] [RESEARCH ACTIVITY] have (been) [VERB -ed] | [TOPIC]  
[PURPOSE]

A number of METHODS have recently been described to measure this property, including the Tarr-Baker gelometer (Bender, 2009) and the Herbstreith Pektinometer (Zedler, 2013).

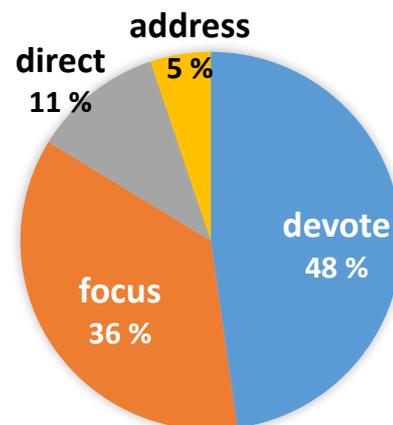
A “quick-and-dirty” analysis using Google Scholar revealed that the vocabulary shown on the following pages is commonly associated with these three sentence types of topic sentences.



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5. {TIME} [QUANTIFIER] [RESEARCH ACTIVITY] has [verb -ed] + [TOPIC]

Considerable Much Significant	research work effort	has been DEVOTED to has FOCUSED ON has been DIRECTED toward/ at has ADDRESSED (the issue of)
Considerable Growing	attention in interest in	has FOCUSED ON has been DIRECTED toward/ at
Extensive Numerous Many Several	efforts studies papers investigations	have been DEVOTED to have FOCUSED ON have been DIRECTED toward/ at have ADDRESSED (the issue of)



EXAMPLES:

OVER THE LAST DECADE, MUCH RESEARCH HAS BEEN devoted TO obtaining short pulses at high repetition rates.

IN RECENT YEARS, CONSIDERABLE EFFORT has focused on evaluating the blocking experienced by “customers” in contending for a commonly shared “resource.”

IN THE PAST YEARS, MUCH EFFORT HAS BEEN directed toward modeling the nonselective multipath fading and shadowing IN personal communications satellite systems

6. [TIME] [QUANTIFIER] progress has been [verb -ed] in [TOPIC]

Much Considerable Significant Great Substantial	progress success improvement	has been	ACHIEVED in MADE in REPORTED in
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EXAMPLES:

CONSIDERABLE progress has been reported in wafer size [1], epitaxy [2], and in discrete device and integrated circuit technologies for silicon carbide [3].

IN RECENT YEARS, MUCH progress has been achieved in the development of biodegradable products using agricultural materials as basis.

SINCE THE MIDDLE OF THE 1990s, MUCH improvement has been made in the research and applications of workflow.

## 7. {TIME} [QUANTIFIER] [RESEARCH ACTIVITY] have (been) [verb -ed]

Various	approaches	have been	PROPOSED	for [PURPOSE]
A number of	methods		DEVELOPED	to [PURPOSE]
Several	technologies		PRESENTED	
A wide variety of	algorithms		DESCRIBED	
Numerous	solutions			
Many				

### EXAMPLES:

**VARIOUS methods** have been **described** **TO MEASURE** this property, including the Tarr-Baker gelometer (Bender, 1949) and the Herbstreith Pektinometer (Zedler, 1983), a derivative of the Liiers & Lochmiiller ( 1957) instrument.

**MANY approaches** have been **developed** **TO PREPARE** chitosan beads, including the water in oil method (Onishi et al., 1996), emulsion-droplet coalescence technique (Tokumitsu, Ichikawa, & Fukumori, 1999), and microemulsion (Andersson & Löfroth, 2003),

**A NUMBER OF methods** have been **developed** **FOR** the cross-linking of chitosan, including chemical cross-linking with glutaraldehyde (Hirano, Yamaguchi, Matsuda, Miura, & Kondo, 1977) and with Mo(VI) polyoxyanions (Draget, Varum, Moen, Gynnild, & Smidsrod, 1992).

**A NUMBER OF TECHNIQUES** have been **proposed** **FOR PROVIDING** runtime performance guarantees while minimizing power consumption.

**TO ELIMINATE OR REDUCE** harmonics in power systems, **SEVERAL METHODS** have been **developed** and **put** into practice.

**NUMEROUS MODELS** have been **presented** **TO ESTIMATE** the displacement of piezoelectric actuators.

## Present Perfect tense

Note that the **topic sentences (5-7)** listed above use the **present perfect tense** to introduce **research activities** as a new topic that will be continued in the following sentences. Table 1 below lists the research activities most commonly used as the **subjects** for sentences using **Strategy 7**. Note that such topic sentences are used to announce **recent research or trends** reported from **multiple studies**.

<p>Various <b>methods</b> <b>have been used</b> to construct experimental models for resistive antennas.</p> <p>Several <b>approaches</b> <b>have been proposed</b> for overcoming these problems [5], [6], [8].</p> <p>Numerous <b>algorithms</b> <b>have been developed</b> for the detection of ECG beats [4]-[8].</p> <p>Many <b>studies</b> <b>have focused</b> on analyzing customer's mobile device usage [10]-[15].</p> <p>Much <b>research</b> <b>has been directed</b> towards feature recognition in human faces (See [7] for a review).</p>
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The following **research activities** are typically used in **subject** position with a verb in the present perfect. These sentences function as topic sentences and use sentence **strategies 5-7** listed on the preceding pages.

Algorithm	Framework	Model	<b>Strategy</b>
<b>Approach</b>	Heuristic	Procedure	Structure
Architecture	Materials	Process	System
Design	Mechanism	Protocol	<b>Technique</b>
Equation	Measure	Scenario	Technology
Extension	<b>Method</b>	<b>Scheme</b>	Theory
Formula	Metric	<b>Solution</b>	Tool

**Table 1** Superordinate terms commonly introduced as **research activities** using the **present perfect**.