

# Thesis Workshop 2

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1

Compare and contrast the source integration techniques used in chemical engineering bachelor's theses and other fields

2

Reflect on methods of incorporating sources into your text and when you might use each type

3

Review the Given-New Principle in academic writing for increasing reader comprehension

# Workshop Learning Outcomes

# Activity A

## Methods of Integrating Sources

Non-integral (Excerpt 1, Version A)

Integral (Excerpt 1, Version B)

Reference numbers (Excerpt 2, Version A)

Footnotes or endnotes

Summary / Generalization

Quote

*Table 2: Surface forms of citations (%)*

Discipline	Non-integral	Integral
Biology	90.2	9.8
Electronic Engineering	84.3	15.7
Physics	83.1	16.9
Mechanical Engineering	71.3	28.7
Marketing	70.3	29.7
Applied Linguistics	65.6	34.4
Sociology	64.6	35.4
Philosophy	35.4	64.6
Overall Averages	67.8	32.2

Ken Hyland. (1999). Academic Attribution: Citation and the Construction of Disciplinary Knowledge. *Applied Linguistics* 20/3: 341±367

*Table 4: Reporting forms in citations*

Discipline	Reporting structures		Most frequent forms
	per paper	% of citations	
Philosophy	57.1	67.0%	say, suggest, argue, claim, point out, propose, think
Sociology	43.6	42.0%	argue, suggest, describe, note, analyse, discuss
Applied Ling.	33.4	44.4%	suggest, argue, show, explain, find, point out
Marketing	32.7	34.5%	suggest, argue, demonstrate, propose, show
Biology	26.2	31.7%	describe, find, report, show, suggest, observe
Electronic Eng.	17.4	40.6%	propose, use, describe, show, publish
Mechanical Eng.	11.7	42.5%	describe, show, report, discuss
Physics	6.6	27.0%	develop, report, study
Averages	28.6	42.6%	suggest, argue, find, show, describe, propose, report

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*Table 3: Presentation of cited work (%)*

Discipline	Quote	Block quote	Summary	Generalization
Biology	0	0	72	38
Electronic Engineering	0	0	66	34
Physics	0	0	68	32
Mechanical Engineering	0	0	67	33
Marketing	3	2	68	27
Applied Linguistics	8	2	67	23
Sociology	8	5	69	18
Philosophy	2	1	89	8

Ken Hyland. (1999). Academic Attribution: Citation and the Construction of Disciplinary Knowledge. *Applied Linguistics* 20/3: 341±367

- Depending on the intended application, membranes can be hydrophilic or organophilic [4], [5], [6], [7]. As hydrophilic membranes, is employed for dehydration of organic mixtures [7] and on other hand organophilic membrane used in ether removal of organics from diluted stream [8] or in Acetone butanol-ethanol fermentation process [9].
- Recently, Kamtsikakis et. al, developed nanocomposite membrane using high aspect ratio CNF with nonpolar polystyrene-block-polybutadiene-block-polystyrene matrix for ethanol/water pervaporation dehydration. In their study, on 15 wt.% CNF addition in membrane (60~80  $\mu\text{m}$ ) resulted highest mechanical properties with 3-fold increase in flux accompanied by 40 % decreased in separation factor giving a highest pervaporation separation index ( $89.4 \text{ g m}^{-2} \text{ h}^{-1}$ ) was observed [25].

## Chemical Engineering Journal Article



# Activity B

# Activity B: Plagiarism or Acceptable Use?

- Potential Use 1. Plagiarism. This passage is virtually a word-for-word copy (with only a few words changed here and there), yet there are no quotation marks or other indications that it is a quotation. The citation by itself is inadequate indication of the source. Quoted words must always be marked as quoted. Changing a few words here and there does not change the fact that most of the words are quoted.
- Potential Use 2. Plagiarism. This passage is an inadequate paraphrase of Nickerson, since the passage has many words and phrases that echo the source. Also note that, as in Potential Use 1 above, the passage does not have an opening tag to indicate where the use of the source begins. A citation at the end of the paragraph is not sufficient to indicate what is being credited to the source.
- Potential Use 3. Acceptable use. This passage is an acceptable summary of Nickerson's words, and where it uses an exact phrase, it puts the phrase in quotation marks. Note the opening tag, "Nickerson (1999) argues" to indicate the beginning of the use of the source.

# Activity B : Plagiarism or Acceptable Use?

- Potential Use 4. Plagiarism. This passage begins with a properly quoted and cited passage, but then it continues with a lightly modified quotation of the subsequent words in Nickerson's passage. The implication to the reader is that the words and ideas following the cited quotation are the student's, when in fact they are still Nickerson's.
- Potential Use 5. Acceptable use. This is an appropriate combination of quotation and summary, with the summary in the student's own words and the citation in the proper place. Note that the beginning tag "We are informed by," and the concluding citation enclose the borrowed material completely.
- Potential Use 6. Plagiarism. Even though the student here has not quoted the passage word for word, the ideas have been taken from the passage and not cited. The lack of citation of the source of the ideas is plagiarism.

# Avoid Paragraph- final Citations

- To ensure that the reader knows *exactly* what information comes from the source:
  1. Open the paragraph with a lead-in sentence or topic sentence that introduces the source you are summarizing or paraphrasing.
  2. In the sentences that follow, refer back to the source when needed to show that you are still using the same source.
- According to Spitzer's (2010) study on the effects of radiation on humans ...Spitzer's study developed the guidelines needed to test...The most important find in his study was that....Spitzer concluded the benefit of radiation...The evidence that proves these guidelines...(Spitzer, 2010).

- Depending on the intended application, membranes can be hydrophilic or organophilic [4], [5], [6], [7]. As hydrophilic membranes, is employed for dehydration of organic mixtures [7] and on other hand organophilic membrane used in ether removal of organics from diluted stream [8] or in Acetone butanol-ethanol fermentation process [9].
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## Chemical Engineering Journal Article

Gonzalez et al. (2012) uses a modified version of NREL's MAS pathway model to quantify the pathway's techno-economics under five lignocellulosic feedstock scenarios: loblolly pine, natural hardwood, eucalyptus, stover, and switchgrass. A TPI of \$284 million is calculated for a 1295 MTPD biorefinery. The analysis calculates both NPV and IRR for each feedstock scenario under the assumption that the biorefinery receives \$4.64/gge (\$1.23/lge) of ethanol and operates for 15 years. The stover and switchgrass scenarios yield the lowest returns (\$38 million/14.2% and \$84 million/16.5%, respectively) while the pine scenario yields the highest returns (\$192 million/21.4%). The authors attribute the different results to the composition, moisture content, and alcohol yield associated with each feedstock.

## Writing a paragraph on one citation: integral

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## Writing a paragraph on one citation: integral

### 3.2.1. Fast pyrolysis and hydroprocessing

One of the earliest TEAs of the fast pyrolysis pathway is provided by [Bridgwater \(1996\)](#), which calculates that the MFSP of diesel fuel produced via FPH is 158% higher than the contemporary diesel fuel market price. The analysis presents MFSPs for several scenarios involving different process and upgrading configurations, including catalytic upgrading, but provides relatively few details on capital costs. Furthermore, its conclusion that the FPH pathway cannot compete with petroleum is largely driven by its use of a \$20/bbl petroleum price that, while appropriate at the time, is much too low for current comparisons.

Writing a paragraph on one citation: non-integral



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What are the author's own views on the matter?

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What are the author's own views on the matter?

Whose  
voice is  
this?



The voice of the  
scientific community

Shared / common  
knowledge?



The voice of the cited source and its  
author(s)?



The author's own voice?

# Methods of Integrating Sources

Discuss in groups:

1. When have you used one of these source integration methods in your thesis?
2. What are the benefits or disadvantages of each method?
3. After this textual analysis, are there any changes you might make to how you incorporate sources in your thesis?

Non-integral

Integral

Reference numbers

Footnotes or endnotes

Summary / Generalization

Quote

## Review

Review the three types of given-new structures



## Practice

*Academic Writing for Graduate Students*

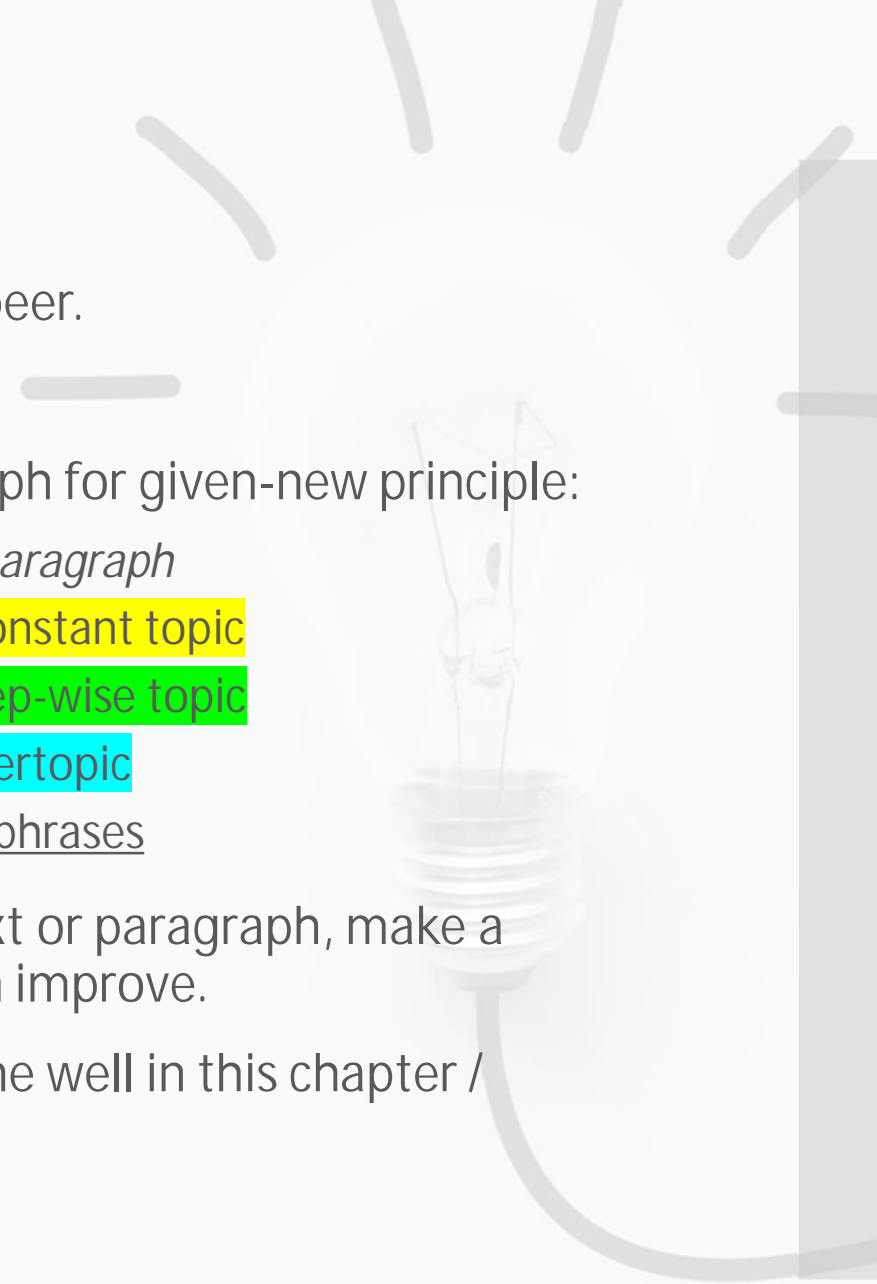
- Complete Task 16 (7 min)
- Read pages 31-33, 37 (5 min)
- Task 17 (complete yourself, if interested)

Given-New  
Principle

# Activity C

# Peer Review

1. Email your thesis excerpt to your peer.
2. Read the first two pages.
3. On their text, look at each paragraph for given-new principle:
  - *Italicize the topic sentence of the paragraph*
  - Highlight in yellow if they use a constant topic
  - Highlight in green if they use a step-wise topic
  - Highlight in blue if they use a hypertopic
  - Underline transitional words and phrases
4. If they have no clear flow in the text or paragraph, make a recommendation for how they can improve.
5. State one thing the author has done well in this chapter / section.







Is there an in-text citation style expected for your bachelor's thesis?



How might your incorporation of sources change in different parts of your paper?



How have previous chemical engineering students incorporated sources into their thesis in the past?



Does each paragraph of your text utilize one of the methods for given-new information flow?



What have you learned from reading your peer's thesis excerpt?

# To Consider