

## Synthesis

To “synthesise” means to bring together ideas from a range of sources. The synthesis process is an important academic skill that demonstrates your ability to undertake research and develop an argument. It therefore involves corroborating appropriate information and organising it in a logical way to present a point of view in response to an assignment question.

Effective synthesis:

- Indicates a breadth of research
- Allows you to cite multiple sources, even if you have a small word limit
- Determines common themes on a particular topic
- Establishes your perspective based on your research

Synthesis Examples:

Idea 1

Idea 2

Synthesised source

1. *The significance of the role the English language plays in cross-cultural communication is still being debated. Supporting the contention that English is the dominant world language, Watson (2011) and Lui (2010) point out its importance as the medium of international communication in business, technology and other global forums. However, others argue that despite its apparent dominance, English is not the global language when the number of native speakers of other languages, e.g. Chinese, are considered (Hannan, 2009; Dowd, 2011)”* (adapted from: RMIT University: Learning Lab, n.d., para. 4).
2. *There are multiple ways of referring to peer involvement in learning and assessment. Concerning terminology, it is remarkable that while Van Gennip et al. (2010) and Van Zundert et al. (2010) were talking about “peer assessment”, Van Steendam et al. (2010) as well as Cho and MacArthur (2010) used “peer revision” to describe the phenomenon. Yet differently, Gielen et al. (2010) and Stijbos et al. (2010) introduced “peer feedback” when describing the topic of their research. One may argue that this variety simply reflects that the authors investigated different sub-processes or sub-phenomena of peer assessment (adapted from: Kollar & Fischer, 2010, p. 345).*
3. *Formative peer assessment has the potential to transform current approaches to tertiary education. There is general agreement in the literature that peer assessment, particularly formative assessment, promotes effective learning for University students (Boud, 2000; Boud, Cohen & Sampson, 2009; Falchikov, 2007; Lui & Carless, 2006; Sadler, 1989; Topping, 1998). Where summative assessment has been criticised for its emphasis on simply awarding credentials (Boud & Falchikov, 2006) and, in turn, its intrinsically competitive nature (Boud et al., 1999), formative assessment has been credited for promoting skills that foster life-long learning (Boud, 2000; Boud & Falchikov, 2006). Given that summative assessment is still an integral component of tertiary education, and that formative feedback provided by academics is not only minimal but often ignored by students (Marcous, Marken & Yu, 2012), participation in peer assessment groups may assist students to develop skills necessary for success, both in their current studies and in their future learning.*



## Synthesis matrix

A useful strategy for achieving synthesis is to sort the information from different sources into a matrix:

	Cornelsen	Stewart	Bruley	Scott
Alteration of women's roles because of WWII	<ul style="list-style-type: none"> <li>- Women accredited the WASP program for opening new doors, challenging stereotypes, and proving that women were as capable as men (p. 113)</li> <li>- Women could compete with men as equals in the sky because of their exemplary performance (p. 116)</li> <li>- WASP created opportunities for women that had never previously existed (p. 112)</li> <li>- Women's success at flying aircrafts "marked a pivotal step towards breaking the existing gender barrier" (p. 112)</li> </ul>	<ul style="list-style-type: none"> <li>- WAAC (Women's Army Auxiliary Corp) was 1<sup>st</sup> chance for women to serve in army, given full army status in 1943 as WAC (p. 28)</li> <li>- Needs of the war were so great that women's traditional social roles were ignored (p. 30)</li> <li>- Military women paid well for the time period and given benefits if they became pregnant (p. 32)</li> <li>- The 1940's brought more opportunities to women than ever before (p. 26)</li> </ul>	<ul style="list-style-type: none"> <li>- Women given equal opportunities (p. 223)</li> <li>- Women joined workforce as a break from the ordinary to help the war (p. 220)</li> <li>- Unconscious decision to cross into male-dominated roles (p. 221)</li> <li>- Seized these new opportunities to bring about change (p. 230)</li> </ul>	<ul style="list-style-type: none"> <li>- Women born in the 1920's found new doors open to them where they once would have encountered brick walls (p. 526)</li> <li>- Even women not directly involved in the war were changing mentally by being challenged to expand their horizons because of the changing world around them (p. 562)</li> <li>- War also brought intellectual expansion to many people (p. 557)</li> </ul>
Hardships and oppositions women faced	<ul style="list-style-type: none"> <li>- "From the outset male pilots resented women's presence in a traditionally male military setting" (p. 1113-4)</li> <li>- "The WASP were routinely assigned inferior planes that were later found to have been improperly maintained" (p. 114)</li> <li>- discrimination against WASP at every level of military service, women were only paid 2/3 of what men were for doing identical tasks (p. 114)</li> <li>-...</li> </ul>	<ul style="list-style-type: none"> <li>- Women in the military given extensive physical and mental tests, but still discriminated against, ridiculed, and considered inferior to men (p. 29)</li> </ul>	<ul style="list-style-type: none"> <li>- Women given unskilled labor positions by government because only seen as temporary workers, therefore no reason to train them (p. 221-2)</li> <li>- Women given less significant work and viewed as less intelligent and physically able (p. 224)</li> <li>- "The Church-Bliss diary reveals how dilution arrangements...ensured that women working in male...."</li> </ul>	

SOURCE: NC State University Writing and Speaking Tutorial Service, 2006

### Important points:

- You can only really know the themes to include AFTER you have done a fair bit of reading, and made notes
- It is ESSENTIAL to make overall notes of your reading first, then transfer key points from your notes onto the matrix. Otherwise, the matrix becomes too detailed and unfocussed.

The matrix is a tool to help you see which ideas can be synthesized, and how. Here is a paragraph written by a student using the ideas from the above matrix:

*While the articles used in this research agree that women made many advances during the Word War II period, it is crucial to realize that not all these changes were welcomed. In most cases women faced discrimination from just about everyone around them. Women in the workplace were often placed in positions of inferiority or treated as being less physically able to do the same work the men did. Many women were often not trained because they were viewed as temporary employees who were only there for the duration of the war (Bruley, 2003, pp.221-222). Women were very rarely given equal pay as men, even though some of them did the same work. Women in the military faced not only mental abuse but also physical harm from their male counterparts. According to Cornelsen (2005), there were many instances where female aviators were injured or killed due to being made to fly ill-maintained aircrafts or aircrafts that had been sabotaged.*

Here is our analysis of this paragraph. We have used colour coding in this and in the matrix to identify features.

While the articles used in this research agree that <b>women made many advances during the Word War II period</b> , it is crucial to realize that not all these changes were welcomed.	Argument/topic sentence
<b>In most cases women faced discrimination from just about everyone around them.</b>	Key synthesized idea (e.g. discrimination)
Women in the workplace were often placed in positions of inferiority or treated as being less physically able to do the same work the men did. Many women were often not trained because they were viewed as temporary employees who were only there for the duration of the war (Bruley, 2003, pp.221-222).	Supporting evidence: Example 1 (of Hardships and opposition)
Women were very rarely given equal pay as men, even though some of them did the same work. Women in the military faced not only mental abuse but also physical harm from their male counterparts. According to <b>Cornelsen (2005)</b> , there were many instances where female aviators were injured or killed due to being made to fly ill-maintained aircrafts or aircrafts that had been sabotaged.	Supporting Idea: Example 2 (of Hardships and opposition)

Adapted from NC State University Writing and Speaking Tutorial Service, 2006

Notice how when transitioning from Bruley to Cornelsen the writer notes not only that the two articles are similar, but also *how* they are similar. Rather than summarizing, the author draws comparisons between the two articles, giving relevant information and at the same time synthesizing the two works.

### References:

- Kollar, I., & Fischer, F. (2010). Peer assessment as collaborative learning: A cognitive perspective. *Learning And Instruction*, 20(4), 344-348. <http://doi:10.1016/j.learninstruc.2009.08.005>
- NC State University Writing and Speaking Tutorial Service. (2006). Writing a literature review and synthesis matrix. Retrieved December 1, 2016 from <https://tutorial.dasa.ncsu.edu/wp-content/uploads/sites/29/2015/06/synthesis-matrix.pdf>
- RMIT University: Learning Lab (n.d.). Synthesising. Retrieved November 1, 2016 from <https://emedia.rmit.edu.au/learninglab/content/synthesising-0>