

# **Jigsaw in Practice: a Collaborative Workshop about Collaborative Learning**

Sarah Honeychurch

University of Glasgow

sarah.honeychurch@glasgow.ac.uk

- Managing tutorial groups with a range of abilities and motivations (at UoG students do 3 subjects in their first year, so tutorial groups are mixed between those intending taking a subject to Honours, and taking it as a third subject)
- Aronson's “Jigsaw Classroom”: a method of turning groups into small groups and encouraging collaborative learning
- F2F teaching supported by Moodle wikis and forums

# Aronson's Jigsaw Classroom

Aronson developed the Jigsaw Classroom learning design in order to get different groups of pupils working together and stop destructive competition.

Basic method: Make them depend on each other. Their only access to the knowledge on which their marks depend is from other children teaching them. Split the class into groups, each specialising on one part of the topic; prepare materials; present.

This has other good effects. One of the biggest is that the work they produce is of real value to others: whereas normally student work is artificial, with no end user.

# The Jigsaw Technique

The jigsaw classroom is a cooperative learning technique with a three-decade track record of ... increasing positive educational outcomes. Just as in a jigsaw puzzle, each piece - each student's part - is essential for the completion and full understanding of the final product. If each student's part is essential, then each student is essential; and that is precisely what makes this strategy so effective. <http://www.jigsaw.org/overview.htm>

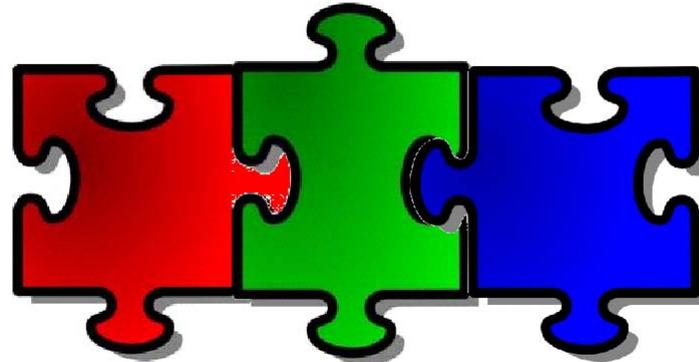
# The Jigsaw Technique

Here is how it works: The students in a history class, for example, are divided into small groups of five or six students each. Suppose their task is to learn about World War II. In one jigsaw group, Sara is responsible for researching Hitler's rise to power in pre-war Germany. Another member of the group, Steven, is assigned to cover concentration camps; Pedro is assigned Britain's role in the war; Melody is to research the contribution of the Soviet Union; Tyrone will handle Japan's entry into the war; Clara will read about the development of the atom bomb.

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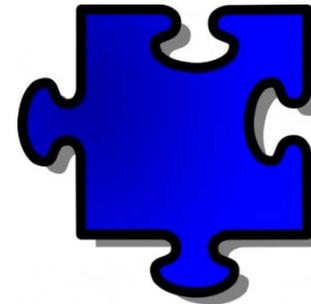
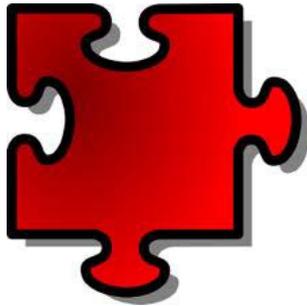
# The Jigsaw Technique

Main topic



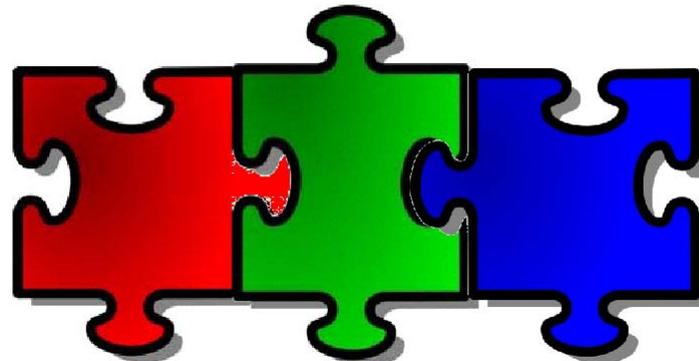
Divided by teacher,  
class only see their  
section of the topic

Group  
work

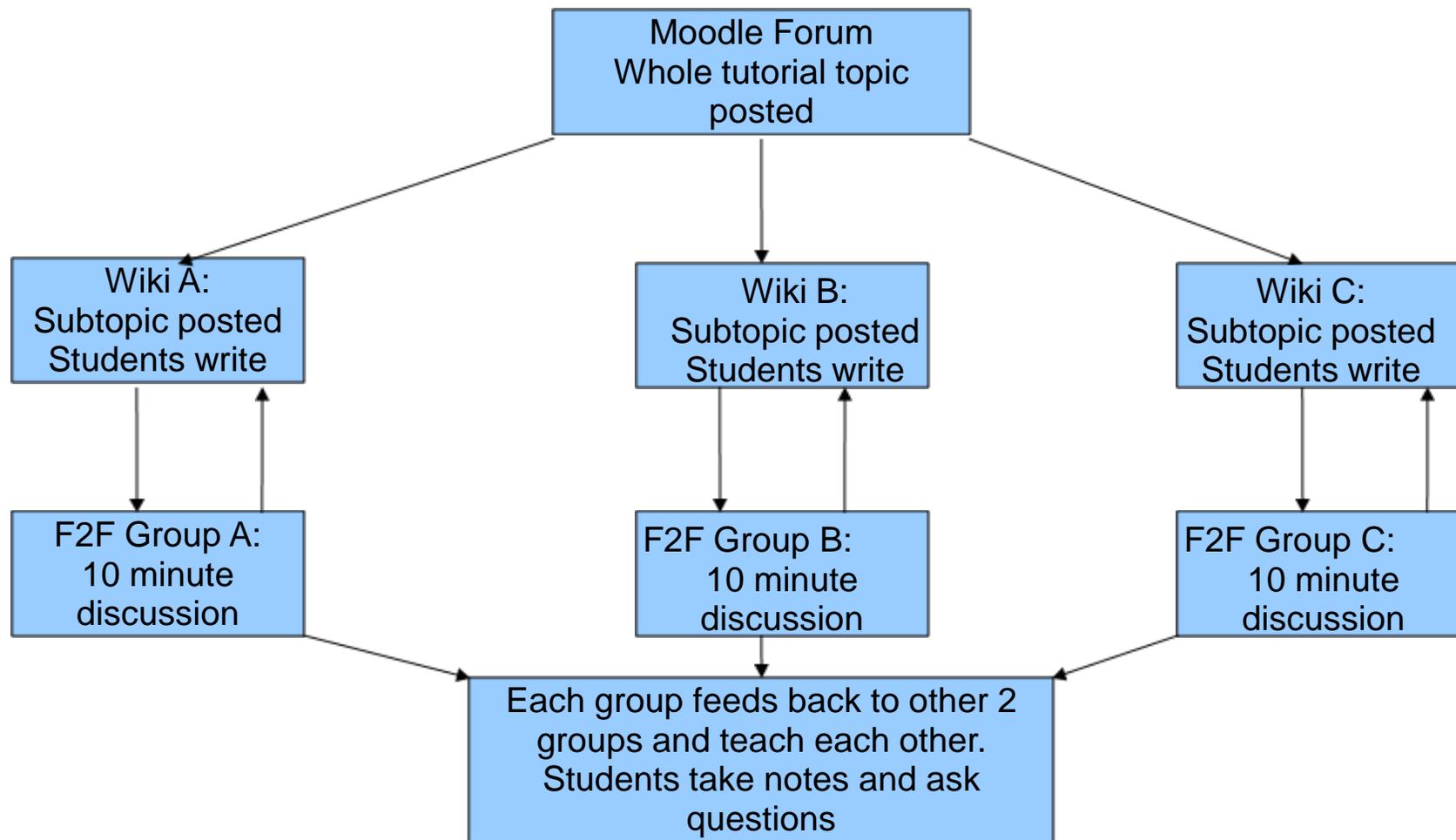


Sub  
topics

Whole topic



All students now have  
access to all of the  
answer



- Tutorial timetable posted to tutorial group forums prior to the beginning of the course
- Tutorial topic posted each week to the tutorial group forums
- Sub-topic and questions posted each week to the Jigsaw wikis
- Students encouraged to write comments and answers to the wiki
- “Scaffolded” EBL

- Weekly face to face tutorials
- Handouts based on the wiki provided for all students
- Students worked in sub groups for about 20 minutes
- Nominated spokesperson from each sub group presented in turn
- Other sub groups took individual notes and asked questions
- Class ended with a summary of the whole topic



“...the notes left are excellent for revision”

“...listening to the interpretations of other students helped deepen understanding of subject materials”

“A majority had things to say that were insightful and useful, unique amongst my tutorials for other classes!”

“When questions were asked, lots of people gave contributions so you have access to a lot of different viewpoints, which is helpful”

“I think there should be more emphasis on filling out the wiki”



Course marks indicate that the students taught using the jigsaw technique consistently outperformed 'all other students' by more than a 5% margin and had a 93.6% pass rate compared to 84% for the latter.

Based upon 55 student feedback sheets (a good rate of 88.8% feedback) the student experience in SH's tutorials seems to have been extremely positive.

Tony Milligan, University of Aberdeen

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