Jigsaw classroom

What is it?

The jigsaw classroom was originally devised in the 1970s by Elliot Aronson to overcome segregation between school children (Social Psychology Network & Aronson, 2000-2019; Voyles, Bailey, & Durik, 2015). It is a cooperative learning technique (rather than collaboration, as it is typically a teacher-directed activity) whereby students in groups disaggregate then move into expert groups to research and discuss a specific sub-topic with others, before returning to their original group to share their new found expert knowledge (Keyes, 2019).

How does it work?

The jigsaw classroom is essentially as it sounds:

1. Students are divided into small, diverse groups of 5-6 students (Social Psychology Network & Aronson, 2000-2019).
2. Within each group, each person is assigned a specific area of investigation – e.g. subtopic 1, 2, 3, 4, 5. Each student researches their subtopic individually, then all the '1' students move to a single group (as do '2', '3', '4', '5' students) to discuss their findings in their expert group to generate an enhanced, shared understanding of the sub-topic.
3. In the next part of the exercise, the students move back into their original groups and disseminate the outcomes of their focused research to their original group.

A multiple-choice quiz at the end of the class can also be a motivating factor and help students consolidate their learning (Keyes, 2019). A variation of the method – Jigsaw II – is interpreted in different ways; group scores are calculated to create competition between the groups (Keyes, 2019), and this may incorporate scores to reflect the extent to which the group work has improved individual students' understanding, via pre- and post-tests (Voyles et al., 2015).

The use of a modified jigsaw classroom has been used to overcome social loafing and promote individual accountability; Voyles et al. (2015) recommended that students take notes in their expert groups to evidence their contributions to the original group, as well as all the members of each original group presenting their collective findings to the class as a whole.

Does it work?

There are no systematic reviews or meta-analyses of the jigsaw classroom, with the exception of the cross-sector meta-analysis by Johnson et al. (2000), who reported the jigsaw approach as sixth most successful (in a list of eight cooperative learning methods) in terms of impact on student achievement.

A variation of the jigsaw approach was used in conjunction with problem-based learning of the pharmacokinetics of renal clearance, whereby 118 students formed their own expert groups (Persky & Pollack, 2009). Pre- and post-surveys indicated that despite some student resistance to group work, many students considered that they and their peers had expended significant effort on the task (worthy of an A grade), and a comparison of assessment scores with the previous cohorts revealed no difference in student performance, i.e. they performed as well using the jigsaw classroom as the traditional method. Another pharmacy study of 94 students had conflicting results;

better performance was demonstrated by the traditional cohort in a post-test of knowledge, but there was no difference in project or end-of course examination scores, and jigsaw students preferred that method over traditional teaching, and perceived it as beneficial for problem-solving, communication and cooperative learning skills (Wilson, Pegram, Battise, & Robinson, 2017).

What do I need?

Although Keyes (2019) argues that all that is needed is a flat-floor space, an active learning classroom with tables that seat 5-6 students is desirable, so that students can work together comfortably. Students will normally be conducting research as part of the activity (although this could be done outside the classroom as part of a flipped classroom activity) so it is necessary to have a room with a power supply for tablets or laptops, or at the very least a TEAL table with one dedicated computer per table, which could also be used to generate the expert group output. If groups are to present their outcomes to the whole class, microphones are recommended for accessibility.

Links

A helpful visual guide to the jigsaw method, and Jigsaw II, is provided in this Cult of Pedagogy video. Another useful practical guide to getting started with the jigsaw classroom is provided by Keyes (2019).

The main public resource to support the jigsaw method is The Jigsaw Classroom website. As well as a detailed overview of the activity (in 10 steps), the resource introduces its founder Elliot Aronson and provides a number of links to relevant resources.

References

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