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Maximizing the Value of Jigsaw Activities

par Stephen GAIES et Contributions de LAIPDI

Contributions de LAIRDIL

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La conférence n° 5, *Maximizing the Value of Jigsaw Activities*, a été donnée le 6 mars 1995 par Stephen Gaies, enseignant à l'Université de Northern Iowa (département d'Anglais) à Cedar Falls.

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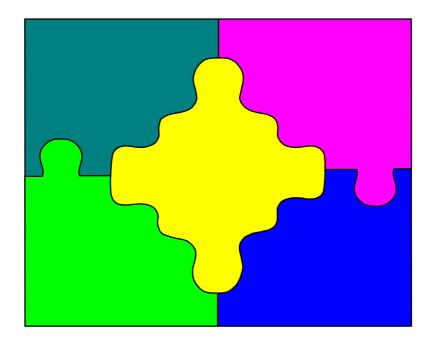
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CONFERENCE



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Maximizing the Value of Jigsaw Activities

(This is a transcript of the conference, which accounts for the spoken style)

I am frankly fascinated by Jigsaw because I think it presents to us a number of paradoxes. On the one hand, it is a very simple technique for arranging classroom activity, in the language classroom and in other classrooms. We can spend a lot of time just talking about Jigsaw as a technique and how to carry out this technique in the most efficient way possible. That is, in fact, what I want to do for the most part, to talk about maximizing the value of Jigsaw. But on the other hand, we can look at it as the window to a very broad discussion of educational philosophy because Jigsaw, as an activity, is representative of a fundamentally different view of teaching and learning than most of us are accustomed to. If we are accustomed to looking at teachers and learners as playing a variety of roles in the classroom, it is something that we probably learned in our professional development more than we experienced it as students ourselves. And so, to talk about introducing Jigsaw into a classroom is really more than introducing a technical change. It is introducing a very different philosophy of teaching and learning. So we can look at it at a very broad philosophical level or we can look at it from a practitioner's perspective, as a technique.

An old paradox about Jigsaw is that the technique is familiar to many language teachers who do not know anything else about the kind of learning arrangements of which Jigsaw is representative, mainly co-operative learning. Many foreign language teachers, who have never heard of co-operative learning, are nevertheless familiar with the Jigsaw technique. And yet, as familiar as it is, it is being reintroduced to a generation of language teachers and discussed with an intensity that is quite unusual. You cannot pick up a journal or read a teachers' magazine without reading about Jigsaw or similar activities. So, on the one hand it is old and it is known and, on the other hand, it is being reintroduced now very differently from the way language teachers have known about it in the past.

I have done workshops, seminars, talks about Jigsaw all over the world and I try to temper my own enthusiasm for Jigsaw, which I use in my own teaching, with the message that Jigsaw activity is very easy to do in a mediocre way but it is extremely difficult to do well. That is to say, anyone can introduce Jigsaw, but perhaps not too many people, without a real commitment to it, can do it well.

Classroom instructional technology decisions

1. Task structures

The mix of activities that make up the school day or a set of classroom lessons: lectures, discussion, seat work, teacher-led drill, pair work, etc., in other words, tasks and grouping procedures prescribed or allowed.

2. Reward (incentive) structures

The means for assessing and motivating student performance; these structures can be tangible or intangible and can vary in terms of frequency, magnitude and sensitivity.

3. Authority structures

The control allocated to teachers and students of classroom activities.

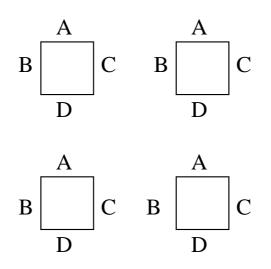
These represent areas of decision-making that any teacher has to be concerned with. For example, decisions about providing learners with autonomous, or self-directed learning opportunities, certainly fall under the rubric of instructional technology decisions. And we make these decisions, sometimes on the basis of practical factors: we have too many students in our classes to be able to provide effective whole-class instruction, we need to find different arrangements so that students can make better use of the limited classroom time that they have. Sometimes we make instructional decisions for philosophical reasons or because we have a particular view of the educational process that we would like to translate into classroom practice. But all of us, whether we are simply following tradition, imitating our peers, sticking to what is tried and true, or whether we are trying to introduce change into classrooms, make decisions about tasks, structures and reward or incentive structures and authority structures. And Jigsaw can perhaps best be understood in terms of each of these structures. Because Jigsaw activity represents a particular kind of task in which the assessment, the evaluation of student performance on the task is very different from traditional evaluation in the classroom and in which the assignment of responsibility - who's responsible for the student's learning? - is again quite different from what it typically is in a conventional or traditional classroom.

THE FOUR STAGES OF CO-OPERATIVE TEAM JIGSAW ACTIVITY

Let us look at Jigsaw in terms of the traditional structure of the activity and see if we can identify its defining characteristics.

Stage 1: Jigsaw-group formation and organization

Learners gather in Jigsaw groups and receive expert-group assignments and instructions.

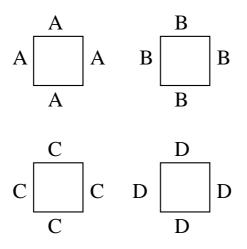


Students are going to work in groups and have a specific responsibility to the group in which they work. Students are assigned to Jigsaw groups and are given specific instructions for the next stage of the activity.

Stage 2. Expert-group study and rehearsal

Learners regroup into expert groups in which they study material that they will later teach to their Jigsaw group. Once they understand the material, they rehearse how they will teach it to their Jigsaw group.

Students from the different Jigsaw groups who have been given the same assignment meet in what are called expert groups and they work with material, information, tasks that they alone are responsible for among the members of their Jigsaw group. In other words, each member of an expert group will be the sole resource, the sole source of the information with which that expert group is working when that student returns to his or her Jigsaw group. Each student then, in a Jigsaw activity, is the unique owner of information which is vital to the success of the group and of each of the individual members of the group.



Stage 3: Jigsaw-group teaching and learning

Learners re-assemble in their Jigsaw groups and teach their materials to each other to reach a complete understanding of the general problem (*i.e.* the materials from all four expert groups).

The term used here is to "teach" material. It may not involve teaching. In some cases it may simply involve pooling information, in some cases it may involve comparing information, but in some cases it may indeed involve teaching or transmitting information, so that the entire group can solve a problem or complete a task, whatever the specific nature of the Jigsaw work may be.

Stage 4: Evaluation

Learners are evaluated on what they have learned. This can be done with an individual test (which includes information from all four expert groups), an analysis of the participation of group members, group presentations or a homework assignment.

Usually this evaluation includes some sort of individual testing. But in the assignment of rewards, both to individuals and to groups, there may be some consideration for the performance of the other members of the group.Now let us compare Jigsaw work with other types of small-group work. It is often helpful to remember that all Jigsaw work involves small-group work. But not all small-group work is Jigsaw work. It is a special kind of small-group work.

Let us take, for example, an activity called "Who gets the heart?"¹ This is a decision-making activity, from a text that is now more than a decade old, but which at the time of its publication was quite well received both critically and in classrooms. This is one of these classic decision-making activities in which, in its original form, small groups of learners have to decide which of six candidates for a heart transplant is the most worthy recipient. They have to reach consensus and identify which person is to receive the heart and why. Certain key elements of Jigsaw work are missing from this activity in its original form.

¹ ROOKS, G. (1981). The Non-Stop Discussion Workbook. Rowley, Mass.: Newbury House. Unit 8. 31-33.

KEY ELEMENTS OF JIGSAW WORK

The four critical elements of Jigsaw are also elements of other types of "cooperative learning".

1. Positive interdependence

In Jigsaw work, when it is properly designed and used, every student depends for his or her success on the successful performance of peers. The only way that you can be successful in a Jigsaw activity is by ensuring that your team- mates are also successful. In other words, the structure of a Jigsaw activity, as with other co-operative learning arrangements, is designed to bring co-operation and mutual support among learners rather than the typically competitive spirit which is one of the hallmarks of traditional instruction and conventional educational systems. In the "Who gets the heart?" activity, in the form in which it is constructed, there is no positive interdependence. Every member of a small group looking at this problem has access to all of the information. And not only can one or two members of the group monopolize the discussion of this problem but they can impose their solution on the rest of the group and label it as consensus. The group, in effect, can reach the end of a task successfully, without ever having functioned as a group and without regard to the success of all of the members of the group in understanding what the problem is and how it is best solved.

2. Face-to-face interaction

This second element of Jigsaw is, in principle, what drives a small-group problem-solving activity like this. But whereas in this activity there is nothing that compels learners to interact with one another in discussing the problem, or to function as a group, in Jigsaw the structure of the task requires face-to-face exchange of information. Whatever information one learner has gotten from his or her expert group has to be communicated, face to face to the other members of that learner's Jigsaw group. So that, whereas face-to-face interaction can result, and often does result, in an activity like this, it is not guaranteed; in Jigsaw it is.

3. Individual accountability

Nothing prevents a member of a small group doing this activity from opting out of the activity, simply pushing back his or her seat and letting the other people do the work. In Jigsaw that is not an option. Any person who fails to carry out his or her assigned role or responsibility undermines the ability of everyone in the group to reach the end of the task successfully. In other words, everyone is accountable for at least some part of the solution to a problem.

4. Pro-social and small-group skills development

Finally, Jigsaw, again like other similar arrangements that we group together under the umbrella of "co-operative learning", is explicitly designed and should include, when it is used in a systematic way, explicit efforts to help learners function more effectively as members of groups. So that, typically you will find, associated with Jigsaw, when it is a systematic part of instructional routine, different attempts to develop small-group skills, to make the management of the group's work more efficient, to acknowledge and reward what we call prosocial behavior, behavior which aims at fostering better relations between students.

This last point, as well as the emphasis on positive interdependence reflects the origin of Jigsaw in education in general. Jigsaw work is normally recognized as having begun as a general pedagogical technique in the late 1970's, when a group of researchers in the state of Texas designed Jigsaw activities for use in schools which were beset by all of the social problems which have challenged American education for the last 50 years. In these schools there was a mixture of students from different races and ethnic backgrounds who did not get along. Many of the students came from family backgrounds which placed very little value on education or in which there was very little support for the work of the schools. Jigsaw was intended, in part, to develop not only academic skills in students but social skills as well, to develop better liking for other students, better understanding of students from different backgrounds. To put it another way, Jigsaw was an attempt at social engineering within classrooms, to create instructional arrangements that would bring students into contract who would ordinarily avoid one another.

That original benefit, or perceived benefit of Jigsaw is just as needed today in many countries, perhaps particularly in the United States. Just about two weeks ago, an article was published in the *New York Times* which reported - and there are articles like this all the time - widespread dissatisfaction among employers, businesses, industry, corporations, with people who were leaving university and coming into the work force. The report stated that, according to captains of industry and commerce who were surveyed, the three most important attributes that employers were looking for and not finding in university graduates were:

- previous work experience,
- positive attitudes,
- social skills (the ability to function as a member of a work team).

The report probably reveals the proverbial tip of the iceberg. Many people who saw the potential benefit of Jigsaw work back in the 70's see it as an even more urgent necessity today, when so many of the other institutions for socializing young people seem to be under threat: families, communities no longer performing their traditional role as socializing agents, as developers of a community spirit and of the skills of interacting as a member of a community.

And so the burden has again fallen even more heavily on the schools.

Now, what about situations in which the need to train students to get along with people from diverse backgrounds is not as pressing?

There is still probably much to be said for accompanying Jigsaw work with some sort of activity that helps learners become at least conscious of how well they are functioning in a group. If it is not going to include specific training in small-groups skills, at least there can be some sort of assessment by the group of the quality of its performance as a unit.

So, these are the four features that we want to see in any kind of Jigsaw activity. But by themselves they do not tell us enough about how to use Jigsaw with maximum effect. In other words, many discussions of Jigsaw - and I hope this will not fall into that category - try to describe what Jigsaw is, try to identify its essential elements and then leave it to the imagination of teachers as to how to create Jigsaw work that is effectively matched to particular instructional aims and to particular learners.

KEY DECISION-MAKING AREAS

Let us try to identify the key decision-making areas that take us from a generic understanding of Jigsaw to a well-honed ability to apply it effectively in different situations for different purposes.

1. Long-range planning

The issue of maximizing the value of Jigsaw consists of three levels of decision-making. Each of these levels needs to be thought about consciously and the decisions have to be made or reconsidered periodically by anyone who wants to use Jigsaw either on a very modest basis or as a more integral part of a language class or language program. Certainly one level of decision-making that ought to precede all others is that of long-range planning which involves four related decisions.

• Commitment to Jigsaw work as an instructional arrangement

There is a large difference between an occasional use of Jigsaw as a way of breaking the routine, as an occasional change of pace for a language class in which the staple activity is something else, whether teacher-led instruction or some combination of activities and the use of Jigsaw as an on-going, systematic, predictable part of the classroom routine. Some ardent proponents of Jigsaw have argued that as much as 50% of class time can be devoted usefully to Jigsaw work. Most proponents of Jigsaw are much more modest in suggesting that perhaps 20 to 25% of the total class time can be allocated to Jigsaw without compromising the value of other activities. But even if we choose the relatively modest figure of 20%, that still represents one hour out of every five.

Is a teacher, a team of teachers or a group responsible for an entire program willing to make that commitment of time in planning a course? If so, then time will have to be allocated for introducing students, gently but systematically, to the nature of Jigsaw, to teach them what it is so that their work in Jigsaw activities will be increasingly effective, but effective from the very beginning. So this is the first thing that has to be decided. Is this going to be an occasional change of pace, or is this going to be an integral part of language instruction?

• Composition of groups

In Jigsaw work, as it was originally designed for the kinds of challenging settings which I described earlier, the idea was to put students into Jigsaw groups, who were academically, racially and ethnically heterogeneous in order to engineer interactions among people who would ordinarily not have anything to do with one another. In many cases, it is difficult to find a basis on which to make heterogeneous groupings. Typically, students have all had the same previous foreign language experience if they come from the same educational system, there may not be perceptible differences in their ability if they have all been placed at a particular level. They may be relatively homogeneous in terms of ethnicity, race and other sociological variables. So it may well be that, instead of teacher-assigned groupings aiming for heterogeneity, the teacher will decide to use self-selected groups, or to assign students to groups on a completely random basis, or to alternate the composition of groups on a regular basis. That is to say, every four weeks groups will be reconstituted. But some thought has to go into how students are going to be grouped rather than simply deciding, on a whim, or "Today you four people, you four people", etc. The composition of groups ought to be a matter of long-range planning: what, if anything, do you want to accomplish by grouping arrangements?

• Incentive structure of Jigsaw: reward system (individual vs. group)

This is a controversial part of Jigsaw and other co-operative learning arrangements. But a decision has to be made about whether the performance of any individual will be evaluated on the basis of that individual's performance alone, or on the basis of the performance of all of the members of the group to which that individual belongs.

This has nothing to do with the nature of the task itself but only with the way in which performance is assessed or evaluated. Here, local circumstances and traditions as well as teachers' own intuitions about what sort of reward structure will motivate students most effectively should come into play. But there are certainly opportunities to base evaluation of performance on individual performance alone, group performance alone or some combination that takes into account both the individual's own performance and the performance of other members of the group.

• Commitment of lesson time

We have to acknowledge that Jigsaw work does take time and give careful thought to the decision about whether or not to restrict Jigsaw activity to single classroom lessons or to make the greater commitment of carrying Jigsaw work over from one lesson to another. Clearly, there are risks in situations in which absenteeism is a frequent problem, when you do not know from week to week and even from day to day who is likely to be in class or who is likely not to be in class. So some teachers decide to use Jigsaw activity but only of the type that can be managed within a single classroom lesson, so that any problems resulting from absenteeism or anything else will not spill over and affect a subsequent lesson. These are the sorts of things that define the boundaries of the kind of Jigsaw work that a teacher is going to do.

2. Activity design

• Different types of Jigsaw activity

Jigsaw activity is not all of the same cloth. There are different kinds of Jigsaw activity. This is a point that is frequently overlooked but which can often lead to very disappointing results because of a failure to recognize that Jigsaw comes in different types. I have tried to identify different types of Jigsaw work that in fact create very different activities, even though all of them are based on the Jigsaw principle, that is to say the idea that in any group each learner will have to be the unique owner of certain information.

I have been working on this typology for some time and I'm still not entirely satisfied with it, but this is a distinctive improvement over some previous versions.

Convergent Jigsaw

A very common type of Jigsaw activity that is used with less advanced learners, beginning at lower intermediate learners, is what we can call convergent Jigsaw activity. In a convergent Jigsaw activity, each expert group has access to one piece of a set of information and when the Jigsaw groups reconvene the task of that group is to pool that information, to simply put it together much in the manner learners in pair work complete an information grid by exchanging information. The information is collected in expert groups and then brought back and transmitted to the other members of the Jigsaw groups so that everyone arrives at the end of the activity with a complete set of information.

Corners Jigsaw

One interesting variation on the Jigsaw principle is what is called corners Jigsaw, where different pieces of information will be posted in the four corners of a room. Members of an expert group must go to their appropriate corner, collect the information, bring it back to the group and communicate it to the group without actually showing them that information. For example, we might have, in the four corners of the room, four different advertisements for jobs that are available, with a description of the type of work and the minimum qualifications and the application procedures for each job. And everybody will come back with his or her information, so that each member of the Jigsaw group has completed a little slip of paper for each of the four jobs. But this is a simple pooling of the information without any processing of the information itself.

♣ Alternative Jigsaw

An alternative Jigsaw task is one in which each of the four expert groups has access to one alternative solution to a problem. The Jigsaw groups must compare the alternatives and select the best one. Here we have a processing task, because it is not simply a matter of collecting the information but comparing and contrasting it. A good example of this would be the "Who gets the heart?" activity if it were converted into a Jigsaw activity, that is if, instead of presenting everyone with the full set of information, different expert groups were given descriptions of one or two of the potential recipients. They have to bring that back and propose why that recipient is the most worthy candidate and then the group will have to decide, once the information has been shared, which person they are going to give the heart transplant to. The point here is that it is not simply a matter of pooling information but of selecting what one believes to be key information and using that to argue for or against a candidate.

* Divergent Jigsaw

A divergent Jigsaw task is one in which we not only anticipate that different Jigsaw groups will come up with different solutions to a problem but in which we expect and want them to. And a good example of this is the "Sad House Story"² which is not a Jigsaw activity in its original form but which I have used as a Jigsaw activity by giving each expert group one of the pictures and telling them that they have to come back and describe what is in their picture and that the group has to select one of the four orderings of the picture. They do not have to construct a narrative, although that is certainly a possibility, but they have to vote for one particular order. And groups always come up with a different story line so that this, then, becomes a divergent task.

² PEREZ, G. Y., VELA, I. G. & FRANKENBERGER, C. (1987). *Let's Learn English: Second Language Activities for the Primary Grades*. Glenview, Ill.: Scott. Unit 9, Worksheet 2, 80.

* Complementary Jigsaw activities

Each expert group has access to a complete set of information, in other words each group is working with a set of information that is understandable and meaningful on its own terms. But then, the Jigsaw groups, after they have reconvened, must use some or all of the information to solve a problem. They are not only simply pooling the information but they are going to use the information in a problem-solving task.

Good examples of this can be found in one of the few published materials that rely exclusively on Jigsaw activity. This is called *All Sides of the Issue*. The authors are Elisabeth Coelho, Liz Weiner and Judy Winbell Orson. In this set of materials you have, for example, a Jigsaw activity that is based on an industrial accident. Different expert groups read the accounts of this accident given by very different parties: the supervisor in the area of the plant where the accident occurred, a union official representing the injured party, the injured employee himself, etc. There is a worksheet that the Jigsaw groups use when they reconvene as Jigsaw groups, in which they have to get information from different reports so that they are not simply pooling the information but using the different information selectively in order to decide what really was the nature of the accident. Was it an act of God or was it a case of company negligence or of worker negligence?

A lot of the success of any Jigsaw activity depends in part on an understanding, on the part of the teacher, of the type of activity involved, that if you choose, for example, a divergent activity, you have to plan more time than you would for a simple convergent activity, simply because of the nature of the task. In other words, the type of Jigsaw activity is going to dictate the nature of the work that is done by the experts in the Jigsaw groups and it will affect our decision as well about, for example, what kind of guidance and what kind of materials to supply to students.

Amount of focus to expert groups

How much guidance, how much direction, how explicit should the instructions be to the expert groups about how best to manage their work ?

To illustrate this point let us go back to "The Sad House Story". I have often observed that if you do not provide any guidance to expert groups, they will rehearse a long, painfully detailed description of everything they can see and in fact some things that they really cannot see in these pictures. Typically, for example in this picture of a family presumably waiting to get on a bus or having just got off a bus, they will describe the clothes that these persons are wearing. They will describe each piece of luggage in painstaking detail when in fact, what you really might want and what you will probably want is a very short, maybe one or two or three sentence description of what is in the picture. You have to decide, as we always do for activities, how much guidance to provide to learners. It is not simply a matter of wasting time by giving people too much time so that they come up with very long and overly detailed descriptions, but in fact you may create a frustration level for students by leaving the task so open-ended. The students will be frustrated by their inability to describe things in a picture that they do not really need to describe.

Should expert groups be given worksheets, specific instructions, specific questions to answer, to make their work more efficient? Should the same be done for Jigsaw groups? This is a key design feature. How much guidance and focus should there be at each stage of the activity? How much should be given to learners in terms of focus?

• Materials for Jigsaw learning

There are three basic options described below.

Published materials (e.g. Listening Links, Reading Links, Jigsaw Listening, All Sides of the Issue)

One option is to use off-the-shelf materials. The problem is that there are only a few such materials. Although they may be ideal for Jigsaw group work, they may not be appropriate in terms of content, of organization, of length, of format, of complexity/difficulty for use with particular learners.

We have used some of these materials quite successfully with some English classes for international students at my university. But there are some Jigsaw activities that we cannot use very well because they are culturally loaded towards students from Canada. That is, without a familiarity with life in Canada, it is more difficult for students to work with the materials effectively.

* Adaptation of materials

A second option is to adapt materials and to create Jigsaw material out of it. This works fine for certain kinds of materials but not for others.

Obviously, it becomes something of a problem to take a narrative, to divide it up into four parts and to assume that students reading the last quarter of a narrative are going to be able to understand it without having read the first three quarters. Imagine reading only the last 25% of a detective novel. How can you make any sense of it unless you have read the first part ?

In fact, there are not many activities and texts that lend themselves to be divided into self-contained and comprehensible sections. In addition, it may be impractical to prevent students from seeing integral texts in their textbook that are not intended to be adapted into Jigsaw reading activities.

♣ Jigsaw II (Annex 2)

An alternative is to use what is called Jigsaw II and compare it to the original Jigsaw technique. What you have on the left hand column is original Jigsaw. What you have on the right hand column is what is called Jigsaw II, which is not a successor in the style of films these days, *Rocky 2, 5, 15* but rather an alternative. And the essence of Jigsaw II is that you give everyone an entire text but give them different tasks to work on within that text. Make the text long enough that no one would even be tempted to try to do all of the tasks by himself or herself. Or even easier, ensure that each expert group knows only which task they are to do.

That is one way to avoid the problem of having to reject a text because it does not lend itself to being cut up into a Jigsaw puzzle.

* Creation of Jigsaw materials

It presents a problem. Like all materials development, Jigsaw materials are time-consuming to prepare. Care must be taken to select appropriate texts and to design activities to follow Jigsaw work.

• First language vs. second language

Finally, at the level of activity design, decisions have to be made about the role of the students' need of language in expert and/or Jigsaw group work. This is a problem that does not arise when you have a linguistically heterogeneous class, as is often the case in second language settings, but which certainly is an issue when you have a class consisting of native or fluent speakers of French.

More and more people are recognizing that the native language does have a useful role to play, if not so much in foreign language development, at least as a tool that can be used in making activities more efficient. For example, there is nothing to prevent a teacher from allowing students to look at or to discuss material in their expert group in their native language with the provision that the students will, at some point, develop a description or a summary in English that they will use to present the material to their Jigsaw group. The feeling that what might only require ten minutes in an expert group if it could be done in French, would require 35 or 40 minutes if it had to be done entirely in English may lead you to opt for allowing or even encouraging the use of the native language at one stage of the Jigsaw work.

Other teachers might look at the same activity and decide that the time that would be required by expert groups to do their work in the target language is a good investment of class-time. But certainly the decision has to be made whether and how to use the first language at any stage in Jigsaw work.

3. Tactical decision-making: teacher guidance of expert - and/or Jigsaw - groups

Finally, we come to the level of tactical decision making, by which I mean on-the-spot adjustments or interventions by the teacher as the Jigsaw activity is unfolding. So that while we can think of long-range planning and activity design as involving strategic thought about Jigsaw, trying to anticipate what is likely to be efficient and effective as a Jigsaw activity, there will undoubtedly be occasions where on-the-spot decisions have to be made. This would certainly include, among other things, a decision about how much guidance the teacher will provide. Will the teacher help expert groups or Jigsaw groups out of a corner into which they have painted themselves? Or will the teacher simply force the group to rely on its own resources? Will the teacher provide some sort of verbal encouragement to groups that are not functioning well as a unit? Or will the teacher simply let the group reap the penalties of not functioning as a group? These are decisions that cannot be made in advance, but we can certainly consider the options for how we might respond should a problem arise in the actual unfolding of a Jigsaw activity.

My argument would be that to maximize the value of Jigsaw activity in the foreign language classroom, there needs to be thoughtful consideration at all of these different levels of decision-making. If this is done, the likelihood of a good fit between an activity and a group of learners is increased, the likelihood that the activity will produce the results that the teacher anticipates, or hopes for, will be increased and the benefits of Jigsaw will be less a matter of serendipity and more a matter of instructional planning.

BENEFITS OF CO-OPERATIVE LEARNING IN MULTI-CULTURAL CLASSROOMS³

This is a very concise and useful discussion of co-operative learning in multi-cultural classrooms. It may be of somewhat less direct relevance to foreign language classrooms. But there is a good summary of the ways in which a Jigsaw activity fits with what we understand about the second or foreign language development process in the classroom.

What is it about Jigsaw activity that realizes principles of second language development?

1. Jigsaw activity provides frequent opportunity for natural second language practice and the negotiation of meaning through talk.

2. Jigsaw activity can help students draw on primary language resources as they develop second language skills.

3. Jigsaw activity offers additional ways to incorporate content areas into language instruction. Language development takes place most effectively when learners are engaged in meaningful interactions, when their attention is not so much on language itself but on the messages that they are trying to communicate through language. Language development, the mechanism that pushes language development ahead, step by step, is the effort that we have to make to understand something that we didn't initially understand. The nature of Jigsaw activity creates multiple opportunities for meaning to be negotiated. The struggle to understand what a Jigsaw group may be trying to say creates opportunities for negotiating. That typically cannot happen in a teacher-led classroom. So this article, which is summarized here in terms of six benefits, I think is relevant even to the foreign language classroom, because it points out ways in which the very structure of Jigsaw work can enhance the contribution of the language classroom to learners.

4. Jigsaw activity requires a variety of group activities and materials to support instruction; this whole array of changes in traditional classroom technology creates a favorable context for language development.

5. Jigsaw activity redefines the role of the teacher in ways that allow teachers to expand general pedagogical skills and emphasize meaning as well as form in communication.

6. Jigsaw encourages students to take an active role in the acquisition of knowledge and language skills and to encourage each other as they work on problems of mutual interest.

³McGROARTY, Mary (1992). Cooperative learning: The benefits for content-area teaching". in P.A. Richard-Amato & M. A. Snow (eds). *The Multicultural Classroom: Readings for Content-Area Teachers*. White Plains, NY: Longman. 58-69.

Learners have to be actively involved in their own learning: this is something that we now repeat like a mantra. We cannot teach languages, we can only create the conditions in which learners activate their own internal resources. That is an article of faith that has been repeated now for some 30 years and I think Jigsaw work provides good examples of how learners can become actively involved in their own learning.

And then finally, just to put all this in perspective I have included a summary of a very nice article by Paul Nation (*Annex 1*), which was written without real mention of Jigsaw but which talks about optimal features of speaking activities and identifies, without trying to, many of the defining characteristics of Jigsaw work:

- each learner has a crucial role to play, there are no free rides in Jigsaw work;
- Jigsaw work typically involves working towards some specific outcome: solving a problem, completing a task;
- the breaking down of an activity into steps, what Nation calls procedure, is clearly evident in Jigsaw work with the four stages;
- the split information Jigsaw, of course, is one of the several different split information, or information gap tasks including strip stories and other types of information gap activities, tasks for communicative dyads, the whole range of split information tasks;
- the challenge, the gamelike quality of seeing if everyone can pool their information and come up with a complete solution;
- the competition between different Jigsaw groups to see which group can give the highest group score on a quiz or a test;
- the need in many Jigsaw activities to memorize information and to bring it back to the Jigsaw group.

The point is that the Jigsaw group is not anything that is new on an absolute basis. Many of the defining features can be talked about without any reference to Jigsaw. And this should be reassuring to any teacher who is committed to the kinds of classroom activities that we have all been hearing about and using for now a decade and a half or two decades.

Stephen J. Gaies

Discussion

Q : Is there a fundamental difference between Jigsaw work and pair work?

A : If you have a pair of students working on a split information task, clearly there is the same potential for negotiating meaning, for doing all the kinds of things that Jigsaw potentially can offer. The difference is twofold:

• If a pair reaches a dead-end or a roadblock, they have no one else to turn to but the teacher. If two heads are better than one, then in some cases four heads are better than two. If one student cannot help the other student, then maybe a third or a fourth student can come up with a way of helping.

• Even more important is the idea that students derive a number of benefits from working in groups that they cannot get from even working in pairs. By working in groups and in addition to whatever instructional benefits come out of the Jigsaw activity, you develop better skills and become more comfortable with working in a small group setting. Outside of foreign language education the prosocial benefits of Jigsaw, may be as important, if not more important, than the instructional benefits themselves.

So, there is no fundamental difference but there are important qualitative differences between pair work and Jigsaw work.

Q: Is four the ideal number?

A : It could be three. Six is about the upper limit and even that is a bit inefficient in terms of time, the time it takes for people to pool their information. Three and four is the most efficient in terms of time, including maximum individual talking time. It is also more difficult to find five or six ways people will differ from one another. But it depends on the kind of text you want to use. Some texts may divide themselves very well into five parts. Also, group cohesion is better ensured if each individual has to pay attention to no more than three other people and is therefore better able to give encouragement, make sure that everyone has understood, mediate disputes, be conscious of the needs of the other members of the group, monitor their behavior and reactions. There is also the general noise level which makes it difficult for larger groups to hear one another.

Q : What can be done when the number of students cannot be divided by four or five?

A: Apart from being paired up in tandems, the odd student(s) can be given the role of circulating and monitoring the functioning of the groups, not necessarily to assume all of the roles of the teacher, but simply to observe positive and less effective behaviors in the group and then perhaps to report, in other words become extra eyes and ears for the teacher so that the groups can be given feedback on their functioning as groups. If the situation occurs again, make sure that some other student is assigned that role. I have

often brought activities to class that were designed in two versions, one for groups of four and one for groups of five.

The inescapable fact is that Jigsaw activity is very labor-intensive. It takes a great deal of time, not only to carry out but to plan, to adapt the materials, or to create your own materials. But then everything is labor-intensive in teaching, most everything.

Q : How do you make it compelling enough for students to participate fully as members of the group, not to have an easy ride? In my experience, there is often one group that does not get involved in the task.

A : Jigsaw work is not a panacea and cannot be guaranteed to be successful every time. But some things have to be done to maximize the value of Jigsaw activity. Even when groups have been carefully constructed, group assignments have been carefully decided by the teacher, there are groups that do not function very well, for whatever reason. This brings up the question of the incentive structures. If Jigsaw work is typically going to involve some sort of evaluation of the performance of the group, that will be incorporated into the evaluation of each individual. If you are in a Jigsaw group and you perform very well on the quiz following the activity but none of the other members of your group performs well, in all likelihood you will be penalized for your poor performance. A learner who comes out of the traditional educational philosophy of which we are all products may well say that this runs counter to the idea of people being responsible for themselves, people being given the opportunity to dictate their own success or failure in the classroom. And that becomes a very sticky issue for teachers. Do you really want to go to the point of lowering a student's score on a quiz because that student's Jigsaw group mates either could not or chose not to put very much energy into the task? There is no ready answer to that problem. It is a problem that you try to address when you first introduce the Jigsaw concept to students, when you acknowledge that they are playing by very different rules in Jigsaw activity than they are used to playing by in a normal classroom. In terms of instructional technology, you are altering radically the authority structure of that activity. You are assigning responsibility to students that in a traditional classroom would be reserved exclusively to the teacher. You are assigning students the responsibility for demanding the compliance and work of their group mates. It is a very radical change in instructional technology. If Jigsaw is going to be used as a regular feature in a language class, it has to be introduced and students have to be trained how to do the activity and that may minimize, if not eliminate the kind of problems you have described.

Q : You said there is no way out in Jigsaw work.

A : That is the risk of all student-centered activities that scares many teachers because they are relinquishing some control. With the turning over of some control to students, the outcome of an activity can no longer be guaranteed. If your class is completely teacher-centered, you can at least largely guarantee what is going to happen and how long it is going to take. You cannot necessarily guarantee the level of learning that takes place or the validity of what you are doing but you can at least control what happens, largely. Group work in general, and Jigsaw in particular, present a very different allocation of control.

Annex 1 : Nation's features of speaking activities

NATION, Paul (1989). "Speaking activities: Five features". *ELT Journal* 43. 24-29.

• Roles

The use of roles allows the use of language that might not normally occur in the classroom; in addition, it affects participation in an activity, since it defines what each learner must do in an activity and what expectations other learners should have of the learner.

• Outcomes

Clearly defined outcomes, including those listed below, make speaking activities purposeful and specify what must be done for the activity to be completed:

- providing directions;
- completion;
- ranking, ordering or choosing;
- listing implications, causes or uses;
- matching, classifying, distinguishing;
- data gathering;
- problem solving;
- producing material.
- Procedure

The division of an activity into steps and/or the formalization of a learning or speaking strategy can increase the amount of speaking involved in the activity and can increase the likelihood that each learner in the group participates in the activity.

• Split information

Splitting information

- gives each person a reason to participate;
- makes it important for each person to understand what the others say;
- builds group cohesiveness.
- Challenges

Game-like features that increase interest and involvement in speaking activities, including:

- competition;
- limitation of time or quantity;
- ♦ memory;
- hidden solution.

Annex	2
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Jigsaw (Aronson et al., 1978)	Jigsaw II (Slavin, 1978)
interdependence: each student is	learning materials; thus, interdepen- dence is lessened. However, the use of existing materials makes Jigsaw II
Materials are designed or rewritten so that each member of a learning team has a unique source that is comprehen-sible without reference to the other sources.	expert teams, read the whole learning unit, with emphasis on their expert
Team-building and communication training activities are an integral part of Jigsaw work. Preparing students to cooperate and communicate in groups takes the form of role playing, brain- storming and other small-group skill building.	•
quizzes covering all of the material of	Base scores, improvement scores, team scores and individual and team recognition techniques similar to those in STAD are used.
	ability- based grouping of students to 4-member teams; no designation of group leadership roles.

CONTRIBUTIONS DE LAIRDIL



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Puerto de la Cruz, Tenerife, 1990

Sous la plage, les pavés

Le travail par paires ou en groupes est toujours bien accueilli par la population à laquelle je m'adresse (étudiant-e-s scientifiques de second cycle). Toutefois, la technique du "jigsaw", qui en est une forme, s'est avérée insatisfaisante.

The Sooey Pill : Un essai infructueux de lecture en puzzle

On prend un texte qui semble bien se prêter au découpage, notamment chronologique: "The Sooey Pill" de Elaine Slater (*Ellery Queen's Mystery Magazine*, 1969)

On prend une idée alléchante: le puzzle.

On mélange, on agite.

On obtient: une déception.

Ça ne marche pas.

On recommence une autre année, avec d'autres étudiant(e)s.

Rien.

L'impression générale semble être que tout ceci est une perte de temps: pourquoi ne pas aller droit au but? Pourquoi ce découpage? Ce n'est pas un jeu, comme dans un exercice du type "Order the sentences". Le texte est même assez difficile. Lorsque l'ordre des différentes parties a été reconstitué, les étudiant-e-s semblent ne plus être intéressé-e-s par ce texte qui, de part son histoire de science-fiction, devrait pourtant susciter la discussion. La présentation en puzzle est tellement laborieuse qu'elle tue l'envie de rester sur ce texte.

Cette technique convient-elle mieux à un groupe plus faible? A un texte plus court? A des étudiant(e)s moins "rationnel(le)s"?

Sans doute l'explication se trouve dans la "philosophie" de cette technique telle que l'expose Stephen Gaies et qui va bien au-delà de la simple technique. A la question sur la différence entre le travail par paires et le travail en forme de puzzle, il avance des arguments qualitatifs. N'ayant pas une expérience intensive de la pratique du "jigsaw", je ne hasarderai pas d'opinions sur cette différence. Par contre, ayant pratiqué le travail par paires et les jeux par paires ou en groupes de façon intensive depuis de longues années, il m'a semblé intéressant d'interroger mes étudiant(e)s sur leur "perception" de ces deux formes d'activité, m'attendant à une réaction plus favorable à l'égard des jeux. Les résultats ont prouvé le contraire.

Le travail par paires

Praticienne intensive du travail par paires, je suis toujours étonnée de constater à quel point il est peu répandu. Les collègues, du secondaire comme du

supérieur, semblent éprouver une grande résistance à l'emploi de cette technique. Tout semble avoir été dit: la littérature consacrée à ce sujet ressasse à l'infini les avantages et les inconvénients du travail en dyades. Nous allons les rappeler ici, de façon schématique. Puis, dans un deuxième temps, nous examinerons l'autre aspect de la question qui, lui, est rarement évoqué, à savoir la perception, audelà des présupposés, qu'en ont réellement les étudiant(e)s.

Principe de base: information tronquée

C'est une activité orale qui permet à une paire d'apprenant(e)s, par un échange d'information (souvent sous la forme de questions/réponses) d'obtenir une vision globale d'un document ou d'une question. La motivation pour mener à bien ce type de tâche semble être l'horreur du vide: le remplissage d'une grille donne une idée d'achèvement, d'accomplissement même si, au fond, on n'a rien à faire de l'information en question. Le travail par paires est perçu, à juste titre, comme un entraînement à la parole, à la pratique de certaines structures ou fonctions, à l'emploi de certains mots et expressions et il est bien accepté.

Beaucoup d'enseignant(e)s ont du mal à renoncer à l'illusion du contrôle absolu de ce qui se passe dans leur salle de classe. Mais qui contrôle les esprits des 35 inactifs pendant que le/la 36ème parle anglais?

Avantages	Inconvénients/Objections	Réponses/remèdes possibles
Les apprenants se parlent: c'est sympa	Utilisation de la langue maternelle dans les classes monolingues. Discussion de sujets autres que la tâche.	Si la tâche est intéressante et la motivation forte, le recours à L1 est minimal. Les grilles à remplir étant en anglais, il est plus simple de parler en anglais que de faire une double traduction. Si l'on doit donner une synthèse en anglais à la fin de la tâche, il est aussi plus simple de faire tout dans une même langue. Si l'enseignant(e) explique la tâche en anglais, continuer dans cette langue en est facilité.
Le prof cesse d'être au centre de l'attention et peut se consacrer à autre chose (circuler, aider, etc.)	Niveaux différents.	Former des sous-groupes de niveau; changer les paires pour que des fort(e)s travaillent avec des faibles par moments. Dans des classes de niveaux très différents, on peut même envisager des tâches différentes pour fort(e)s et faibles.
Augmentation du temps de parole individuel; participation maximum.	Temps pour accomplir la tâche différent d'une paire à l'autre.	Donner une limite de temps pour les exercices. Certains exercices n'ont pas nécessairement besoin d'être terminés s'ils sont de forme "drills". Prévoir une activité supplémentaire, quand c'est possible, pour les rapides.
Augmentation du temps d'écoute d'autres voix, accents	Possibilité d'accomplir la tâche sans parler.	Changer les paires.
Méthode moderne, progressive, à la mode, politiquement correcte	Domination de certain(e)s. Passivité de certain(e)s.	Encourager.
Donne confiance aux participant(e)s quand ça marche.	Certain(e)s n'aiment pas cette technique ou n'aiment pas la tâche.	Rarissime. Si rédhibitoire, donner autre chose. Expliquer à quoi sert ce type d'exercices, en L1 peut- être la première fois.

]
Aide à prendre conscience	Mauvaise entente entre partenaires.	Changer les paires.
de ce qu'on sait, à		
organiser ses idées, sa		
façon d'apprendre		
Exposition à un langage	Refus de coopération: certain(e)s	
compréhensible et à des	travaillent seul(e)s.	
éléments de langage		
inconnus qu'ils/elles		
peuvent apprendre.		
Pratique intensive des	L'esprit de compétition l'emporte sur la	Donner des tâches où la coopération est plus
nouveaux éléments présentés.	bonne exécution de la tâche.	importante que la compétition.
1	Dérie de de feed heele encourse	Délicate à conserve II contractore acéccia aux conécia
La sur-correction n'inhibe	Période de feed-back ennuyeuse.	Délicate à organiser. Il vaut mieux prévoir que guérir
pas.	Manque de feed-back, de correction.	car il est difficile d'avoir l'attention de tout le monde
D(1.1.		en même temps à la fin.
Développement de la fluidité.	Classe bruyante, chahut, problème de discipline.	A chaque prof de savoir si la classe n'est pas trop
Iluidite.	discipline.	indisciplinée. Si la tâche est intéressante elle sera faite sans trop de problèmes de bruit car les paires savent
		réguler le niveau de leur voix, même dans une classe nombreuse. Question d'habitude aussi. Comme le/la
		partenaire est proche, on n'a pas besoin de parler fort.
Apprentissage/pratique	Classe en rangs d'oignons.	On peut se déplacer, travailler avec quelqu'un devant,
des stratégies de	Classe en langs d'orgnons.	derrière, à droite, à gauche
communication (demande		defficie, a dione, a gauche
de clarification, de		
confirmation, répétition),		
pour entretenir la		
conversation, pour		
compenser les manques		
de connaissances,		
lexicales notamment.		
Indépendance,	Classe trop nombreuse.	Raison de plus pour utiliser cette forme de travail.
autonomisation.	chubbe dep nomereuse.	Bien préparée.
Possibilité de travailler à	Classe trop faible.	Faisable à tous niveaux.
son propre rythme		
Possibilité d'apprendre	Problème d'organisation matérielle:	Une fois qu'une tâche est organisée, elle est réalisable
des autres.	petits bouts de papier différents.	à l'infini. Savoir à l'avance combien d'étudiants il y a
	r	pour prévoir le nombre exact. Certaines paires seront
		impaires.
Échange de	Problèmes d'organisation.	Former les groupes/paires rapidement. Donner
raisonnements sur la	<i>G</i>	instructions clairement, avant de distribuer le matériel.
langue.		Démontrer.
Encourage la coopération	Le prof n'a rien a faire.	Au contraire: écouter, aider, conseiller. Écouter
(même sil y a de la	L	surtout pour savoir ce qui doit être prévu la fois
compétition dans		prochaine pour aider.
l'exercice).		
Les étudiant(e)s	Tendance à lire son information et celle	Le rôle de "surveillant(e)" de l'enseignant(e) est
apprennent à se connaître,	de l'autre plutôt que de communiquer	fondamental. Insister sur la mémorisation de
à parler à d'autres avec	réellement.	l'information, lorsque c'est possible, avant de
lesquel(le)s ils/elles ne		commencer la tâche.
parleraient peut-être pas.		
Individualisation,	Technique inconnue.	Expliquer les principes de base. Au bout de deux ou
motivation, "depth of	1	trois exercices, les étudiant(e)s n'ont plus de
processing", climat		problèmes et se lancent dans l'activité avec un
affectif, de confiance.		minimum d'explications. Commencer par des
,		exercices simples.
	I	exercices simples.

Difficultés à communiquer par manque de vocabulaire.	Anticiper les difficultés. Donner le vocabulaire nécessaire avant.
Le/la prof n'entend pas toutes les fautes et donc ne peut pas les corriger.	La correction constante inhibe plus qu'elle ne remédie. Mieux vaut corriger, à la fin, les erreurs les plus fréquentes.
Embarras de parler en anglais avec quelqu'un avec qui on communique en L1 d'habitude.	L'embarras est encore plus grand devant un grand groupe. La tâche, dont les éléments sont donnés en anglais, facilite l'interaction.
On entend beaucoup de langage "incorrect".	Rien ne prouve qu'on reproduit les fautes entendues (de même qu'on ne reproduit pas automatiquement le langage correct, hélas).

Simon Haines résume ce que l'on pourrait dire sur la question avec une formulation de bon sens:

Clearly, well-motivated students in small classes can develop their communicative abilities to a high level through carefully chosen pairwork tasks, monitored by a conscientious teacher. Equally, ill-thought-out, badly organised activities thrown indiscriminately at large classes of bored, unmotivated students will produce chaos, not communicative competence (HAINES, Simon. "Pairwork". *Modern English Teacher* 4 : 1, January 1995. 58).

Des étudiant(e)s très motivé(e)s apprendront avec n'importe quelle méthode, de même que lorsque la motivation est absente on ne peut pas s'attendre à des miracles. La plupart des situations ne sont pas si extrêmes. Haines affirme que le travail par paires, en rendant le communication obligatoire, est stressant.

> My own theory is that pairwork is stressful to the extent that it allows no escape from communication. It may be exhausting, or even threatening, to spend significant periods of time doing activities in a foreign language without the benefit of direct feedback. Students may feel like prisoners, being spied on by the monitoring teacher/warder who may be making secret notes which may or may not be made known to the student/prisoner at some time in the future (58).

Comme trop souvent, cette théorie ne s'appuie sur aucune "preuve" sinon la formule passe-partout "there is some research evidence to back this up" suivie d'une référence de bas de page (David Nunan, *Syllabus Design*, Oxford University Press, p. 78). Une enquête menée auprès de mes étudiant(e)s, effectuée dans le but de voir s'ils/elles percevaient différemment le travail par paires (supposé sérieux) et les jeux (supposés plus divertissants) m'a donné une image très différente.

Enquête sur le travail par paires et les jeux: enquête de perception

1. Méthodologie

Phase 1

Γ

• Enquête auprès de 71 étudiant(e)s de 2ème cycle sciences/médecine (enseignement optionnel, motivation forte dans l'ensemble):

- * 41 de niveau avancé;
- * 30 de niveau intermédiaire.

Travail nar naires

• Interrogation libre par écrit (anonyme): avantages et inconvénients du travail à deux et des jeux pour contraster les deux (ressemblances et différences).

Τουν

• *Résultats*: éléments les plus fréquemment mentionnés:

Travali par partes		JEUX				
Avantages						
Fait parler plus, travailler plus.	66%	Amusants, agréables, attractifs, stimulants, etc.	77,5%			
Favorise l'échange, l'aide et la correction mutuelles.	34%	Permettent de travailler sans s'en rendre compte, de participer.	29,5%			
Permet de parler plus facilement que dans le grand groupe.	26,5%	Spontanéité, débrouillardise.	11%			
Permet de connaître les autres.	18%	Atmosphère détendue.	10%			

Inconvénients				
Manque de corrections.	19,5%	Pas toujours intéressants.	10%	
Recours au français	12,5%	Manque de corrections.	4%	
Incompatibilité de partenaires	5,5%			

En général, peu d'éléments négatifs ont été notés, donc ces activités sont vues globalement comme positives. Le travail par paires est apprécié mais perçu comme un travail (le manque de corrections importe), tandis que le principe de plaisir dans le jeu est prépondérant et le manque de corrections ne gêne pas. Une notion intéressante émerge, bien que minoritaire, car elle est en général ignorée: la difficulté de ce genre de travail quand les partenaires manquent de bonne volonté ou sont d'un niveau trop différent.

Phase 2

• En fin d'année, un questionnaire a été élaboré à partir des remarques faites dans le questionnaire libre.

• Le questionnaire a été rempli, toujours de façon anonyme, par 84 étudiant(e)s:

- * 39 de niveau avancé;
- * 45 de niveau intermédiaire.

2. Résultats : Questionnaire de perception (résultats en pourcentages)

		TRA	VAIL A D	DEUX			JEUX	
		oui	non	autres		oui	non	autres
Avar	itages							
1	oblige à parler	96,4	3,5	1,1		61,9	22,6	15,4
2	permet de connaître les autres	72,6	9,5	16,6	,	77,3	7,1	14,2
3	plus facile pour parler que grand groupe	86,9	9,5	3,5		63	23,8	13
4	atmosphère détendue	84,5	5,9	9,5		94	5,9	0
5	travailler sans s'en rendre compte	55,7	25	19	,	73,8	8,3	15,4
6	plus intéressant qu'exercices normaux	56,9	8,3	34,5		55,7	11,9	29,7
7	fait travailler plus	20,2	39,2	34,5		11,9	57,1	32,1
8	stimulant	52,3	17,8	27,3		54,5	17,8	25
9	distrayant	61,9	14,2	25		85,7	3,5	8,3
10	intéressant	56,9	9,5	11,9		54,5	4,7	38
11	permet d'apprendre à se débrouiller	50	26,1	23,8		45,2	33,3	20,2
12	spontanéité	59,5	20,2	19	,	77,3	8,3	15,4
13	bon pour la grammaire	29,7	30,9	38		16,6	39,2	41,6
14	bon pour le vocabulaire	(6,9	21,4	22,6		52,3	16,6	30,9
15	bon pour la prononciation	26,1	51,1	23,8		25	48,8	28,5
16	détente	69	8,3	21,4		94	1,1	3,5
17	aide mutuelle	78,5	3,5	14,2		65,4	14,2	20,2
18	correction mutuelle	54,5	11,9	28,5		42,8	25	34,5
19	plus efficace qu'exercices écrits	27,3	29,7	44		21,4	41,6	39,2
Inco	nvénients							
20	manque de corrections	76,1	13	9,5	,	70,2	13	16,6
21	recours au français	65,4	19	16,6		63	21,4	15,4
22	pas toujours intéressant	54,5	22,6	21,4		42,8	32,1	26,1
23	passivité	15,4	73,8	9,5		28,5	51,1	21,4
24	pas obligé(e) de travailler	23,8	57,1	15,4		30,9	48,8	21,4
25	partenaire trop fort(e)	9,5	77,3	7,1		9,5	77,3	10,7
26	partenaire trop faible	10,7	78,5	5,9		10,7	75	9,5
27	partenaire pas motivé(e)	27,3	56,9	11,9		25	65,4	14,2
28	partenaire pas sympa	11,9	69	13		9,5	69	15,4
29	pas d'apport de vocabulaire nouveau	32,1	59,5	8,3		20,2	60,7	20,2
30	pas de grammaire	36,9	44	13		35,7	36,9	27,3
31	pas toujours clair	30,9	51,1	17,8		34,5	46,4	20,2
32	participation inégale	32,1	54,5	14,2		46,4	29,7	23,8
33	problème de concentration	29,7	58,3	11,9		30,9	52,3	19
34	surplus d'enthousiasme	16,6	67,8	10,7		20,2	58,3	22,6
35	pas de travail de vocabulaire	17,8	61,9	19		27,3	44,4	27,3
36	pas de travail de grammaire	23,8	51,1	26,1		39,2	34,5	27,3
37	pas de travail de prononciation	35,7	42,8	21,4		44	34,5	é2,6
38	efficacité douteuse	14,2	50	33,3		25	40,4	34,5
39	trop vague	15,4	54,5	23,8		23,8	47,6	27,3
40	trop long	7,1	76,1	15,4		15,4	64,2	21,4
41	trop simpliste	7,1	64,2	25		21,4	50	29,7
42	trop bruyant	8,3	75	9,5		15,4	70,2	14,2

Faites-vous une différence fondamentale entre le travail à deux et les jeux?

oui	non	sans réponse
29,7	54,5	17,8

Appréciation générale	Travail à deux	Jeux
globalement positive	79,7	63
globalement négative	0	5,9
mitigée	9,5	26,1

Les appréciations sont semblables pour les propositions les plus "populaires".

a. Problèmes

• Propositions redondantes

Certaines propositions devraient se recouper mais en fait n'obtiennent pas forcément la même réponse par la même personne (32 et 38, 31 et 37).

- Incohérences:
- * quelques un(e)s trouvent le travail à deux non stimulant, non distrayant mais intéressant;
- * un(e) autre le trouve stimulant mais ne sait pas si c'est intéressant (un(e) puritain(e) qui se méfie);
- * un(e) pense qu'il y a correction mutuelle mais ne sait pas s'il y a aide mutuelle;
- * un(e) qui trouve qu'il n'y a pas de problème de partenaire mais que la participation inégale des partenaires est un problème (la 2ème proposition est plus impersonnelle, moins une attaque).
- On peut aussi lire le caractère sous certaines combinaisons de réponses: le paresseux, ou l'anti-ludique qui pointe sous l'appréciation contradictoire:

fait travailler plus: **oui**; stimulant, distrayant, intéressant: **non**.

b. Travail à deux: commentaires sur quelques propositions

• Le principal attrait du travail par paires, à la quasi-unanimité, est qu'il *oblige à parler*. C'est en effet ce que les étudiant(e)s trouvent de plus difficile à faire et ont le moins pratiqué, ce qui est le plus difficile à obtenir pour l'enseignant(e).

• 87% des étudiant(e)s trouvent qu'il est *plus facile de parler à deux* que dans un grand groupe (ce qui ramène le pourcentage des extravertis à 10%).

• Le 3ème avantage est l'*atmosphère détendue* avec 85% (mais seulement 69% apprécient la détente, encore des puritains; 14% de masochistes).

Viennent très haut dans les appréciations positives deux critères assez surprenants.

• 78,5% apprécient le travail par paires pour l'*aide mutuelle* que les étudiant(e)s s'apportent les unes aux autres. Cependant à peine un peu plus de la moitié voient la *correction mutuelle* comme un avantage de cette forme de travail ce qui implique que l'aide est d'une autre nature (suggérer, souffler, susciter).

• 72,5% apprécient cette forme de travail car elle leur permet de *connaître les autres*. Ce n'est pas surprenant dans un contexte où les étudiant(e)s proviennent d'UFR différentes et donc ne se connaissent pas au départ.

Beaucoup de caractéristiques tournent autour de 50% et semblent donc indiquer soit des perceptions très différentes, soit une incertitude. Trois propositions reçoivent très peu de voix. 20% seulement considèrent que le travail par paires *fait travailler plus* et un quart qu'il est *plus efficace que des exercices écrits*. Ceci ne doit pas surprendre. Le travail par paires est une forme de travail à laquelle les étudiant(e)s ne sont pas habitué(e)s. L'enseignement français est très écrit et il est déroutant de ne plus avoir ce support. Si ce n'est pas écrit on n'a pas l'impression de travailler, même si par ailleurs on déplore de ne pas assez parler. Quant au travail sur la *prononciation*, cité par 25% seulement parmi les avantages, elle est perçue comme étant défectueuse, donc à corriger et le travail par paires n'offre pas un/e correcteur/trice derrière chaque étudiant(e)s à tout moment. Il n'y a pas non plus de modèle, ou pas souvent.

c. Écarts entre niveau intermédiaire et avancé

Il y a très peu de différences d'appréciation.

• Dans le groupe intermédiaire, on souligne davantage l'*atmosphère détendue*, le fait de travailler sans s'en rendre compte, de façon *distrayante*. Le travail par paires est également pratiqué de façon plus systématique dans ce niveau.

• Le niveau avancé mentionne plus fréquemment que cette forme de travail est bonne pour la *prononciation*. C'est normal: ils/elles ont besoin de moins de corrections et davantage de pratique.

• De même, la *correction mutuelle* apparaît plus souvent au niveau avancé, sans doute grâce à la présence de fort(e)s qui aident volontiers les autres.

• Les sans opinion ou indécis(es) réalisent un score élevé dans les questions 6, 7 et 19 (*plus intéressant, fait travailler plus, plus efficace*) qui reflètent bien la difficulté des étudiant(e)s à évaluer l'efficacité du travail. L'étudiant(e) n'est pas convaincu(e) que parler c'est travailler. La question sur l'*efficacité* obtient plus de "je ne sais pas" que de oui ou de non, la seule question dans ce cas.

• Sur les questions 7 et 13 les opinions sont très partagées.

• Questions 13, 14, 15 : on voit bien dans le travail par paires qu'il y a apport de vocabulaire mais le travail de grammaire est mal perçu (et pourtant les exercices de ce type portent souvent sur les structures grammaticales). Ce travail est sans doute trop différent de l'habitude.

d. Les jeux: commentaires sur quelques questions

On pourrait s'attendre à ce que les réponses soient semblables pour les jeux. En fait, elles divergent sur des points importants.

• D'abord, le principal avantage du jeu n'est pas qu'il oblige à parler, ce qui n'est le cas que pour 2/3 (dans un jeu, à plusieurs, on peut être plus passif/ve) mais c'est la *détente* qui l'emporte à la quasi-unanimité, 94% (100% chez les intermédiaires) et là il n'y a pas de différence entre détente et atmosphère détendue.

• Juste derrière, avec 85%, on trouve l'aspect *distrayant*.

Trois autres éléments obtiennent un bon score.

• Le jeu permet de *connaître les autres*, un peu plus que le travail par paires (77,3% contre 72,6%).

• Le jeu permet de *travailler sans s'en rendre compte* (73,8% contre 55,7%). Il y a un aspect formel, laborieux dans le travail par paires qui disparaît dans le jeu.

• Le jeu est perçu, à juste titre, comme une activité où la *spontanéité* peut s'exprimer (77,3%).

• Par contre, l'*aide mutuelle* et la *correction mutuelle* sont moins forts dans le jeu, ce qui est normal : avec la fièvre du jeu, on n'a pas le temps de coopérer et le jeu est moins perçu comme un travail.

• Il apparaît encore plus clairement que pour le travail par paires que, dans les jeux, la grammaire et la communication sont deux choses différentes!!!

Les autres éléments sont semblables.

e. Écarts entre niveau intermédiaire et avancé

Le jeu est plus stimulant, plus intéressant, plus spontané pour les fort(e)s, peut-être parce que les jeux sont plus évolués, plus complexes.

Conclusion

Sous l'appréciation globalement positive, la méfiance, le puritanisme pointent.

Sous la plage,



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Thaïlande, 1992 Madère, 1988

les pavés.

Nicole Décuré

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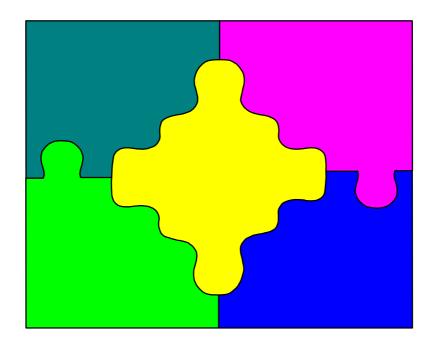
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- Cooperative/collaborative learning (bibliographie commentée)
- Collaborative projects
- Large classes
- Small groups

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Jigsaw Istening

Pour développer la fluidité orale, les activités d'expression basées sur des supports écrits sont bien connues. La moitié de la classe lit un texte. L'autre moitié lit un autre texte. Ensuite les étudiants, par deux, échangent l'information, ce qui donne à chaque membre du groupe l'occasion de parler. NÈanmoins, un inconvénient quand on utilise un support écrit, tel que des coupures de presse, est la difficulté d'effectuer le passage de la langue écrite à la langue orale, que ce soit pour le lexique ou pour la syntaxe.

C'est pourquoi, il m'a semblé approprié d'utiliser, pour ces échanges, des sources audio.

Méthode

1. Le groupe est divisé en deux. Chaque demi groupe écoute un document sonore différent. Cette écoute peut se faire soit en laboratoire de langue, soit dans deux salles équipées de magnétophones. Les apprenants disposent d'un document de travail propre à faciliter la compréhension : vocabulaire, questions sur le sens, grilles à remplir. Le but est de préparer la reformulation du contenu. Les deux demi-groupes travaillent seuls, l'enseignante n'intervenant que pour aider ponctuellement, si c'est nécessaire. La consigne donnée aux apprenants est de s'entraider. En fait, les étudiants les plus avancés aident les autres en répétant ce qu'ils ont compris et en répondant à leurs questions.

2. Lorsque l'écoute est terminée, le groupe est rassemblé, et les étudiants travaillent par deux, avec quelqu'un de l'autre groupe. Ils doivent restituer le contenu de leur cassette et effectuer ensemble une tâche, par exemple chercher les ressemblances et les différences entre deux récits, ou proposer des solutions pour résoudre une énigme.

3. Tout le groupe ensemble, les participants comparent le résultat de leur échange.

Type de matériel

On peut soit utiliser du matériel commercialisé, soit réaliser ses propres enregistrements.

1. Le seul exemple de matériel créé spécifiquement pour échanger de l'information est, à ma connaissance *Parallels* (Rost & Lance, Lingual House,

1984). Chaque unité comporte une énigme qui ne peut être résolue qu'en parlant avec quelqu'un qui a écouté l'autre cassette. Les livrets d'accompagnement comportent des grilles d'écoute pour aider la compréhension et faciliter la restitution du contenu. Par exemple la préparation d'un vol à main armée comprend une conversation à propos de la sécurité du magasin visé par les bandits. En comparant les informations qu'ils détiennent, les étudiants doivent imaginer l'issue de cette entreprise. La solution (le garde est tué) est donnée en fin de séance. Malheureusement, il semble que cet excellent matériel destiné à des étudiants de niveau intermédiaire, ait été peu diffusé et soit à présent épuisé.

On peut, à défaut, utiliser des enregistrements commercialisés portant sur des thèmes proches. Par exemple, *Auto English* de Nathan offre des interviews courtes sur des sujets variés qui se prêtent à l'exercice de restitution. Reste à l'enseignant à préparer les grilles d'écoute nécessaires pour faciliter la comparaison.

2. Une autre possibilité est de réaliser soi-même des enregistrements. J'ai plusieurs fois mis à contribution des amis anglophones en les enregistrant séparément sur le même sujet. L'intérêt vient des divergences d'opinion. Ainsi, j'ai demandé à un jeune couple américain qui rentrait d'une expédition en canoÎ dans le grand nord canadien de décrire leur voyage, en prenant bien soin de les questionner à part. L'homme qui était un entomologiste était intarissable sur les charmes du voyage. Sa jeune femme avait souffert des conditions matérielles excessivement dures et des tensions dans le groupe. Les étudiants arrivaient à déceler qu'il s'agissait en fait du même voyage, vu sous deux angles différents.

Un autre exemple est celui d'un couple d'agriculteurs anglais parlant séparément de la France quelques années après leur installation en Dordogne.

Le seul équipement nécessaire à la prise de son est un petit magnétophone portatif. Mais il faut ensuite préparer les grilles d'écoute.

En conclusion, il faut insister sur l'intérêt d'une manière de procéder qui décuple le temps de parole octroyé aux apprenants et leur donne réellement l'occasion de mettre en pratique ce qu'ils ont appris. L'échange d'information à deux favorise la prise en charge par les étudiants de leur propre apprentissage, démarche tout à fait indispensable à l'acquisition de l'autonomie.

> *Anne Péchou* Maître de Conférences à Toulouse I

AUTRES CONTRIBUTIONS



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oulouse III, 1992

The Jigsaw Method: Seeing the Whole Puzzle

Introduction

Any language teacher with a sense of adventure can bring a teaching technique such as Jigsaw into her classroom, implement it effectively and evaluate the success of the endeavor without knowing anything of the origins of the technique. Jigsaw activities are no exception; when accompanied by clear instructions, they can be readily introduced into any teaching/learning situation.

Yet it is often much to the teacher's benefit to possess some background knowledge prior to trying new approaches. Knowledge of the results of trial stages of experimental techniques will provide the teacher with valuable insight and help her to avoid some of the typical pitfalls associated with trial-and-error classroom teaching. Research into available resources may unearth ready-made materials that can be used in class, thus avoiding the danger of "reinventing the wheel" or spending endless hours devising learning activities which can already be found in published material.

Perhaps the best argument for researching a new teaching technique is that familiarity with its background can help a teacher see how it fits into the larger picture of teaching methodology. In this way, a teacher can decide how the technique corresponds to her own teaching philosophy; she can then make it an integral part of a well-rounded pedagogical approach.

In this paper, I would like to place the Jigsaw teaching technique into the larger context of language teaching methodology, particularly cooperative or collaborative language learning.⁴ I will show how the Jigsaw technique evolved by examining the research and theories of linguists, pedagogues and researchers of the past few decades, and by highlighting facets of their philosophies that have had some bearing on the place of cooperative learning methods like Jigsaw in the teaching of foreign languages. I will also show that renewed interest in cooperative language learning techniques has brought Jigsaw—as well as many other related group methods—back into favor.

⁴ In this paper, for the sake of simplicity, I will consider the terms "collaborative language learning" and "cooperative language learning" to be interchangeable. As the Oxford English Dictionary defines collaboration as "united labour, co-operation" and cooperation as "the action of co-operating, *i.e.* of working together towards the same end, purpose, or effect; joint operation", I feel that the two terms are compatible in the present context. Furthermore, David Nunan uses the two terms interchangeably throughout his introductory chapter to *Collaborative Language Learning and Teaching*.

Language teaching methodology

Retrospective

Structural linguistics

In the earlier part of the twentieth century, thinking about language teaching stemmed mainly from a desire to pin down a language, to demystify, define and concretize an abstract system. Even as recently as thirty years ago, teaching methods were based on the findings of structural linguists like Bloomfield (1930's and 40's), whose immediate constituent analysis method allowed teachers and students to classify and order language elements without taking into account the meaning of each element. Language laboratory exercises based on this method, in a manner reminiscent of that of the behaviorist Skinner, encouraged learners to memorize and repeat words and phrases, thus enabling them to acquire automatic reflexes necessary for the later production of original language. Many textbooks still include sentence-building paradigms or substitution tables, whose goal is mainly to help students learn the correct place and function of each word in a given sentence.

Transformational generative grammar

In 1957, with the publication of *Syntactic Structures*, Noam Chomsky added consideration of the component of meaning to the mechanical analysis of language. While acknowledging the value of immediate constituent analysis, he criticized the superficiality of structural linguistics and the fact that it failed to take into account the linguistic competence of the language learner. He believed that one must consider the underlying, deeper meanings of language, meanings which can only be described through a set of ordered rules which permit the production and the interpretation of speech.

Chomsky's distinction between the two levels of language, the surface or performance—level and the deeper—or competence—level had a direct effect on language teaching. Not only is it important to consider what people do with language, but also how they learn to do it⁵.

Sociolinguistics

During the 1960's and early 1970's, American sociolinguist Dell Hymes maintained that speech, far from being the product of an ordered system, is a product of a community of speakers and as such is influenced by the myriad emotions, needs and intentions of the members of that community. Hymes' concept of "communicative competence" refers to the extent to which a sentence

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Hutchinson & Waters, 1987.

is appropriate in relation to the context in which it is uttered⁶. Not only must a speaker possess knowledge of a language's superficial structure and the ability to apply rules to the production and interpretation of language, he must also know what to say and when. This further distinction added a new facet to the teaching of a foreign language: the need to identify purpose, intent, topic and relationships between speakers.

Functional/notional approach

In the 1970's, the functional/notional approach to grammar and syllabus development classified language in two ways: functions which reflect social behavior (agreeing, disagreeing, requesting, apologizing, etc.) and notions, or "categories into which the mind and thereby language divides reality"⁷ (money, time, frequency, duration, etc.).

J. L. Austin, in his book entitled *How to Do Things with Words*, claimed that all utterances simultaneously perform three kinds of acts: a locutionary act (the propositional content), an illocutionary act (speech act, the conventional force of an utterance, *e.g.* statement, offer, promise) and a perlocutionary act (the effect of the utterance on the listener). Austin further classified speech acts into 5 categories: exercitives (warn, order, advise); verdictives (describe, analyze, evaluate); commissives (agree, disagree, intend, promise); expositives (affirm, define, state, conclude) and behabitives (thank, apologize, request).

The concept that speech is equivalent to action formed the basis of the functional-notional syllabus. Austin's classifications of speech acts found an immediate application in the authoring of material for teaching and learning foreign languages. Even today, many new textbooks are structured around a functional-notional syllabus.

Process approach

In the early 1980's, Michael Breen and Christopher Candlin rejected the functional aspect of communicative teaching. They asserted that to learn a language is not to learn *what* to communicate, but *how* to communicate within a particular sociocultural group. According to them, language learning "may be seen as a process which grows out of the interaction between learners, teachers, texts and activities"⁸.

The process approach promotes the consideration of the classroom as a resource or a meeting-place of all other resources—texts, materials, equipment, teacher—at the learners' disposal. The teacher is a facilitator, helping students to function within an environment which is, at best, artificial: the classroom.

Communicative approach

⁶ Melrose, 1991.

⁷ Hutchinson & Waters, 1987, p. 31.

⁸ in Melrose, 1991, p. 9.

It is, in essence, the artificiality of the typical classroom which can be viewed as the one barrier to true communication between learners. Without an authentic need to communicate, learners do little more than simulate communication.

The communicative approach emerged as a way to make communication the goal of an activity rather than the tool. Brumfit, Johnson and Littlewood were instrumental in defining and promoting the communicative curriculum, whose content is selected for its ability to provide opportunities for true communication between the learner and another person. The focus of such an approach is not the process of learning; on the contrary, all awareness of process must be relegated to the subconscious if the learner is to become a true participant in the communicative experience.

Authenticity is one of the key concepts of the communicative curriculum. Not only the communicative experience itself but also the materials used in the classroom must be authentic. Texts should be taken from current newspapers and magazines, and whenever possible presented in their original form. The term *realia* refers to the authentic documents and objects (airplane tickets, restaurant menus, bills and receipts, etc.) which are frequently used in a communicative classroom.

Another integral part of a communicative curriculum is task work. Candlin and others offer guidelines to the use of problem-solving tasks and strategy activities which place the learner in the position of wanting and needing to communicate with his fellow learners.

A learning/learner-centered curriculum

A shift occurred during the late 1970's from a focus on how the *teacher should best teach* to how the *learner might best learn*. This new perspective on language learning, which led first to the development of the communicative approach, soon evolved into the learner-centered approach promoted by Hutchinson and Waters⁹.

According to Hutchinson and Waters, the term "communicative" is quite imprecise. What teaching approach would term itself "uncommunicative"? They assert that the term "has come, in effect, to mean simply a good, modern approach to language teaching, rather than indicating what that approach might consist of¹⁰."

Their definition of a learner-centered approach is somewhat more concise. A learner-centered curriculum takes the learner into account at every stage of its progression: needs analysis, syllabus design, the choice and creation of materials, coursework and evaluation.

¹⁰ Hutchinson & Waters, 1987, p. 23.

⁹ Hutchinson and Waters prefer the term learning-centered to learner-centered, as the learner is but one of the many elements involved in the process of learning.

While one could argue that all approaches claim to take the learner into account, in reality many focus much more on the content or the skills to be acquired than on the processes that the learner uses to acquire them. Like a communicative approach, a learner-centered approach involves providing the learner with situations in which he or she can put learning strategies, decision-making mechanisms and communicative skills into play at every stage of his/her learner experience. But according to Nunan, "(...) the key difference between learner-centred and traditional curriculum development is that, in the former, the curriculum is a collaborative effort between teachers and learners"¹¹. In essence, the learner-centered approach keeps the learner at the center of every step of the learning process, from needs analysis through final evaluation.

Where next?

Throughout the 1980's the preoccupation with the functional/notional curriculum and the teaching of English for special purposes (ESP) meant that the energies of many researchers and teachers were focused on materials design and creation. Old text- and resource-books no longer provided adequate variety for the teaching of "general" English. The rising demand for language training for the industrial and technological sectors sent authors scrambling to produce materials for an ever-widening market.

In the 1990's, partially as a result of the huge increase in available published resources, language teachers have begun to re-evaluate their use of ready-made materials in the classroom. Faced with an overwhelming array of exercise books, progressive methods and resource materials of all types, a teacher may often find herself in a position where she must redefine her personal teaching philosophy in order to make more effective choices when selecting materials.

One of the basic elements of a sound teaching philosophy is its goal structure. We have seen three: individual, competitive and cooperative. Jigsaw activities belong mainly to the third category.

Cooperation is a skill which must be mastered by any individual who hopes to play a productive role in the modern world. The rapid development of telecommunications and information sciences permits communication at levels and in situations which, only a few years ago, seemed impossible. This development brings with it a sort of forced intimacy, as it throws together individuals who had previously enjoyed more spatial and intellectual maneuverability, especially in their professional life.

Paradoxically, the very technological advances which pull people together have also created an unprecedented level of professional mobility. More and

¹¹ Nunan, 1991, p. 3.

more professionals choose to work from their homes, thus causing a decentralization of information resources.

The ability to negotiate the sharing of information is essential to survival in such an environment. Jigsaw activities help develop this skill. Thus, they are of indisputable value both in a classroom situation and for the further education of adults. The recent renewal of interest in the Jigsaw approach is a logical reflection of the demands that modern life places on every individual.

Collaborative language learning

Types of group learning

It would be false to assume that any learning situation involving group work can automatically be considered to be collaborative. Students are frequently asked to work in groups for reasons of expediency—as a classroom management technique for large classes, for example. While small-group work which is not intrinsically cooperative can certainly be advantageous, most of the benefits of collaborative work are lost without a certain degree of interdependence among group members. In choosing activities for cooperative learning, the teacher must first give adequate thought to the relationship of each group member to the task at hand as well as his relationship to members of his own and other groups.

Schiffler provides us with classifications of group learning. He outlines three different groupings, in which:

- all groups in a class work toward a common goal,
- tasks within each group are mixed, or
- each group in a class works toward a different goal¹².

Only the first and third groupings can truly be classified as being "cooperative". In the first, the entire class shares a common goal, and the learners are divided into smaller groups while working toward that goal. In the third, learners in each group collaborate on one task.

In the second grouping, however, in which each group member works toward a goal that is different from that of his group-mates, the element of collaboration is absent. Learners are organized into smaller groups mainly in order to improve the learner-teacher ratio and to make the learner more responsible for his or her own learning.

Thus, Schiffler provides us with evidence that not all group learning can be considered to be collaborative or cooperative.

¹² Schiffler, 1984.

Goals and intents of collaborative learning

One of the main arguments for the implementation of Jigsaw activities into a curriculum is that they increase learners' self-esteem¹³. This is, in part, due to the sense of accomplishment that a student gains from having been instrumental in his classmates' successful completion of a task.

This increase in self-esteem can also be attributed to the absence of the traditional teacher-student relationship, which is replaced in collaborative activities by a more satisfying peer-peer negotiation. While this is particularly true for children, even adult learners can benefit from the knowledge that they are responsible for ensuring the effectiveness of the information exchange. Often unconsciously, adult learners quite frequently re-create the adult-child relationship they experienced while in school. Collaborative activities can help make language learning a relevant, even professional activity for these learners.

Another of the goals of cooperative learning methods is the reduction of student isolation, which can help reverse the potentially negative effects of a competitive learning environment.

In examining the following three types of goal structures for classroom activities, it is clear how the element of cooperation can not only make a learner feel more capable of learning, but also add the incentive for him to make more of a personal investment in the learning process.

- An individualized goal structure implies that one student's goal attainment has no effect on and is not affected by other students' goal attainment.
- In a competitive goal structure, a student's chance of reaching a goal increases as other students fall farther from the goal.
- In a cooperative goal structure, the student's possibility of achieving a goal increases as other students are successful at achieving the goal¹⁴.

Forming groups for cooperative learning activities

Making appropriate choices when establishing groups for cooperative learning activities is essential to their success. Schiffler provides us with a description of several options for group formation:

- The teacher can choose the groups arbitrarily (which, according to Schiffler, may create potential for dissension and tension).
- The teacher can form groups according to learners' grades or ability level.
- Groups can be formed according to a theme or a subject to be studied.

¹³ Slavin, 1981.

¹⁴ Long & Richards, eds., 1987.

- Designated group leaders can choose groups.
- Students can be free to choose their own groupings.
- Groups can be formed in function of the seating arrangement (a solution frequently adopted because of its ease of implementation).
- Or groups can be formed in function of sociopsychological and sociotherapeutic issues (Schiffler's choice for most efficient grouping system). This implies taking into account the wishes, personalities, strengths and weaknesses of learners¹⁵.

While any of the above groupings can be acceptable, depending on factors governing the choice, the most effective collaborative groups are deliberately heterogeneous. In this way, stronger learners can help weaker ones, making the group more able to work independently and freeing the teacher to spend time consulting with the various groups or observing them. Changing the groupings from one activity to another will provide students with variety and the opportunity to use different skills in different social situations.

Jigsaw

Description

Developed by Aronson in 1978 and described in his book *The Jigsaw Classroom*, Jigsaw is a cooperative learning technique in which a class is divided into teams, each of which becomes "expert" in a given area. Once each team has mastered its material, the class is divided into a second set of teams, each one composed of one member from each of the first set of teams. In this new arrangement, each student is responsible for teaching his area of expertise to the others in his new group.

The writings of Johnson & Johnson are mainly responsible for the popularity of Jigsaw. Slavin also adopted the technique, and developed a variation of it called Jigsaw II. For an in-depth discussion of Jigsaw, Jigsaw II and the issues surrounding their use in classrooms, I refer the reader to Stephen Gaies' article in this publication.

Jigsaw's universality

Jigsaw defies all attempts at fixing it within a well-defined taxonomy of language-teaching techniques. It shares many characteristics with other techniques, and can be a part of many different kinds of syllabuses. This very

¹⁵ Schiffler, 1984.

quality of polyvalence explains the past popularity of—and the renewed interest in—Jigsaw.

Jigsaw is at once a many-faceted and a very simple tool for language learning. The fact that it is concerned solely with the sharing of learned items between team members who each have a stake in the success of his teammates makes it, in essence, a more sophisticated version of a very primitive ritual: the sharing of collective knowledge, collective wisdom.

In the following paragraphs, I discuss the possible applications of Jigsaw within the context of the methodological approaches already presented.

Structural approach

While it is usually considered a communicative activity, Jigsaw can also be useful in a structural approach to language learning. Although relatively few modern curricula integrate purely structural activities, some language courses, particularly those concerned with language for special purposes, rely heavily on memorization of lexis and structures. Teamwork and collaboration can add creativity and variety to these activities, thereby alleviating some of the boredom that learners often experience when attempting to master new language.

A technical reading course may require learners to analyze the form and function of words and sentences, in order that they might more effectively infer the meaning of new words in future reading texts. This modern application of Bloomfield's immediate constituent analysis can certainly take the form of a Jigsaw activity, by making students "experts" on different types of words or expressions, on different sections of the document or on different paragraphs within a given section.

Functional-notional approach

Jigsaw can be a part of a functional-notional syllabus. By its very nature, it develops the functions of requesting and giving information. It also strengthens the skill of negotiation, in the sense that all communication is negotiation; in addition, students must negotiate the manner and the quality of the exchange of information within teams, as the teacher may well choose neither to arbitrate nor to provide guidance during the activity itself.

All five of Austin's categories of speech acts can be present in a Jigsaw activity, from the more common behabitives like requesting and thanking to more complex expositives like defining and concluding.

The process approach

Remembering that Melrose defines language learning as being a process which results directly from the interaction of resources (learners, teachers, material), Jigsaw appears to be perfectly suited to a process approach to language teaching. It corresponds to the two defining parameters of the process approach: the existence of learning resources and the interaction which the students' intervention causes to take place between them.

In Jigsaw the learner is encouraged to avail herself of the resources at her disposal, in this case other learners who are experts in areas where she is less knowledgeable. The interaction required of learners in a successful Jigsaw activity will result not only in the sharing and assimilation of material, but also in the increased ability of each learner to optimize her learning mechanisms in future activities.

Communicative approach

Jigsaw is communicative, and therefore a logical part of a communicative syllabus. It places learners in a position where they have an authentic need to communicate with other learners: the desire—or, indeed, the obligation—to master the material about which other members of their team are already experts. Furthermore, by using Jigsaw for test revision and for preparation of group projects, the authentic need to collaborate provides learners with an authentic communication experience.

Learner-centered approach

Jigsaw is learner- and learning-centered. While a purely learner-centered approach—such as that at Summerhill school in England, where students are permitted to define their entire curriculum on their own—would probably be unrealistic in most contexts, one could argue that Jigsaw is more learner-centered than many classroom techniques.

The teacher may determine the main parameters of the activity, such as the pedagogical support, team assignments and time limits, but a Jigsaw activity will be most efficient if those parameters are chosen in function of the strengths, weaknesses and interests of the learners. In addition, once a class has prior experience with Jigsaw, it can be very profitable to encourage the learners to define the parameters of their own projects.

Jigsaw is *learning*-centered in that it promotes the acquisition and perfecting of skills which are essential to the learning process.

Basic characteristics of Jigsaw

As was said earlier, Jigsaw is a many-faceted activity. Following are some of the characteristics of Jigsaw which enable it to be integrated into such a wide variety of learning situations:

- Jigsaw is cooperative and collaborative, by definition.
- Jigsaw is a problem-solving technique.

- Jigsaw implies an information gap. In order for a learner to have a desire/need to communicate, she must desire to possess information which she lacks but which is possessed by another learner.
- Jigsaw is task-based.
- Jigsaw can be used in project work.
- Jigsaw is useful in "mixed-ability" classes. In choosing teams for activities in "mixed-ability" classes (classes in which age, language or education level or skills are unequal) attention to sociopsychological and sociotherapeutic criteria can ensure the success of a collaborative activity.
- Jigsaw activities can be designed, and therefore viewed, as games.
- Jigsaw can be competitive as well as cooperative. In order to foster "team spirit", a teacher can assign different tasks to each team. Within the team, cooperation and collaboration are *de rigueur*, but teams compete to be the first/best/most...
- Alternatively, Jigsaw activities can follow a sort of "wheel within a wheel" pattern, an echo of the pyramid decision-making process¹⁶: each group completes a Jigsaw project which then becomes a part of a larger project accomplished by two or three groups together, which in turn becomes a part of a "master" project produced by the entire class.

Other methods of collaborative and group learning

The Jigsaw technique is just one part of the larger arena of cooperative and group-learning methodologies. It is difficult to establish a precise taxonomy of cooperative language learning methods, as so many characteristics of group learning overlap; role plays and simulations, for example, can be considered to be dramatic, while not all drama activities involve true role-play. Writing, rehearsing and performing a play does not place the learner in a situation where spontaneous language production is elicited; the value of such activities is rather that they encourage learners to generate and then to memorize language elements, with the goal of adding them to an internal repertoire.

Role plays and simulations can involve information gap, brainstorming, pair work, problem solving. The combinations and permutations of cooperative language learning activities are endless. Like Jigsaw, most of these activities can be easily integrated into any kind of syllabus.

Following is an overview of many different kinds of group-learning situations:

¹⁶ In the pyramid decision-making process, learners are given a problem or situation to discuss. They begin by working together in pairs or in very small groups. Within a given length of time, members of each group must reach a consensus. The smaller groups are then paired to form larger groups, which must equally reach a common decision. Groups are combined in the same way until the class as a whole has been able to agree on one solution to the problem.

- role plays/simulations;
- group or pair homework checking;
- games;
- drama learning, writing or performing a play together;
- projects group writing, research, group reports;
- brainstorming pooling collective knowledge;
- pair work information gap, drill partners, reading buddies (for younger learners);
- information gap Jigsaw (both I [Aronson] and II [Slavin]); interviews, charts to fill out with information which must be obtained from another learner;
- problem-solving/decision-making activities moral issues, debates;
- opinion exchange;
- pyramid work used for decision-making;
- using Cuisenaire rods¹⁷ or Legos to build according to someone else's instructions:
- team drawing¹⁸ members of a team collaborate on a drawing which carries visual meaning for each member of the team (this artwork serves as a visual summary of material they have learned in class and is more effective as a mnemonic device than any illustration chosen and distributed by a teacher);
- photo reporting/collaborative report writing or creating;
- the "jigsaw puzzle" technique¹⁹ an activity in which learners are required to piece together previously cut-apart elements of a linguistic whole (paragraphs of an article, titles separated from stories, words of a sentence, etc.).

Following are several, more formalized group-learning methods:

- Community Language Learning (CLL)
- Student Team Learning (Slavin):
 - 1) Student Teams-Achievement Divisions (STAD)
 - 2) Teams-Games-Tournament (TGT)
 - 3) Jigsaw II
 - 4) Team Accelerated Instruction
 - 5) Cooperative Integrated Reading and Composition.

¹⁷ Small, light, colored sticks of wood, or rods, of different lengths. Cuisenaire rods were originally developed for use as part of the Silent Way technique.

¹⁸ Schiffler, 1984.

¹⁹ The term "jigsaw" can occasionally lead to confusion. In the context of language teaching, "jigsaw" can mean two different things: the Jigsaw group-learning technique, and the cut-and-match technique described above. The jigsaw puzzle technique can easily be transformed into a collaborative Jigsaw activity.

Some cooperative techniques described by Manarino-Leggett & Salomon as being particularly appropriate to reading²⁰:

• *CIRC* (Cooperative Integrated Reading and Composition)

Students are divided into heterogeneous learning teams. Students study together, reading to one another, writing responses and practicing vocabulary; they are tested when each teammate decides that the group is ready.

• *Dyads* (Pairs)

Students study in pairs. First they read a text silently; next, one student, the "recaller", summarizes the text orally while the other listens. The role of the listener is to correct, clarify and elaborate. The two students switch roles until the entire text has been read.

• Group retellings

Each student in a group reads a different piece of literature on the same subject, then recounts to the group what they have read in their own words. Others from the group can intervene to add additional information when needed.

Conclusion

Teaching methodology has changed a great deal throughout the twentieth century. From a purely analytical approach to a very humanistic, personalized approach, teachers, linguists and researchers have touched upon every possible aspect of language acquisition.

The test of time seems to indicate that the communicative approach to language learning is the most effective; it has certainly been the most popular approach over the past two decades. Indeed, one might even consider the term "communicative language teaching" to be a tautology. As language is a vehicle for communicating ideas, any effective method of teaching language should therefore consider communication to be both the means and the end.

A communicative teaching approach can involve an astoundingly large variety of activities. Among these, collaborative learning situations have proven to be effective not only in terms of language acquisition, but also in terms of a student's self-esteem and the degree to which he is willing to assume responsibility for his own learning process.

Jigsaw, initially developed in the late 1970's, is a collaborative approach which is currently enjoying renewed popularity. Jigsaw activities present the benefits of any collaborative learning activity; they have the added advantage of conferring expert status on learners, along with the responsibility of ensuring

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Manarino-Leggett & Salomon, 1990; many other methods are described as well.

that teammates rise to a similar level of expertise on different aspects of a given subject. In addition, the universality of Jigsaw activities makes them quite simple to integrate into any teaching/learning situation.

Until recently, Jigsaw activities were most frequently used in teaching social studies and mathematics in the United States. Jigsaw is well-suited to the discussion-oriented, problem-solving nature of these areas. However, a cursory examination of any catalog of ESL teaching materials will show that authors tend more and more to include Jigsaw activities in their publications. This renewed interest may be due in part to the increasing sophistication of communications technology, as the need for negotiation and information-sharing skills increases.

The Jigsaw method is, obviously, appropriate for use in a modern language-teaching and -learning environment. Nonetheless, the Jigsaw method has yet to find its ideal place in language teaching. One of the main advantages of Jigsaw is its ability to place learners in an authentic communication situation, and to give them a real need to negotiate. However there remains one essential aspect of "real life" that has been largely ignored by Jigsaw materials developers: information technology.

Currently, most Jigsaw activities involve reading, listening, watching films, and/or discussion. Perhaps because teachers are most comfortable using traditional tools like cassette players and video recorders or, perhaps, because institutions are unable to make the necessary financial investment, very few activities have been developed which involve computers.

In "real life", negotiation includes information exchanges with people one has never met, whether by post, electronic mail, telephone, video conferencing, or the Internet. Jigsaw activities should include research and communication which utilize these resources, both in the first stage of a Jigsaw activity, in which learners become experts in their subject, and in the second stage, which involves the transmission of learners' expertise to other learners.

Such technological resources have the potential to render a wellconceived Jigsaw activity virtually indistinguishable from a "real-life" situation. The activity thus attains a high degree of authenticity, which a communicative methodology must strive to achieve. In addition, learners are exposed to a large number of linguistic and social variables, which enhance the learning experience and stimulate and challenge students.

With the help of these new forms of technology, the versatility that has enabled Jigsaw to endure through the past two decades and to gain popularity in recent years will ensure that it remains at the core of language teaching methodologies for decades to come.

> Bonnie Woolley Enseignante

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Bonnie Woolley





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Small groups

Editor's Note: These postings discuss benefits and techniques of using pairs and small groups in ESL classes, and also discuss the ideal size of small groups and ways to organize groups.

• Pair work

First, exercises should be constructed so that at least one of the partners discovers something new. The interaction should be set up so that Speaker A. has information that B. both lacks and needs (at least for purposes of the exercise, and hopefully beyond.). That way both speakers must cooperate, and thus develop conversational management skills, to get the job done. Simply giving one speaker a set of questions to ask the other is not effective or interesting.

Second, whatever the task assigned to the pairs or small groups, they should be required to report back to the group as a whole in some format. That provides some motivation for actually performing the task (contributing to a discussion, defending a point of view) and offers another chance for corrective feedback if needed.

Correction is a sensitive issue. On the one hand you want to keep out of the students' way when they're engaged in a communicative, as opposed to grammatical, task. On the other, giving them no corrective feedback is dishonest and eventually leads, at best to "Terminal 2" speakers (in the ACFTL or ILR Rating scale).

11 July 91 Frederick L. Van Doren Dickinson College VANDOREN@DICKINSN.BITNET

• Another "mixing" idea

I learned this several years ago in a TESOL summer institute class taught by Judy Winn-Bell Olsen, and have been using it ever since.

1. Rank your students by target language proficiency - most proficient to least proficient. The ranking doesn't have to be exact, but do the best you can.

2. Divide the list into the top fourth, the bottom fourth, and the two middle fourths.

3. Make groups of four (about the ideal size for communicative groups). For the first group, take a name from the top, a name from the bottom, and two names from the middle. Then work in from the two ends and out from the middle as you select more groups.

4. Make adjustments as you go to make sure groups are mixed by sex and by L1 background and other factors as appropriate. Of course, your class population may not be evenly divisible by four. Better to set up a of five than three; if someone is absent, a groups of three is going to be too small.

1 November 1992 John M. Green University of Puerto Rico at Mayaguez J_GREEN%RUMAC@UPR1.UPR.CLU.EDU

• Permanent groups

[...T]here is a good deal of comfort in permanent groups. However, I think there is also some local culture development and leveling, which may not be to for the best in terms of "education." I think of one of my daughters and her friends; group loyalty sometimes overcomes the desire to learn and teach each other. So, I think that mixing groups up (no, not confusing them!) say every week or two is desirable. Actually, I change groups on a daily basis unless there is a reason not to.

2 November 1992 Eileen Prince eprince@LYNX.DAC.NORTHEASTERN.EDU

• Permanent groups

[P]ermanent groups [...] need to be put together thoughtfully so that the benefits are not destroyed by antagonisms or other problems.

As with any human organism, some classroom groups are good and some go bad. I have had, despite the best intentions and forethought, groups which have just not gelled. For whatever reason, they did not pull together. Perhaps there were antagonisms, perhaps there was no motivational force, but things just did not work. The temptation in such a case is to mess with the mix: take a strong motivator from one of the stronger groups and insert him or her into the weaker gr. I have always resisted this temptation much as I resist transplanting a bush when it seems I have planted it in the wrong place (not enough light, etc.).

My gut tells me that nature adapts. Are groups part of nature?

2 November 1992 David Tillyer City College of New York DXTBM@CUNYVM.BITNET

• Groups again

One reason I like foursomes when they fit the situation is that four is an even number. This is a small consideration, but with a foursome, a "tie" vote is possible. By this I mean that there is sometimes a greater need for negotiation (= real discussion) than in a group with three or five members, in which any two-way split results in a majority and minority. In my experience with problem-solving activities, I really prefer foursomes, and find my current computer access a real pain in that it is hard to get even three in front of and able to read one monitor. Four is an absolute impossibility in the facilities available to me (...)

2 November 1992 Macey Taylor MACEYTAY@ARIZVMS.BITNET

• Small groups

It all depends.

But one thing is certain (at least for me). A whole group of 12 is just perfect. It makes for groups of 2, 3, 4, 6... all the useful sizes, and yet 12 itself is a very manageable size for a gr.

The other all-important thing to remember - and I presume I'm preaching to the converted here - is NEVER to plan work specifically designed for pairs, triplets, quads, quintuplets.... Someone is BOUND to be ill. Any groupwork must be modifiable, so that one of two can become a threesome, or that the work you planned for your of fifteen can be rearranged (when the flu strikes!) to two groups of four and a three, or (and you must FEEL this in advance) a six and a five.

As to HOW you divided the groups, that too depends on what you want out of them. Sometimes you need a boy in each group(the students I teach are mostly female). Sometimes you need GMs (group members) of the same level, sometimes it helps to mix. Sometimes you don't want those eternal Siamese Friends to work together, other times you don't mind. All sorts of things can come into play - height, colour of hair, size of shoes. For instance, when the weather gets bad and the students come to do Ed drama with me dressed for Arctic conditions, I do a shopping situation where an aggressive shop assistant tries to sell clothes that don't fit/suit the customer. It's much more fun if the biggest person in the group is paired with the smallest, and they have to try on each other's clothes.

A good way to "make" groups is by short activities, not even necessarily language ones. "Stand in a line with the tallest person at one end and the shortest at the other". THEN divide into pairs, threes, whatever along the line - AB AB AB AB...

Someone who has given a lot of thought and energy to group-forming is Paul Sanderson of Pilgrims Language Courses, Canterbury.

30 September 1993 Andy Rouse Hungary ROUSE@BTK.JPTE.HU

• Small groups

I use small groups all the time and find that 3-4 is the best number. Five is OK in a pinch when you have an odd number. Other important items in groupwork is how you place the desks (if you have to use them - tables are better). In a of four students should be placed face to face and side by side so that all the desks are touching. In a of three two students side by side and the third students desk facing the two side by side students. Desk placement I have found is crucial for successful communication.

For placing students in a group, I sometimes use random placement. Random placement is where the students are placed into a group by color coded card or number. At other times I use what I call like interest placement. I'll give the students an activity (*example:* if you like to watch TV in your spare time stand here, if you like to fish in your spare time stand there, if you like to shop stand over there, etc.) I then divide students in to groups from like interest.

30 September 1993 Susan Gaer SusanG2@aol.com

• Group size

I also vary the size according to the activity. The situation dictates the size; discussion requires bigger groups (5+) - especially if we want some sort of sparring and convincing to go on.

Two other things I find useful:

1. Since especially at the beginning of a term we want all student to get comfortable working with everyone in class, I just call out a count, *i.e.* we have 21 students, I'd like groups of three, I have them count out to 7 down the rows. Invariably, some groups end up with a couple of extra people. This is not necessarily a hindrance if...

2. I assign a group leader. After initial hesitancy, even the shyest take on the responsibility of keeping the discussion/assignment going. Errors and overzealousness are just a lesson in directing since this situation lends itself to help me move around without having to direct the groups. I circulate answering questions, activating groups, etc.

30 September 1993 **Ricardo D'iaz** en Provo, Ut DIAZR@YVAX.BYU.EDU

• Small groups

I have found that groups of three work best. Two people don't seem to have enough ideas. With four people, one member tends to not feel responsible. When there are more, no one seems to feel responsible at all, everyone seems to wait for everyone else to say what is to be done.

I have also found that groups work better if I do NOT select the group members myself.

This is true for groups that:

- work for several weeks,
- work on their own (I'm there to help if asked),
- have to do something creative
- and have to hand in a group report at the end.

Before groupwork starts, basic information must be given (usually three classes).

30 September 1993 **LEUSCHNE** LEUSCHNE@DULRUU51.BITNET

• Small groups

I'm a teacher trainer and my students always tease me that my immediate answer to any question is " It depends." For me ideal small group size depends on two considerations: the nature of the task and the size of the whole gr.

TASK BASED

Any task which involves reading or reference to graphs, charts small pictures, etc. Three is ideal, two is OK.

- Tasks which necessarily involve unplanned, communicative oral interaction on individual topics. Three is ideal, two or four OK
- Tasks which involve highly predictably interaction, like filling in an address book or registration form, etc. Three to eight depending on the complexity of the task. You need to balance variety of responses with sheer exhaustion.
- Task which involve reporting back or presenting a creative product to the whole class. Five is ideal. Four is OK. Any more and just the superstars will do all the work. Shyer students will not even be following what's going on.
- Tasks which involve group or general interest topics or debate. Five to eight with an appointed (or elected) leader to give informal report.
- Role plays or simulations work best with the exact number of participants. If the situation is general, like an airplane, it's usually possible to add a passenger or fight attendant. If it's not, sometimes a "minor character" can have two parts. The worst for me is to have one or two too many.

SIZE BASED

- If the class is small, 8-12, much of the work that by necessity needs small groupwork in a larger class can be done by the whole gr.
- If a class is small, groups of three or even pairs are often successful at work that would normally be done in larger groups.
- If an activity needs teacher support it is difficult to handle more than five groups. Six on a good day.
- Unless the "product" to be shared with the whole class is intrinsically interesting or extremely brief, four or five reports is about all I can handle and I have doubts about that many.
- With groups of twenty or more (our groups average about thirty) "chaining" drills and games are best for me if they are done in groups of 8-12. This is also true of many traditional whole class games. If interest is high they can be played again as a championship play-off.

1 October 1993

Diana Gwen Jenkins Williams - CELE jenkins@REDVAX1.DGSCA.UNAM.MX

• Small groups

In our IEP we usually get 15 to 18 students per class. Sometimes we end up with more, but the upper limit is around 25. After that, we tend to split up classes into two sections. When working with groups, class size can make a difference. I prefer small groups with three students, especially for writing classes, where we do a lot of peer editing. For groupwork where students have to prepare a report, the small group size will "force" shy students to participate more.

Overall class size again will influence class time setup with groups because with more than six groups in line waiting for their turn to present their materials many students become impatient, or uninterested in the process.

2 October 1993 **Tamas** FDMARIUS@UCF1VM.BITNET

• Group size

I think, for me, there are different sizes for different activities, not one allpurpose ideal size, but that all of the principles expressed are relevant. It is necessary to be prepared for absences, for unexpected animosities and other causes of group failure, etc. In much of my small groupwork (the on-going group kind), I now find that having class conferences with individual, smallgroup, and whole-group "e-mail" has made a difference in how large a group can be and still get its work done outside of class because (1) it is not necessary to find so much time when all are free and willing to meet and (2) the less talkative are more likely to participate actively. For in-class work, size is more important because of the real-time aspect and the dynamics of face-to-face groupwork.

4 October 1993 Macey Taylor Marie Curie Sklodowska University maceytay@klio.umcs.lublin.pl

• Pair work arrangements

I like [the recent] suggestions for forming pairs, and I wanted to share a method that's worked well for me.

Paste small pictures onto index cards, and cut the cards in half, in a "jigsawy" manner (*i.e.*, curvy, not straight). Mix the cards up, and distribute them to your students. They have to find the person who has the other half of their picture, and do pair work with them. It's very random, and if you have a large library of pictures, it's also fun for students to identify what they've got. (They all know Coke, but few know Harry Truman!)

30 June 1994

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Review

Daniel D. Holt (ed.). (1993) *Cooperative Learning : A Response to Linguistic and Cultural Diversity*. McHenry, IL : Centre for Applied Linguistics and Delta Systems, Inc.

This book, developed by staff members of the Bilingual Education Office, California Department of Education, is divided into two sections. Part I provides a theoretical rationale for cooperative learning (CL) and relates this specifically to second language acquisition and language minority education. Part II looks at the application of cooperative learning at the elementary and secondary levels, and presents five model units prepared by classroom teachers and resource specialists showing the use of CL in language arts, social studies, English as a Second Language (ESL) and history.

(...) In Chapter 2, Spencer Kagan outlines his structural approach to cooperative learning, which involves the systematic application of content-free ways of organising social interaction in the classroom.

Kagan briefly discusses a number of these structures and points out their "distinct domains of usefulness". This highlights the need for teachers to choose structures which reflect their goals at any given stage in a unit. The overview of selected structures on pages 14 and 15 is a useful reference for teachers unfamiliar with cooperative learning, but unfortunately does not include all the structures mentioned in subsequent chapters. Such a ready reference would have been helpful for readers dipping into the book.

In the third chapter, Mary McGroarty reviews current models of second language acquisition and draws parallels between these and the principles underpinning CL. She concludes that research in both areas agrees on the importance of repeated and varied exposure to knowledge and of interaction and negotiation of meaning as a foundation of learning. The flexibility of CL provides a number of advantages. These include preplanning the use of students' first and second languages, varying group composition according to the demands/goals of the task, providing contextual support for verbal learning and making use of informal as well as formal learning methods.

McGroarty also stresses the need for more research into the process of language development in cooperative settings. Teachers are aware that factors such as age, gender, status and ability levels affect student participation in whole-class and groupwork. The picture in culturally and linguistically diverse classrooms is even more complex. A potential shortcoming of the book is perhaps that the issue of developing cross-cultural communication skills has not been addressed more explicitly, although several authors mention the need for team and class building. Some of the activities suggested for this, however, appear (to this reviewer at least) to be culturally very "American," and so may clash with the expectations of students (and teachers) from other cultures. With its emphasis on interpersonal skills and the need to evaluate interaction between learners, CL certainly lends itself to the development of such skills, but the adaptation must be two-way.

In Chapter 4, Kagan and McGroarty further explore the ways in which cooperative classrooms provide an environment likely to maximise both language development and content knowledge. This is achieved through the provision of groupwork involving plentiful, appropriate and comprehensible input in a structured context which requires negotiation of meaning in a safe, non-competitive environment. The cooperative learning principles (positive interdependence, individual accountability, social skill development and the simultaneity principle) all contribute to an acquisition-rich classroom environment in which second language learners receive the support they need from both the teacher and their more proficient peers. While one of the tenets of CL is the value of heterogeneous groups, the authors also explore the use of homogeneous groups to allow learners to work in their first language or to receive instruction specially adapted to their level of second language proficiency without being excluded from the class as a whole. In the second part of the book, several of the units suggest the use of such homogeneous groups to prepare less proficient learners for interaction with their peers.

For language teachers familiar with the linguistic debate on the importance of groupwork (*e.g.*, Long 1989), cooperative structures and "microstructuring" suggest techniques which will maximise interaction within a context of activities familiar in the language classroom. Long's two-way tasks, for example, follow the principle of interdependence, and research into the interaction to which they give rise lends support to the value of cooperative learning for language development. The benefits of optimal access to language and content learning, of course, do not only accrue to the second language learners but to the class as a whole.

In Chapter 5, Corine Madrid illustrates how CL can facilitate limited-English-proficient (LEP) students' learning in three distinct areas : academic content, English language arts, and social skill development. Whether LEP students are from a range of backgrounds or share a common language, cooperative structures are suggested for use either as a single activity or as a sequence over a number of lessons.

The sixth chapter focuses on CL as an effective strategy at the secondary level, where it allows LEP students to maximise the amount of time available for hearing and using language in a low-risk environment. Author Barbara Chips argues that CL can not only provide content support and facilitate productive interaction with peers, but also stimulate students to higher levels of thinking, thus preparing them for academic learning and testing.

As in the previous chapter, the structures and activities presented can be used individually (for example, as a five-minute team builder) or in longer sequences. This flexibility is no doubt intended to assist teachers to familiarise themselves with the techniques and incorporate them gradually into their classroom repertoire. A possible drawback, however, is the perception that the content-free structures are on-off activities which will not be related to a coherent program of instruction and so will remain content-free. In this chapter, for example, Chips presents seven activities designed to develop social skills for teamwork and improve comprehension and oral production skills. She then shows how various other structures can be combined into a unit of work. This sequence, however, seems unrelated to the activities presented in the first section. It might have been more coherent if the author had presented the sequence of team building/social skill development activities and then shown how these same activities could be adapted to fit specific academic content and linguistic objectives in a unit of work.

The final five chapters present model units that use a range of cooperative structures and are designed for classes from Kinder-garten to Grade 10. Three of the models present lesson plans for a sequence of instruction over four days. The remaining two involve three phases which may be extended over a number of teaching periods.

Each model presents a rationale and considerations for meeting the needs of LEP students. There are also details of the instructional setting, a proposed timeline, and the academic, language, and social objectives for each lesson or phase of the unit. This standardised format and the step-by-step instructional plan setting out what both teacher and learners will do generally provides the reader with a clear picture of the proposed activity sequence, although authors occasionally assume familiarity with cooperative structures which have not been explained elsewhere. Thus, although the book lends itself to browsing, for the uninitiated there is benefit in reading it sequentially, as each author provides certain insights and advice which complement the work presented in other chapters.

Cooperative Learning : A **Response to Linguistic and Cultural Diversity** is a clear, practical and easy-to-read introduction to cooperative learning which will be useful to non-language specialists dealing with LEP students in mainstream classes, and also to language teachers for whom cooperative learning provides structures for the creation of supportive learning environments which maximise interaction. The balance between theory and practice will also appeal to practitioners who are not only given an opportunity to see how colleagues have used CL but also a rationale on which to base their own contextspecific adaptations.

Reference

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