Collaborative learning is currently receiving considerable attention in research and teacher communities. What do policy-makers need to know about it?

Co-operative group work, appropriately organised and structured, impacts positively not only on students' learning outcomes but also behavioural and affective outcomes and neuroscience studies confirm that learning takes place through social interaction, according to the OECD's Nature of Learning guide for practitioners (2012).

Well-organised collaborative learning puts students at the centre of learning, constructing knowledge themselves and with others. This group dynamic can make learning more engaging and give students a sense of control over their learning.

One of the principal benefits of collaborative learning is its potential to develop students' transversal skills: social skills, problem solving, self-effectiveness, responsibility, the capacity for reflection and initiative, and learning to adapt to new problems and contexts. Acquiring such skills prepares young people for future social and employment situations.

The OECD has recognised that these skills are becoming important and in 2017 published its first country ranking for collaborative problem solving based on the 2015 PISA results. Despite this evidence, some teachers and policy-makers are unconvinced and do not encourage collaborative learning, seeing it as a distraction from serious learning and knowledge acquisition.

This issue of Perspectives draws on the literature review The changing role and competences of teachers arising from the TeachUP project and online interviews with teachers in Austria, France, Greece, Italy, Poland, Spain and the United Kingdom in preparation for a TeachUP online course on collaborative learning, available later in 2019 in ten languages.

This perspective paper provides some insights from the above-mentioned literature review and the interviews with teachers to inform advisable policy actions.

**BACKGROUND INFORMATION**

There is strong and extensive evidence that collaborative learning has positive learning benefits at low cost. If carefully organised, it can produce learning gains of around five months per year compared to other approaches, according to a meta-analysis of research by the Education Endowment Foundation. It is, however, important to get the details right. Structured approaches with well-designed tasks encouraging talk and interaction lead to the greatest learning gains. It is not enough to just sit students together and ask them to work together.
Unlike traditional lecture-based learning, collaborative learning is a form of learner interaction developed through an interactive, group knowledge-building process. An assumption that people create meaning together and that the process enriches them lies at the heart of this approach.

Collaborative learning is only one group-based learning approach amongst others, notably problem-based learning and cooperative learning. Even though the terms are used interchangeably at times, they refer to three distinct approaches that have developed separately. Each has characteristics it may share with one or both of the other approaches; but all three have differences as well. Common features of all three approaches are: a common task or learning activity suitable for group work, small-group interaction on the learning activity, cooperative, mutually helpful behaviour among students as they strive together to accomplish the learning task, individual accountability and responsibility and interdependence in working together. Cooperative learning is typically viewed as more structured, more prescriptive and more directive about how students work together (e.g. participation roles) than the two other approaches.

Collaborative Learning is an umbrella term for a variety of educational approaches involving joint intellectual efforts by students, or students and teachers together. In most collaborative learning situations students are working in groups of two or more, collaboratively searching for understanding, solutions, meanings, or creating a product, according to Smith & MacGregor (1992). The TeachUP literature review adapts Griffin & Care’s description (2014) of the steps in collaborative problem solving: joint recognition and understanding the nature of a problem; communication, negotiation and exchange towards a plan to address the problem; coordinated action to carry out the plan, monitoring of progress; and, if necessary, adaptation of the strategy.

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Collaborative learning shares similarities with personalised learning (also described in the TeachUP literature review). Both approaches place the student at the centre of learning. The ideas behind the two approaches are not new, but the drive to teach students 21st century skills and use new technologies has renewed interest in them. Effectively organised collaborative learning allows the teacher to spend time on personalized instructions to small groups and individual students. Finally, both are innovative learning approaches that challenge the traditional role of the teacher the sole transmitter of knowledge.

Ideas for policy action

- Define at national level, in collaboration with curriculum designers and educators, the knowledge, skills and attitudes that the integration of collaborative learning in the curriculum should foster, and how collaborative learning activities should take place and be assessed.
- Organise teacher training and resources that address the above aspects of collaborative learning, for example, practice videos filmed in the classroom, teaching scenarios or lesson plans for a range of subjects in both primary and secondary classrooms and concrete guidance for the implementation of collaborative learning in the classroom, including issues related to inclusion and students with special educational needs or disabilities.

Changing roles for students and teachers

If students are to take responsibility for their own learning, some responsibility for learning needs to shift away from the teacher to the students, as also highlighted in the TeachUP literature review. However, creating the conditions for this shift of responsibility is not simply a matter of ‘how much’ freedom or discipline a teacher should ‘give’ students. The teacher should become an organiser of students into communities for a specific purpose: learning. He or she must restructure freedom and discipline within the class, thereby establishing a ‘polycentralised’ collaborative learning community in which the teacher moves to the perimeter of the action, once the scene is set. This approach encourages students no longer to perceive the teacher as the only source of knowledge and information and to take responsibility for their own learning. As Javier Ramos Sancha, one of the teachers interviewed for the online course, said: “I am a guide and also a designer.”
The teachers interviewed for the course emphasised this new role as learning designer. Teachers need to design tasks that ensure that students actually discuss, contribute to the task according to their roles, and achieve their learning goals. They described their new role as guide, moving between groups, giving more personalised instructions and answering questions, and also monitoring and intervening with individual group members, as necessary.

One of the teachers, Elena Pezzi, pointed out that "sometimes you also have to disappear as a teacher to let your students discover by themselves and to make mistakes. The ultimate goal is to become the teacher that makes his students go up the stage to see things from a different point of view, as shown in the famous scene of the movie Dead Poet Society. It is quite a complex role and I can understand that some teachers are afraid of this change."

BACKGROUND INFORMATION

“The culture has to be right. Students have to trust each other. They have to be comfortable speaking out to each other and challenging each other’s views,” according to teacher Phil Spoors. To create this culture he first discusses basic rules of how to work together with his students. During the group work, he reminds individual students of those rules, as students sometimes tend to forget about them.

Javier Ramos Sancha organises a team building session with his students once a month that allows students to get to know each other better: “If you do not know your mates, it is impossible to work with them.”

Idea for policy action

- Organise teacher training that prepares teachers for their new role in the collaborative learning process.
- Encourage schools to plan for time for their teachers to spend on team building activities with their students.
- Establish a support structure or network, directly at the school or online, to which teachers can turn with specific questions while organising collaborative learning.

Challenges related to collaborative learning

There are barriers for teachers to overcome when implementing collaborative learning according to the TeachUP literature review. They include practical challenges, from curriculum coverage and behaviour management to designing a task that both stretches and supports, and professional challenges such as more time needed for preparation, a certain loss of control, the unequal participation of students in the process, or difficulties in evaluating the learning process and the contribution and learning gains of each student.

The main challenge mentioned by almost all teachers interviewed was the fact that implementing collaborative learning approaches is time consuming. With a strict curriculum and examinations at the end of the year, they reported that colleagues hesitated to dedicate time to collaborative learning activities. Another challenge mentioned was to provide the students with adequate learning spaces for group work.

Finally, involving colleagues can also be a challenge: “There are still a lot of teachers at least in Italy who think that a traditional lesson is the best way to teach, as engaging in collaborative learning requires you to rethink your role as a teacher which can be frightening,” commented Elena Pezzi, Italy.

As research shows that collaborative learning provides clear benefits to students’ learning, defining policy actions that support teachers in overcoming these challenges is crucial.

Ideas for policy action

- Advise for schools to plan a block of two lessons or certain longer time slots for teachers to organize collaborative learning activities.
- Encourage school managements to reward teachers’ efforts to organise collaborative learning and to give teachers explicit permission to spend some time on organising collaborative learning tasks.
- Design curricula that leave teachers with the flexibility to expand on certain topics more than on others.
IMPLICATIONS FOR TECHNOLOGY USE IN TEACHING AND LEARNING

Collaboration is rightfully one of the key 21st century skills that students should acquire, as it is engaging, allows students to take responsibility for their own learning and prepares them for their future. However, for collaborative learning to have this impact, it needs to be organised effectively. Both teachers and students need to become acquainted with their new roles and have room to fail and try again. More generally, the TeachUP literature review and teacher interviews suggest the following:

- Teachers need to design collaborative learning tasks in a way that ensures that every student contributes and learns and guide students during this work. As this is a challenging new role for teachers, they themselves also need guidance and the flexibility to experiment.

- One important enabling factor for teachers is time to get to know their students, to organise team building activities and to re-design their learning activities based on students’ feedback.

- Making collaborative learning a key priority in the curriculum can convince both school management and hesitant teachers to dedicate time to collaborative learning activities, if accompanied with a clear rationale.

What the research shows

More generally, research since the early days of technology in schools shows that ICT can:

- Support innovation and new ways of organising learning in time and space;
- Support effective pedagogies, notably active learning, collaboration, project-based learning, independent learning and personalisation;
- Motivate and engage students and help them understand complex concepts, providing them with richer and more compelling learning environments, and improving productivity;
- Support access and inclusion, in particular of students with disabilities, those with learning difficulties, and those from a different language background;
- Help students develop digital age competences, including higher order thinking skills, creativity and digital competence;
- Enable new forms of feedback and assessment, including learning analytics and adaptive learning, games and simulations;
- Make possible activities that would otherwise not be possible for example showing dangerous experiments, enabling collaboration over distance, and involving outside experts;
- Prepare students for life and work after school and to play their part in a society which has transformed the way young people communicate, seek help, access information and learn.

3 key factors for the successful use of ICT in education

1. The school needs to have a positive culture of innovation, reflection and improvement;
2. Technology has to be fit for purpose, accessible and perform reliably;
3. Teachers need appropriate competences and support.

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