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The power of learning through collaboration deserves more attention

Group work may be messy, but it teaches vital skills for the real world that you can't learn alone.

Intan Azura Mokhtar

At the Singapore Institute of Technology (SIT), I teach modules on Social Innovation and Change Management. Both modules involve group work and collaborative learning. Recently, with the conclusion of one of the classes, I received an insightful reflection from one of the students.

"I am (completing) this module with a stronger belief in our ability as students to contribute meaningfully to societal challenges. We may not be policymakers yet, but through structured, human-centred design and effective teamwork, we've shown that youth-driven change is not only possible – it's necessary."

The student shared these comments as part of a task that required a reflection on how the group worked together. The positive response was encouraging, and it was also a reminder that learning isn't confined to solitary study or passive absorption of information. It is a dynamic and interactive process – one that thrives on collaboration.

At its heart, collaborative learning is simple. It's a group of individuals thinking and working together to address challenges, solve problems, understand and negotiate different perspectives.

Whether in classrooms or workplaces – virtual or physical – this method of learning can be a powerful engine for deeper understanding, innovation and personal growth.

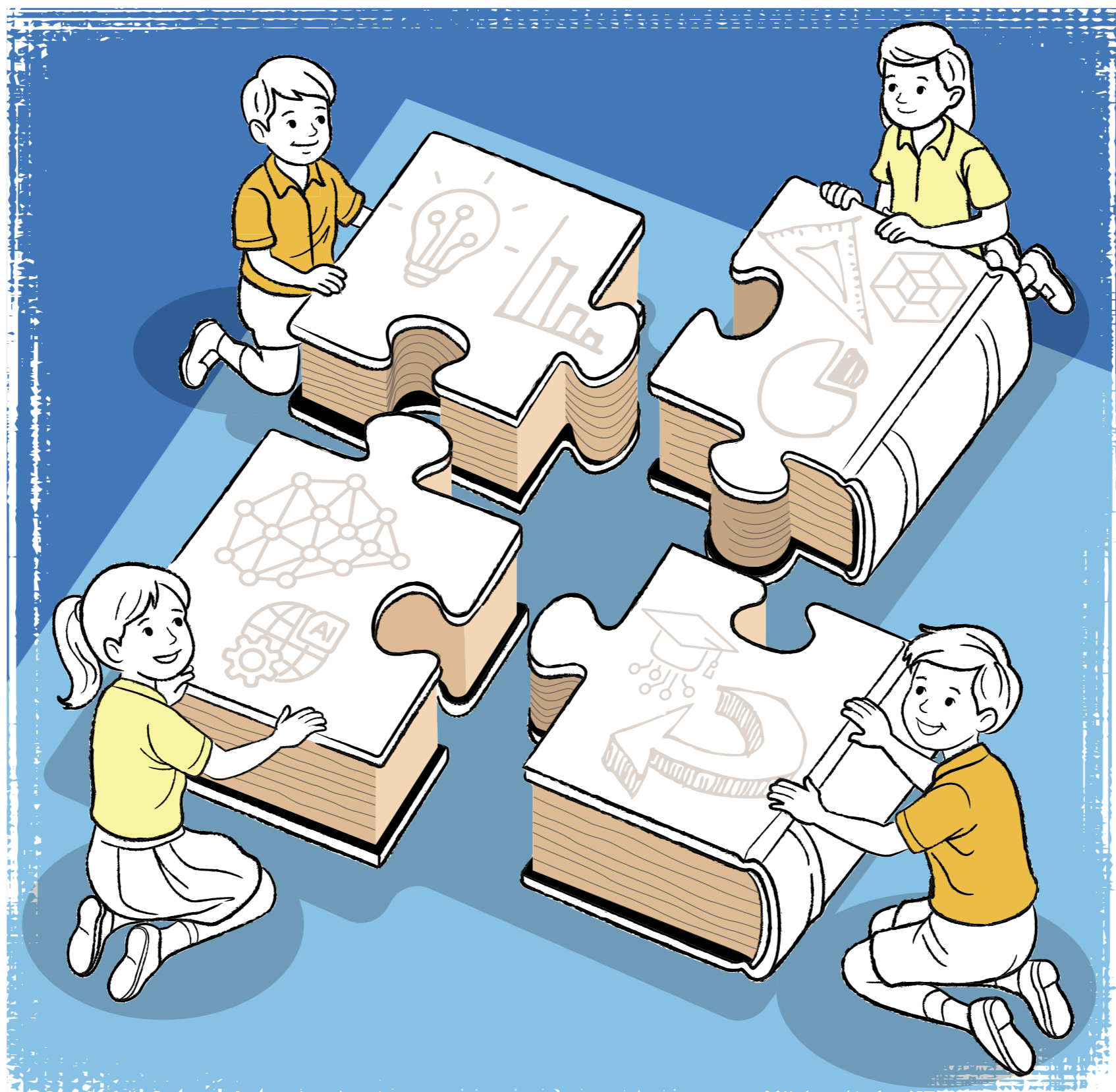
However, to fully harness the potential of collaborative learning, we must consider how we design educational experiences. This means rethinking lessons so they're not just teachers talking and students listening. It requires educators to shift away from traditional lectures and adopt group-based projects that spark students' curiosity.

Institutions need to do more than encourage collaboration – they need to equip and empower the people who make it possible. That means investment and training for teachers to develop and improve the skills to guide students and facilitate teamwork. It also means they should be given the space to design learning opportunities that allow students to experience some uncertainty, and learn from others.

Such experiences help students learn in deeper and more meaningful ways by opening the doors to new perspectives. When the conditions are right, collaboration does something remarkable.

COLLABORATIVE MAGIC

Research shows that collaborative learning enhances critical thinking, information



ST ILLUSTRATION: LIM YONG

School for Humans

retention and motivation. Students learn not just what to think, but how to think – analytically, creatively and reflectively.

Comparative studies between group settings and individualised learning suggest that the former result in better learning outcomes.

For instance, a study in the Philippines involving 5th Grade students compared the effectiveness of collaborative learning with individualised learning in science.

The results revealed a notable difference in post-test scores between pupils engaged in collaborative learning compared with those in individualised learning only.

When students work with their peers, the process of learning goes beyond mere absorption of knowledge or memorisation of facts. They figure things out together, test ideas, and see problems from different angles. This can lead to greater

engagement with the problem and situation at hand, which in turn results in deeper understanding of concepts and a greater ability to apply them.

SHIFT IN HIGHER EDUCATION

Our local autonomous universities (AUs) are increasingly recognising the value of collaborative learning in preparing students for complex, multifaceted careers. There are many examples.

At the National University of Singapore, Design Your Own Course (DYOC) was introduced in 2019 to allow undergraduates an option to co-create learning experiences with their peers and faculty.

Since 2020, the Singapore University of Technology and Design has introduced the Freshmore Curriculum that integrates design thinking, critical inquiry and collaborative problem-solving from the first year.

At the SIT, where I teach, as students are trained to be industry leaders, they are also required to build on skills such as communication, collaboration, interdisciplinary learning, teamwork and reflective practice. This is done through modules

that include critical thinking and communication, digital competency essentials, design innovation and a social innovation project.

Capstone projects in higher education are also feasible platforms for collaborative learning. At many of our local AUs, final-year students work in interdisciplinary teams to address real-world problems posed by industry partners. For example, a team comprising computer science, business and psychology students might develop a mental health mobile application, combining technical development with user experience design and market strategy.

Collaboration has clearly become an integral part of learning in higher education. This signals that it needs to become a bigger part of education in our primary and secondary schools, so as to prepare our learners early.

MAKING TEAMWORK WORK

In Singapore's primary and secondary schools, collaborative learning is implemented through Interdisciplinary Project Work. This essentially involves students working in teams and learning through collaboration to use their

discipline-specific knowledge to address real-world problems.

This could involve students designing inclusive public spaces or proposing climate action plans. For instance, through Project Infinity, students from Hwa Chong Institution worked on projects that connected them with underprivileged children and Vietnamese migrants in Singapore as well as their peers.

However, such project work is not always readily or easily implemented. Despite its distinct benefits, collaborative learning comes with some challenges.

As one educator shared, there remain implementation and assessment hurdles when it comes to project work in schools.

Designing well-planned and integrated tasks is important as this helps ensure relevance and contributes to the overall learning objective. One challenge is ensuring that assessment strategies support the overall learning objective.

Unequal participation, groupthink and assessment difficulties are also common concerns.

For instance, some groups may have members that are quite reticent and who do not contribute much to the group project. In other scenarios, there

may be team members who tend to dominate discussions, resulting in others just following and being less involved.

However, these issues can be mitigated through thoughtful design and facilitation. Assigning clear roles, incorporating peer evaluations and feedback, and including structured individual reflections help ensure accountability and a fairer, more inclusive learning experience.

Educators must also create safe spaces where diverse voices are valued, and constructive disagreement is accepted. Collaboration should not mean consensus at all costs – it should be a process of respectful negotiation, accepting different perspectives, finding common ground and experiencing shared growth.

The mechanism for peer evaluation is an important tool in collaborative learning, such as reducing the risk of "free-riding" in group work.

When students know their group members will evaluate their contributions in the group, they tend to participate more actively and responsibly.

This is why schools and institutions must back teachers with the time, training, and resources to design and manage collaborative projects effectively. With the right support, educators can turn these challenges into opportunities, helping students not just learn, but learn together in ways that prepare them for the real world.

REAL-WORLD RELEVANCE

The benefits of collaboration extend far beyond the classroom. In professional settings, teamwork is the bedrock of innovation. Cross-functional teams bring together individuals with varied expertise to tackle complex challenges.

In research, interdisciplinary collaboration often leads to discoveries and learning that transcend the limitations of a single discipline.

Singapore has its Smart Nation initiative, for example. The development of smart technologies and solutions – from urban mobility to digital healthcare – has been driven by collaboration among government agencies, institutes of higher learning and tech companies, as well as ordinary citizens.

On a global scale, we have seen collaboration at the heart of innovation and finding solutions. Take Google, for example. By bringing together the Chrome and Android teams, the company created a seamless experience across mobile devices, something users often take for granted.

As we prepare students for an uncertain future – one marked by rapid technological change, global volatility and complex societal challenges – collaboration will be more important than ever. It is not just a pedagogical strategy – it is a mindset, a skill set and a way of being a more empathetic and connected human being.

Learning with and through others reminds us that we are stronger together, and that the best ideas often emerge not from individual brilliance, but from collective effort.

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• School for Humans is a new January opinion series that aims to deepen the conversations around education and highlight the human forces at the heart of teaching and learning.