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**Implementing collaborative learning in a  
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## **1. Introduction**

Social constructivists such as Lev Vygotsky have widely written about how people learn by being with others (1986). It is in a continuous interaction with peers and teachers that learners progress at a pace and level that they would not attain on their own. In the context of higher education in China, where lies the Foundation course in Art and Design discussed in this essay, learners are young adults who need to confront their ideas and opinions about their projects, and it is in group that they will be able to discuss and evaluate them at any stage. However, unengaged and untrained students to social and collaborative skills may feel limited in a Western learning environment that continuously practices argumentation and evaluative reflection.

Over nine months of study, the possibilities given by collaboration through scaffolded cooperative activities are vast and should aspire to produce confident, independent critical thinkers prepared to cope with their future UK bachelor. For that, strategies need to be implemented, tested and evaluated to “provide opportunities for students to think collectively, co-constructing knowledge and understanding and solving problems collectively” (Mercer, 2013, p.159). Therefore, the rationale of this essay is to present a pedagogical approach suitable for the Foundation course that would promote effective group work. In the first part, social constructivist theories and concepts advanced by Vygotsky and succeeding researchers will be introduced, as they underpin the pedagogical approaches of cooperative and collaborative learning exposed in the second part. The scaffolding of group activities in a medium-term planning will be suggested and, in the third part, recent examples of my own practice will come to support the theories discussed. The last part will reflect further on how cooperative learning could lead to collaborative learning in this context, highlighting opportunities and constraints. Collaboration can be successful in promoting meaningful learning when rightly planned and taught as this essay will attempt to demonstrate.

## **2. Theories and pedagogical approaches underpinning collaboration**

From the perspective of the theorist and social constructivist, Lev Vygotsky (1986, p.36), “the true direction of the development of thinking is not from the individual to the social, but from the social to the individual”. Thus, students need to engage socially with others in learning environments that enable collective thinking, as an intermental activity, given that social interactions can influence the development of individual cognition, one’s intramental capabilities (Mercer, 2013, p.149). Vygotsky proposed a link between both processes, the former implying an external interaction with the social, cultural or material environment while the latter is an internal psychological process of acquisition and elaboration (Illeris, 2003, p.398). According to Mercer (2013, p.155), students can first “acquire new useful information and successful strategies” from each other by being together, which will later allow them to jointly construct new ideas better “than any of them would have devised alone”, in a process that will at last transform each individual’s capacities as “the experience of group discussion could transform the nature of subsequent individual reasoning”. Thus, through significant group work planned by the teacher, students would be “encouraged to ask questions, give explanations, explain themselves to another person” (ibid, p.157), which builds their own confidence and skills over time.

Based on Vygotsky’s model of cognitive development (1986), logical thinking is closely related to language, as it is where reflection and elaboration of experience take place at a personal and social level. Thus, when

discussing how social interactions assist knowledge development, Mercer (2013) refers to the 'social brain', the brain's social function, and insists on how language mediates the relationship between individual and collective thinking, therefore advancing the importance of spoken dialogue and group work in the classroom. For these joint activities to succeed, a respectful exploratory rather than disputational talk between students is needed (Khong et al. 2017), with its "reasoned justifications and equitable distribution of conversational turns" (Mercer, 2013, p.161) rather than its competitiveness and lack of constructive criticism. In higher education, there are even more reasons to require classroom talk to be exploratory as, at this level, it should be characterised by critical thinking and the comprehension of complex ideas (Atwood et al. 2010). As such, oracy skills, as a range of oral communication skills, need to be explicitly taught to enable students to become effective speakers and listeners, as they are often assumed to be well-established by their teachers (Mercer et al., 2017; Heron, 2019).

A pedagogical approach that comes to support talk in an environment where teachers and students collaborate would be the notion of 'dialogic teaching' (Alexander, 2008), where the amount and quality of dialogue is brought forward. Social interactions, whether in one-to-one, small groups or with the whole class, would be all oriented towards a teaching that is collective, reciprocal in the way teachers and learners listen to each other, supportive, cumulative when building in each other's ideas, and purposeful by planning with specific educational goals (ibid., pp.37–38). Further, to create this effective learning environment, a teacher "needs to know not just the content, but the nature of students' everyday thinking and difficulties related to the content" (Taylor and Lelliott, 2015, p.255), enabling connection between prior knowledge and new learning (Myhill, 2006). It is also crucial to acknowledge contextual factors, such as class size, language or culture, as Chinese students may struggle to express themselves in English or see disrespectful to disagree and ask questions, which may inhibit the use of dialogic talk (ibid., p. 263).

By reflecting on classroom relationships, Vygotsky introduced, in *Mind in society* (1978, p.86), the concept of *the zone of proximal development* (ZPD), as the distance between the actual developmental level of a student that works independently and his/her level of potential development under adult guidance or working with more capable peers; the latter level of assistance being temporary to allow the former to go beyond existing capabilities, to improve and endure. This call for cooperation between teacher and student could lead to a different concept closer to collaboration, *the intermental development zone* (IDZ), in which teacher and learner "negotiate their way through the activity in which they are involved" (Mercer and Littleton, 2007, p.19). This two-way relationship linked to dialogic teaching is more horizontal in the process and could even lead to joint activities among peers. It could also be underpinned by the Social Interdependence Theory (SIT), in which Johnson (2003, p.940) states that cooperative efforts depend on "the presence of clear, positive interdependence that results in promotive interaction" between learners. As such, as seen in this first part of the essay, social constructivist theories and the concepts that they emphasise, underpin educational approaches such as cooperative learning and collaborative learning, which will be further explored in the second part.

### 3. Cooperative and collaborative learning through scaffolding strategies

The complementary notions of 'cooperative learning' and 'collaborative learning' are widely used in education and their differences need to be elicited before discussing pedagogical strategies and activities. According to Topping et al. (2017, p.6), cooperative learning enhances a more structured group interaction oriented by the teacher at a higher or lesser degree while collaborative learning is spontaneous, flexible and usually initiated by the students. The former fits the needs of formal education while the latter is more relevant for open-ended, nonfoundational knowledge, defined by informal education. It seems that one would lead to the other, as if the degree of structuring would progressively vanish when seeing an improvement in students' interactions. Cooperative learning is thus the prelude towards collaboration and it needs to be planned accordingly in the medium term through a contingent scheme of work and in the short term through effective lesson planning.

Topping et al. (2017) also note that it is rather difficult to expect an authentic collaboration between peers if they are not first trained in social and collaborative skills, such as "accepting opposing viewpoints, giving elaborate explanations, providing and receiving help, and negotiating" (Le et al., 2017, p.110). To ensure a progression from cooperation to collaboration, the term 'scaffolding' as a teaching strategy of 'assisted performance' coined by Wood et al. (1976), would enable learners to work within their range of competence and be helped by someone more knowledgeable in tasks that they would otherwise not be capable of doing on their own. In reference to Vygotsky's ZPD concept, being scaffolded by tutors or peers will allow students receiving a temporary supporting structure until they build expertise, confidence, and "begin to regulate their own actions as the tutor gradually reduces guidance, resulting in *fading* of scaffolding" (Reiser and Tabak, 2019, p.47). Scaffolding students in their learning with dialogic teaching will progressively create a collaborative environment in which exploratory talk will be embedded in group discussions and tutorials at a level that would have not been possible to attain at the beginning of the academic year.

To attain this collaboration, strategic interventions and careful scaffolding need to be implemented in the course's scheme of work, with phases of contingency, fading, and transfer of responsibility, as suggested by Van de Pol et al. (2010). In the first months – the *contingency* phase – teachers would have the responsibility to adjust their support to students' level and train them to acquire the social skills sought. Diagnostic strategies could be put in practice in the first weeks "to determine the student's current level of competence" (ibid., p.275), which would later help to anticipate teaching approaches in tutorials and group activities. In the next months of the course, in the *fading* phase, teachers would start withdrawing their scaffolding, for some students sooner than for others as "the rate of fading depends upon the child's level of development and competence" (ibid.), and in the last months, there would be a *transfer of responsibility* phase as students would take increasing control on their learning as they would be given minimal instruction. Parallely, as creative projects share the same phases, from concept and research to experimentation and realisation, scaffolding could be applied at a lesser scale within a project, teachers being more supportive in the first weeks as ideas emerge and then students being more independent in the last weeks as they are more in control of their practice.

Following this contingent plan, a set of general skills need to be prioritised to expect a progress on learners' level of development and competence in group work. Firstly, teachers would build up students' oracy skills, valuing the use of key vocabulary and training their questioning skills while creating a supportive environment, where ideas can be shared safely and one's confidence grow adequately (Heron et al., 2021, p.13). Secondly, they would develop learners' capacity for critical reflection in an iterative process, by practicing early on the skills of reflection and metacognition, starting by learning to reflect on goals through relating and reasoning, to later allow them to develop self-analytic evaluation on their own projects and experiences (Coulson and Harvey, 2013). In learning to improve their critical reflection abilities, students would also learn to develop social responsiveness by identifying with others and reflecting critically on their work (McNaughton, 2016), thus leading to peer review. Thirdly, and closely related to the specificities of the Foundation course addressed in this essay, students would be taught the stages of a creative project and the technical skills needed to produce it, as Kirschner et al. (2006, p.79) argue that learners should "be explicitly shown what to do and how to do it" through clear instruction when dealing with novel information. An extensive scaffolding with instruction and guidance at the beginning would definitely facilitate students' learning in creative skills, techniques and processes that would help them to be more critical towards their practice and those of others later on.

The scaffolding at the right pace and level of these three main skills would be repeatedly carried out throughout the course with a set of teacher-led cooperative learning activities. For an effective implementation, Johnson and Johnson (1999, p.81) have defined five basic components such as "positive interdependence, individual and group accountability, face-to-face promotive interaction, appropriate use of social skills, and group processing". To this list, Topping et al. (2017, p.9) added that groups should be small to allow a better interaction and that the tasks or learning goals implemented should be suitable for group work. For teachers, improving cooperation could also mean becoming a facilitator who monitors the students' learning process while building up their self-esteem; training them to self- and peer assessment while providing feedback on their interventions; paying attention to the beliefs and instructions that one conveys as teacher while considering the learning environment resulting from such posture (Black and William, 2010; Loh and Ang, 2020). Therefore, it seems now essential to conceive the educational approaches discussed here through practical examples of my context as teacher.

#### **4. Testing cooperative learning activities in context**

In our Foundation in Art and Design, the nine-months scheme of work is based on a project-based learning approach (PBL), on a succession of four to five creative projects, of one- or two-months duration each, that increase in difficulty and student autonomy over time. In the final major project (FMP), a three months project at the end of the course, responsibility should be totally transferred to the students, trained to exploratory talk and effective feedback. It is not always the case as different factors, well listed by Loh and Ang (2020), constrain the implementation of cooperative learning, such as teachers' competency, students' level of engagement, effective group formation, the course environment with its class sizes and tutorial-based curriculum, as well as the cultural differences between Chinese and Western approaches. However, due to

Covid-19, we had to tutorise small groups of four students in separated rooms, which gave me the possibility to test different cooperative activities to enable group discussion and peer review.

The first two examples took place when the students were writing their statement of intent (SOI), which is a project proposal for their FMP. At first, I implemented the 'snowball technique', in which cooperation scales up from pairs to a larger group. Students were asked to read good written proposals of previous years and define what were the strengths, first alone, then sharing their findings in pairs and finally with the group. These exemplars helped them to understand learning goals as they made "explicit what is required, and they defined a valid standard against which students can compare their work" (Nicol and Macfarlane-Dick, 2006, pp.206-207). The next day, based on this first activity, students were asked to write what their project was going to be about, to later explain it to the others in a 'listening triad'. One presented, while two others were questioners, acting as teachers by seeking clarifications through a set of criteria, and the fourth student was the recorder, writing what was said on post-it notes. Roles would change after thirty minutes and I would intervene to summarise what was said and indicate improvements to be made. This second activity required a higher level of social skills, as to develop exploratory talk with joint reasoning, "there must not only be a sense of trust and common endeavour but also a shared understanding of how to engage in a productive discussion" (Mercer and Dawes, 2008, p.61).

Both cooperative activities worked well, as mutual understanding and shared cognition between the four members of the group allowed interaction. As exposed by Van den Bossche et al. (2006, p.502), the teams had "a shared commitment toward the task at hand (task cohesion), the belief that they need each other for dealing with this task (interdependence), the belief they will not be rejected for bringing in new meanings (team psychological safety), and the belief that the team is capable of using this new information to generate useful results (team potency)". Ideally, in this framework, the group becomes "truly committed" and an effective dynamic is created (Johnson and Johnson, 1999). As a teacher, I have started the activities stressing out clear goals to later enable self-assessment as "it is very difficult for students to achieve a learning goal unless they understand that goal and can assess what they need to do to reach it" (Black et al., 2003, p.49). Thus, both activities were complementary as the first one reflected on the aspired goals through exemplars considered "a concept of quality" by the teacher (Sadler, 1989, p.121) and hence by the students. This led each student to compare it with what they had written and monitor their own work accordingly to reduce the performance gap. In the second activity, they would show the result to their peers and expect constructive feedback on the answer given, to later improve it.

There is a third cooperative activity that has always worked successfully when done in small groups, which I repeated recently, and that could be named 'peer assessment with a feedback grid'. Students working on creative projects need constructive and supportive feedback at its different stages and it is useful to ask them to present few slides of a Power-Point on the development of their project and let their peers assess it. Following a Design thinking method, when the presenter talks, the other students are asked to fill in a grid with four quadrants; the likes or what works well in the project; the criticism or what should change; questions to ask and, at last, ideas to suggest. Sadler (2010, p.539) points out that the feedback that deals with

strengths, weaknesses and guidance for improving future works is “expository and didactic”. Thus, they all listened to the presentation and wrote down their feedback on post-it that they later placed in the grid. To encourage further thoughtful reflection, the presenter could ask a question to the peers to orientate part of the discussion. Similarly, it was useful to let the presenter quickly read through the written feedback received and choose one comment in a post-it to discuss in more detail with the others. At the end of the activity, they were all asked to do a written evaluation in their sketchbook about the feedback received and their answer to it through plans to action, as although “feedback is mainly retrospective, it has a prospective orientation as well” (ibid., p.538), leading towards project’s self-monitoring. This type of peer review activity teaches students to provide and receive feedback, showing that “self-regulation applies not just to cognition but also to motivational beliefs and overt behaviour” (Nicol and Macfarlane-Dick, 2006, p.202).

Cooperative activities as those presented here are not always easy to handle for students as the skills of peer collaboration need to be acquired progressively, as it is not always evident to listen to a peer, understand the project’s meaning and give constructive feedback. It is also a challenge for teachers as they need to reduce the dominance of their talk, act as facilitators by summarizing, reformulating and asking questions, while measuring their students’ ability and creating a learning atmosphere that is positive to all. Coming back to social constructivist approaches, students learn from each other in a group that will later have an impact on their individual learning as it has been shown, for instance, through peer-assessment activities as it helps to later “develop the objectivity required for effective self-assessment” (Black et al., 2003, p.52). However, to constitute a strong learning community, these three group activities engaging students in specific tasks in the last months of the course should rather be considered in the first months when cooperative learning needs to build its foundations, as it would be too idealistic to expect attaining collaborative learning without testing these strategies in the first place.

## **5. Towards collaborative learning: opportunities and constraints**

Laal and Ghodsi (2012, p.486) define collaboration as “a philosophy of interaction and personal lifestyle where individuals are responsible for their actions, including learning and respect the abilities and contributions of their peers”. Different from cooperative learning, collaborative learning is totally student-led, in situations where students take full responsibility of their learning, which has always been a pedagogical goal to attain in the last months of the Foundation course. At a higher degree of self-directed practice, it could lead to voluntary group talks organised by the students inside or outside the classroom where the gatherings and management of the activities would be done without teacher’s direct supervision. These group discussions would ultimately show that “giving space in the classroom to developing students’ ability to work with each other can be beneficial for all” (Roberts, 2016, p.51).

Before the FMP, I could see these learning communities appearing informally with small groups of friends, which led me to suggest to a high-achiever student, critical thinker and young leader who was creating positive dynamics around her, to lead optional group discussions every Thursday after class to then encourage others to exchange ideas on social issues. Suddenly, collaborative learning would take place and, this time, my role was rather to empower that student by building her confidence in leading this type of

activity. Cups of tea and chocolate were given to those present to create an informal atmosphere and ground rules of exploratory talk (Khong et al. 2017) were reminded to exchange ideas respectfully. I assisted the lead student in the first session by only asking some questions to reactivate the debate, but the second time I did not say anything and observed her leading them from outside the discussion circle, and the third time I was not even in the room. This could also fit, at a smaller scale, with the three phases of scaffolding by Van de Pol et al. (2010) exposed earlier. In this collaborative activity, students would usually pick a topic to discuss and some would start with a statement while others would listen, react and learning to “engage in a context that offers possibilities to learn from others’ preferences and viewpoints by knowing that there are different viewpoints” (Van den Bossche et al., 2006, p.496).

Nevertheless, there have been several factors hindering collaborative learning in the Foundation, the firsts being contextual. The first external constraint is the surrounding environment, as it is a service-based tutoring centre where the main interaction advanced in the curriculum are one-to-one tutorials between teacher and student, focusing on individual performance rather than group work. The second constraint is cultural, as most of Chinese students lack the social skills and attitude expected by their Western teachers along the course. Based on Tweed and Lehman’s study (2002, p.96), the Socratic and Confucian learners differ in *where* to find knowledge, whether “within the self” for the former, leading towards greater questioning, evaluation and self-direction, or from “outside the self” for the latter, relying on the collective and its recognised worthy masters. As such, Western and Chinese students’ need for autonomy when learning may not be at the same level, which opposes self-directed tasks to more structured tasks, student-centred learning to teacher-centred learning (*ibid*). Le et al. (2017, p.116) also emphasise that in Asian countries, students may want to avoid criticism and disagreement when working in a group as it may affect interactions negatively, which confirms how social and cultural contexts are factors not to be neglected, even less in the first months of the course.

Apart from the context, students themselves can also be the cause of ineffective collaboration. Besides a lack of social and collaborative skills, language barriers may hinder interaction. Heron et al. (2021, p.11) point out that while tutors highly value “the construction of students’ disciplinary knowledge” focusing on cognitive skills such as asking questions, reasoning, critical thinking and debate, students learning in a foreign language may place a greater importance on linguistic accuracy as well as the social and emotional dimension of their learning. Chinese students with a low English level may not feel confident enough in their oracy skills, which may in turn inhibit discussion and critical reflection. Another obstacle to collaboration that comes from students is their level of engagement and maturity, because “if they choose to remain passive in their learning, the quality of CL is deemed to be ineffective” (Loh and Ang, 2020, p.30). Group interaction can be impeded by free-riding, with some peers contributing more than others; or by competence status, with low-status peers feeling inhibited by more competent peers (Le et al., 2017). At last, teachers are another main reason for ineffective collaboration. Besides being unaware of the importance of teaching collaborative skills, badly-designed group activities can have a negative impact on effective learning by not considering the group size, the planning of a lesson or the learning tasks addressed (Kutnick, 2011). Professional development (PD) could then be a solution advanced to equip teachers with the necessary knowledge, skills

and confidence to adapt CL activities to their context (Loh and Ang, 2020), thus minimising the impact of all other constraining factors. Further reflection on how to teach collaboration online given the consequences of Covid-19 on Chinese education would also be beneficiary to assure students' progression under any circumstances.

## **6. Conclusion**

Despite the proposal made along the essay, the cooperative activities as those presented earlier were stopped by interpretations of curriculum requirements, while the group discussions led by the students were hindered by Covid-19 outbreaks' restrictions, both highlighting how these learning methods in any education context can be shattered, no matter their effectiveness proved. However, a strong advocacy for the benefits of group work, when adequately planned and implemented, should not be interrupted here, even less when one as a teacher is convinced of their positive impact on students' learning progress. Empowering students with social and collaborative skills will not only enhance academic, affective and social development, but will also be valued as life skills in their future employment contexts (Mercer et al., 2017; Heron, 2019).

When reflecting on the social pedagogy of learning, "it is vitally important to consider what is being taught, but it is equally important to consider how it is being taught and the social context within which the teaching takes place" (Kutnick, 2011, p.172). It is this reflection that I have attempted to develop along the essay by demonstrating, as reflective practitioner, that it is possible to scaffold collaboration and let it be transformative for both students and teachers. My personal theory of learning has been sharpened by the pedagogical approaches and activities exposed here, through which I believe that it is by providing teachers, not just as individuals but as teams, awareness and framework on what effective teaching is and could be that a lasting change will be possible.

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