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Pre-service teachers' perceptions of collaborative learning at university: A repeated cross-sectional study

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This study explores how a group of pre-service teachers in the second year of a pre-service teachers masters program - the Postgraduate Master of Education (PME) - understood and practised collaborative learning (CL). Conducted over a six-year period (2015-2021), the study used semi-structured interviews (n=14) and surveys (n=100) to shed light on students' experience of collaborative learning in one 5 ECTS credits module (ED6341), taking account of their previous experience of CL, and their perceptions of CL as it emerged during the group work component of the module. The results indicate that the attitudes of students to CL were largely positive, despite the challenges they recognised. In particular, the study considered students' understanding of (1) the challenges of CL; (2) the benefits of CL; (3) the authority of faculty members.

Introduction

Despite the reforms in Irish Education at Junior Cycle level, the Head of the OECD's education division, Andreas Schleicher suggested that Ireland's educational system is still based on a 20th century model of learning and that it 'needs to modernise to avoid producing "second-class robots" in a world of rapid technological change' (O'Brien, 2021). Schleicher pointed out that Irish education places too much focus on transmitting knowledge and not enough on enabling students 'to think outside the box'. A key challenge for schools then is to enable students to think for themselves, but how is this to be done? On the one hand, this ideal seems to propose a highly individualist learning objective, but, thinking for oneself may ironically require a strategy of learning together. Alluding to Ireland's focus on literacy, Schleicher observed that just 15 per cent of Irish 15-year-olds can distinguish fact from opinion in a reliable way. He went on to ask: 'what value is literacy if you can't navigate ambiguity? If you can't manage complexity?' To address these concerns, there may be a need to promote more collaboration among teachers and more collaborative learning (CL) practices in classrooms. If this is to happen, learning to work with others in collaborative groups ought to begin in concurrent (undergraduate) and consecutive (postgraduate) teacher education programmes (for details of these two routes to becoming a post-primary teacher in Ireland see Teaching Council of Ireland, n.d.).

Taking this step will not be straightforward. The Irish second level system at Leaving Certificate at senior level (ages 16-18 years) (see National Council for Curriculum and Assessment, 2009), in contrast with the New Junior Cycle at junior level (12-15 years) (see Department of Education & Skills, 2015), stresses individualist learning outcomes, a factor found in many European countries (see Schleicher, 2021). Because of this individualist target, bright and well-motivated students can resent the company of other students who might present as loafers. 'Hell is other people,' once remarked the philosopher Jean-Paul Sartre (1944), and this sentiment is endorsed time and again by individualist learners who

want to achieve high results. One wonders why custom and practice still supports group learning when it simply contradicts the model of 'teacher-centred transmission-of-information' (Smith & MacGregor, 1992). Granting authority to students to engage in group work can be hard work for teaching staff if learning outcomes seem already governed by individualist learning norms.

Could a change to teacher preparation programs then be possible? Not without a battle, it seems. In their study of CL in pre-service teacher education, Ruys et al (2010) surveyed 16 teacher training institutes, 120 teacher educators and 369 student teachers in Flanders and found that, in general, student teachers do not value CL as much as other learning experiences, that their self-efficacy while engaged in CL is only moderate. Because CL was only implemented once in a while during their teacher preparation programs, participants did not feel that they had received adequate training in the use of CL. Similarly, Weinberger & Shonfeld (2020) conducted a study to investigate the willingness of Israeli student teachers to use CL in their own classrooms and concluded that commitment to this form of learning was tangential at best. They recommended a more robust theoretical study of the strengths and weaknesses of CL in their teacher education programs. Kaendler et al. (2015) suggested that any such initiative would require a particular study of student interactions in CL sessions. One considerable obstacle to achieving this, however, is the view, suspected rather than proven, that CL is an unnecessary complication and that group settings would be as much a hindrance as a help to learning achievement (Kagan, 1995).

Teacher beliefs is another obstacle, sometimes related to the concept of unfairness. Duran and Miquel (2019) and others (Fernández et al., 2012; Galton & Hargreaves, 2009; Kagan, 2005; Sharan, 1994) have noted that while a great deal of research on CL exists, 'implementing it in the classroom is still fraught with difficulties and resistance, regardless of the geographic or cultural framework.' At university level, such factors as fear of the unknown, anxiety on the part of students to replicate what the lecturer thinks rather than sketch out what they themselves might think, recognition that in most institutions the lecturer is also the examiner, all present important obstacles to authorising public forms of learning such as CL. Students are reluctant to drift far from the lecturer's words due to hard-wired assumptions about stable knowledge and individualised grading norms.

Research shows that the effectiveness of CL in educational practice depends on the pedagogical behaviour of teachers (Gillies, 2004; Gillies & Boyle, 2008; Meloth & Deering, 1999; Veenman, Kenter, & Post, 2000). In preparing teachers for successful implementation of CL, professional development is crucial (Brody & Davidson, 1998; Lunenberg & Korthagen, 2005). A contribution can be made at the levels of in-service and pre-service teacher education (Cohen, Brody & Sapon-Shevin, 2004; Hornby, 2009; Ishler, Johnson, & Johnson, 1998; Veenman et al., 2002). Teacher educators can successfully model the behaviour they expect from their students (Loughran, 1996). They can develop new teaching and learning methods associated with the social constructivist approach of CL and give these a prominent role in the education and training of student teachers (Niemi, 2002).

As group work is rarely a feature of university teaching, it is not surprising that most of our students had never experienced collaborative learning as part of their university coursework or received a group mark as part of their university assessment. How then would they respond to engaging in a CL module specifically designed to promote collaboration? Before addressing this question, we needed to ask how group work operates, since CL seems to require a very particular kind of methodology.

Group learning: Cooperative or collaborative?

The literature does not make any clear distinction between cooperative learning and collaborative learning, even though some distinctions have lately begun to be accepted (Smith & MacGregor, 1992; Laal & Laal, 2012; Barkley et al., 2014). Smith (1996) reviewed the definition of cooperative learning he had earlier shared with Johnson and Johnson (1991b), namely, ‘the instructional use of small groups so that students work together to maximize their own and each other’s learning’ (Smith, 1996). This definition highlighted the importance of students learning together in baseline social units or groups (Smith, 1996). It claimed that greater productivity would result, and that more caring relationships with fellow learners would arise from these learning contexts as compared with individual learning contexts. Such groupwork would be more likely to achieve an increased competence in social interactions, thanks to the public character of the learning process itself. In turn, this would lead to higher self-esteem (1996). Cooperative learning, Smith (1996) insisted, does not consist of students merely sitting side by side doing their individual assignments; it is not a device to allow one student to do the work while all the rest do little or nothing; and it does not advocate that students who had already finished a task would help other students finish theirs. Instead, cooperative learning sets in place a culture of positive *interdependence* which requires students to work together to complete the task. But what does this *interdependence* mean in practice?

We agree that cooperative learning, as distinct from CL, tends to follow a jigsaw approach (Aronson et al., 1975, 1978; Jigsaw Classroom, n.d.). This means that each member of the group is responsible for a ‘piece’ of the final product (Johnson & Johnson, 2009 cited in Sawyer & Obeid, 2017). Hence cooperative learning demands more systematically structured planning where the learning is plainly scaffolded and where roles and procedures of work within the group are clearly set out. The jigsaw method can easily revert to and is compatible with individualist learning outcomes. It is a type of half-way house where the learning can divert through a non-autonomous or ‘semi-autonomous’ interlude, to use terms from Bruffee (1987). Barkley et al. (2014) hinted at this interlude when they defined CL as ‘two or more students labouring together and sharing the workload equitably as they progress toward intended learning outcomes.’ In contrast, as cited in Sawyer and Obeid (2017), Dillenbourg (1999) and Bereiter and Scardamalia (2006) suggested that CL follows a more ‘self-managed’ strategy in the pursuit of learning outcomes. It is clear that learning outcomes according to this insight cannot be merely individualist. They reflect the contribution of group discussion and further a form of learning that is more ‘self-managed’ than ‘directed’ from the teacher. Could there be a

place here for learning to map back to the individual learner's stage of development in the spirit of a Piaget or a Vygotsky (see Sawyer & Obeid, 2017)?

From the perspective of structure, cooperative learning as distinct from CL is identified by a set of tightly managed processes designed to help individuals interact with each other to achieve a specific purpose (see Flannery, 1994). In cooperative learning, students assume roles and perform the function assigned to them in the group, while their performance is continually monitored by the teacher so that it focuses on the objectives of the activity. Despite the appearance of self-managed learning, the stance of participants is one of 'receivers of knowledge' and 'receivers of direction', albeit by means of a method that is more active than simply listening to instruction. In this way, the teacher rather than the students 'retains control over the knowledge to be mastered and the atmosphere or climate of the classroom in which the mastery takes place' (Flannery, 1994).

In CL environments, by contrast, change is evident in two areas, namely, the role of knowledge, and the role of the teacher's authority (Flannery, 1994). Here learning outcomes are not guided by hierarchical authority and are more uncertain. CL learning outcomes subvert traditional models of transmissive teaching (Smith & MacGregor, 1992; Bruffee, 1995) by establishing learners as 'creators of knowledge' (Flannery, 1994). CL then has 'its home in social constructivism, which assumes that knowledge is socially produced by consensus among peers' (Barkley et al., 2014). As CL challenges the traditional nature and source of knowledge, it begs the question, what is knowledge in this context?

Knowledge, according to Bruffee (1984) is 'an artefact created by a community of knowledgeable peers constituted by the language of that community.' In their small collaborative groups, which Bruffee would call 'a community of knowledgeable peers' or 'transition communities,' students are given the opportunity 'to practice and master the normal discourse exercised in established knowledge communities in the academic world' (Bruffee, 1984) through a process of 'constructive conversation,' in which they talk together and reach consensus (Bruffee, 1995). In this way, CL group members construct knowledge and/or justify beliefs collaboratively by:

challenging each other's biases and presuppositions; by negotiating collectively toward new paradigms of perception, thought, feeling and expression; and by joining larger, more experienced communities of knowledgeable peers through assenting to those communities' interests, values, language, and paradigms of perception and thought (Bruffee, 1984).

From their experience of traditional learning environments, however, the majority of learners come to university classrooms with an expectation of teacher-directed instruction, with lecturers presenting themselves as fonts of knowledge, as 'sages on the stage.' As Bruffee (1999) pointed out, 'students who have previously excelled in competitive individualistic schooling' can very often resist CL. They can feel aggrieved when they learn that traditional mechanisms of control and authority have been replaced by mechanisms that favour group over individual work, cooperation over competition, and student-

centred over teacher-directed learning (Flannery, 1994). Notwithstanding these high ideals in CL classrooms, lecturing, listening, and note-taking still live alongside students' active engagement with the coursework (Smith & McGregor, 1992). Teachers still maintain 'an authoritative instructional presence' (Flannery, 1994), as they define the external parameters of group work and assessment in keeping with course learning outcomes and professional standards. Teachers still design intellectual experiences for students - 'as coaches or midwives of a more emergent learning process' - but less as transmitters of knowledge steering students towards a pre-defined outcome (Smith & MacGregor, 1992). In this sense, CL teachers are far from obsolete, but their role has changed from both 'sage on the stage' and 'guide on the side' to facilitators who enable students to create knowledge. Both teachers and students share this excitement as searchers of knowledge. Together they become 'a community in search of knowledge' (Barkley et al., 2014). Bruffee (1987) identified three background ingredients to ensure 'autonomous collaboration' in such groups:

- a willingness [on the part of the teacher] to grant authority;
- a willingness [on the part of students] to take on and exercise authority;
- a context of friendliness and good grace.

It is relatively easy for CL to lose its sparkle and to fall back upon deadened patterns of group learning, particularly if learning objectives remain stubbornly individualist, or if the group is highly competitive. If lecturers scaffold the group conversations too closely and intervene too frequently, as they may have to do at second level or in primary school, then students will take the hint and subvert the possible autonomy of their own group so as 'to psych teachers out and give 'em what they want' (Bruffee, 1995). On these occasions, students will attempt to extract from the lecturer 'the correct answer' to the group task and/or the assignment question, and when it is not forthcoming, they can often revert to comments such as 'we're paying enough money for this course, we expect you to give us the information' or 'you're not telling us the answers because you don't know' or 'this module is a waste of time.' When this happens, as it can, teachers must be brave and single-minded to pursue the ideal of autonomous learning. If teachers become concerned about showing 'their ignorance' either way, they normally revert to narrower learning and teaching behaviours.

Methodology

Context

In view of Pasi Sahlberg's review of Irish teacher education (Sahlberg, 2012), an innovative module was designed for the new Postgraduate Master of Education (PME) (2014) entitled *Collaborative Learning: Contemporary Issues in Irish Schools* (ED6341) (for details of the contemporary issues chosen for the module see Discussion and analysis below). The module was intended to model CL in the context of a largely individualised educational system. Initially, the module stood out as clearly anomalous and required facilitating certain skills and practices that were completely novel at first and gradually became established as the course unfolded. One of the learning outcomes of the module

was for the collaborative skills acquired in the module to be further applied to the pre-service teachers' practice in school.

The opportunity to 'practice' is in keeping with the insights of Cochran-Smith (2005) and Darling-Hammond (1996, 2013) who contended that 'to be effective in collaborative work, future teachers need opportunities to practice and learn about shared decision making, communication and planning' (Nevin et al., 2007). For this to happen, however, it implies that teacher educators 'should model the collaboration that teachers are expected to acquire' (Nevin et al., 2007).

Research design

A repeated cross-sectional study was chosen to capture the experiences and attitudes of three cohorts of students taking this module to CL over a period of six years, in three phases with a two-year interval between each phase: 2014-2015, 2017-2018, and 2020-2021.

Research questions

The following questions guided the study:

1. What was the participants' perception of group work?
2. How successful (from their perspective) was group work in the context of the Collaborative Seminar module?
3. What (from their perspective) did participants learn about conflict management and groupwork as a methodology for use in post-primary school?

Sample

Participants were pre-service teachers who agreed to be interviewed after the two-year course of initial teacher education study had been completed and assessment finalised. Purposive sampling was employed to identify interview candidates in order (1) to capture a variety of perceptions across a range of abilities and personality types; and (2) to ensure gender balance in the interviews. On the latter point, we found it difficult to recruit, and in one case to retain, male students. This resulted in a smaller cohort of male participants to the percentage of female participants (4/10). The age of participants ranged between 23-35 years.

Data collection

Surveys (n=100) from the three phases of the study were distributed at the end of the module to three PME class groups (n=120 per class group) - in person (pre-Covid) for phases 1 and 2 of the study (2014-2015 and 2017-2018) (average response n=40) and online during Covid lockdown (2020-2021) (average response n=20) - to gauge more generally students' perceptions of collaborative learning. The surveys (see Appendix 1) contained 8 items and utilised a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A comment section after each item, including a comment box at the end of the survey enabled students to write further comments and/or suggestions if they wished.

Interview data were collected from fourteen pre-service teachers: from the class group of 2014-2015 (n=3), 2017-2018 (n=5), and 2020-2021 (n=6). As per the research design, participants received the same semi-structured, open-ended interview questions in each of the three phases of the study (see Appendix 2). Interviews were designed to collect attitudinal information about the respondents' experiences of CL. The interviews of between 50-60 minutes were fully transcribed and checked for accuracy, reliability, and validity.

The interview guide was structured in three phases according to Seidman's *Three-phase qualitative interview* (1998). The first phase, 'Focused life history' enabled respondents to put their current experiences of CL into the context of any previous experiences. The second, 'Details of experience' led them to reconstruct their experiences within the context of the collaborative seminar module. And the final phase, 'Reflection on the meaning' encouraged participants to reflect on the experience of CL within the module as it related to themselves personally, in what they learned about themselves personally and professionally, and how they felt about using CL in post-primary schools. The researchers were particularly interested in knowing about (1) pre-service teachers' previous experience of CL; and (2) their perceptions of CL as it emerged during group work as an integral part of their coursework.

Data analysis

Data were analysed using thematic analysis. Codes were generated and clustered into categories out of which three themes emerged: (1) the challenges of CL; (2) the benefits of CL; and (3) the authority of faculty members. The use of peer debriefing throughout all stages of the research process established validity and trustworthiness.

Ethics

Ethical approval was granted by the University's Social Research Ethics Committee. The study was guided both by the University's *Code of Research Conduct* (revised 2021) and BERA's *Ethical guidelines for educational research* (BERA, 2019). Records and data management were in keeping with the University's Research Data Management Policy and the General Data Protection Regulation (the 'GDPR'). Data were anonymised and confidentiality was extended to all participants. Consent was sought to use interview and survey data.

Discussion and analysis

In their bi-weekly CL groupwork sessions students practised working together on a scenario that used a problem based learning (PBL) methodology, which was not graded (see Appendix 3 for one example). Every second week after week 1, one or two school-based teams would address the group on how their school team confronted a contemporary issue, namely, (1) Inclusion (Wk 2); (2) Pastoral care (Wk 4); (3) Arts in education/Creativity (Wk 6); (4) Student voice (Wk 8); (5) Leadership of learning (Wk10); and (6) The effective school (Wk11); while every other week students worked in groups to discuss and form a group report on scenario-based learning (SBL), the guest speaker

inputs, and assigned reading for the contemporary issue under discussion. At the end of each of the five group work sessions, four groups were randomly selected using an online *Random Name [Group] Picker* (Wheel of Names, n.d.) to make a formal presentation on the group's findings to the larger PME class group (n=120 students) (see Wiener, 1986).

The data indicates that the majority of pre-service teachers were accustomed to working as individuals, and that for some, the collaborative seminar was their first experience of working collaboratively for assessment in a group. For these students in particular, the switch from individualist to CL assessment caused particular anxiety, given that the overall grade depended on the requirement to pass both elements, that is, the individual and the group assignments. Following feedback from the first phase of the study (2014-2015) when group work was weighted more heavily than individual work, this weighting was reversed, and we finally weighted individual assessment at 60% and group work assessment at 40%.

Furthermore, after the first phase, we opted to base the collaborative groups (n=20 groups of 6-7 students per group) on their weekly PME tutorial groups to ensure that students would know at least one or two other students in their newly formed collaborative group.

The challenges of collaborative learning

Several sub-themes emerged from the data under this theme including, among others: (1) group composition; (2) group assessment; (3) social loafers; (4) reluctance to participate in groupwork; (5) dominant voices; (6) groupthink; and (7) conflict within groups. For reasons of space, the section below focuses briefly on three sub-themes, namely (1) group composition, (3) social loafers, and (5) dominant voices.

Group composition

Interview participants from the three phases of the study spoke about the challenges of CL. They felt anxious about the group composition which had the potential to affect working relationships positively or negatively, and consequently the quality of work produced for the group work reports and terminal group assignment. The corresponding survey data indicated that 67% of respondents felt anxious on hearing about the collaborative seminar module before it began. The feeling of anxiety recounted here from the interview data is characteristic of a typical response:

I was a bit wary because I was wondering who was going to be in my group. And with some you would have an assumption going forward about who's going to pull their weight and who's not, who's going to turn up to lectures and who's not. That's what I was thinking about. (P6)

Students recognised not only that something of a cultural change would be needed for collaboration to work but they had no clear idea how they might bring about this cultural change in themselves. Given that most students come to the collaborative seminar module

with an almost exclusively traditional experience of classroom authority, they have to learn, sometimes against considerable resistance, to grant authority to a peer instead of to the teacher (Bruffee, 1987).

The method of merging two PME tutorial groups (3 students from one tutorial group and 3 students from another) and assigning students to groups alphabetically by surname was received favourably by the majority of students, as noted here by one interview participant:

The tutorial mix was very effective. It was really well done because we weren't going in blind. We had people we knew, and it provided us with an environment where we were able to have some sort of familiarity, and where we were not just thrown into the unknown. It's jarring enough to be introduced to a new module, a new concept, and having to do group work with people that you don't even know. (P17)

Social loafers

The survey data indicated that 15% of respondents experienced the presence of social loafers in their groups, and that 9% were dissatisfied with the attendance of some group members. Although a relatively small percentage, the interview data highlighted nonetheless the negative effect of loafers' non-attendance and non-engagement on other more committed group members. The angst experienced emanated from the perceived benefits these individuals were thought to receive in terms of a mark for very little or no work at all in the groupwork and/or terminal group assessment. This sentiment is noted here from the survey data:

It would not be fair if those who did not contribute to the group work still receive the marks when they didn't even bother to attend. (S18)

Anxiety ranked high especially for high achieving students who felt they had more to lose than lower achieving students in terms their overall grade, which reflects current research (Meijer et al., 2020; Oakley et al., 2004). Significantly, the interview data showed that such students generally took charge of the group work to ensure that their identity and high grades would not be tainted or compromised in any way. One such high achieving interview participant noted the following:

As a high achieving student who always wants to get top marks, I am always very apprehensive about group work. In my undergraduate degree I purposely picked modules that allowed me to work by myself. And so, definitely, I was quite apprehensive about this module. I suppose I was very concerned about who was going to be in my group. Once I had seen the names of the people who were in my group, I knew that there were at least three others that were very like me, and they wanted a good result. So, I wasn't too worried. (P14)

The interview data revealed how high achieving students assessed other group members in relation to their own high standards. As noted below, the high achieving student

attempted to combat the perceived weaknesses in other group members by reshaping the collaborative group work element as a more predictable cooperative group work structure:

I would say that each week there were four of us out of seven that very solidly did the readings for the group work. To be honest we didn't get ourselves too worried about the others who didn't have it done for the simple reason we started to divide into subgroups. We always put those who hadn't done the reading with someone who had, which meant that each part of the group report always had good literature to back it up. We took a similar approach with the group assignment. Look, I suppose, we could have said something, but to be honest, we didn't want to make or cause any conflict. We were aware that some people are quite happy just to pass and they aren't bothered about doing the readings. (P14)

In the above excerpt, the interview participant applied a jigsaw learning method (Aronson et al., 1975, 1978) to her collaborative group. As illustrated, each jigsaw-group became a 'temporary expert group' as it worked independently on 'a piece of work.' When the bigger group of seven convened, the pieces of work were duly patched together and tweaked to form a response to the 'collaborative' group task and/or terminal assignment. It has been our experience that in the initial stages of working in a group many groups adopt a jigsaw approach on the assumption that it leads to a better grade for the groupwork.

Another interview participant discussed how his group referred identified social loafers to the 'Group Learning Contract', which was a document outlining the behaviours expected of each group member, and which they had initially signed in the first week of the module. This strategy corroborates Felder & Brent's view that students should formulate and set down a set of team standards and expectations, signing it, and making copies for themselves to be submitted to the module coordinator (Felder & Brent, 1996).

To solve the issue of non-attendance of some group members, the contract, which was signed at the beginning of the year, was addressed. This contract was fundamental because the procedures that needed to be followed were clarified here. The members were contacted, and the issue was discussed amongst us. Afterwards the attendance of all members improved. Collaborative learning in this instance allowed us to resolve the issues in a friendly manner and no further action had to be taken. (P8)

To minimise the occurrence of group conflict, another interview participant spoke about the skills her group had learned and practised enabling them to minimise conflict while at the same time confronting group members in a respectful manner:

I have learned through conversations and discussions with my group members that everyone will not always contribute equally or show up to lectures. While this can be frustrating for students that attend weekly and work on their tasks, I have learned how integral it is to deal with this professionally so as to minimise conflict while also confronting the situation in a respectful and understanding way. (P11)

Of the interview participants who spoke about social loafers, many referred to the predominance of certain male students whose infrequent attendance caused anxiety for

other group members. A similar finding was made in a study by Kugihara (1999) which showed that females tend to loaf less than males, and that male effort suddenly declines when the work profile changes from an individual to a collective setting.

Dominant voices

The issue of dominant voices in collaborative group settings also emerged as an interesting sub-theme across all the interviews, with one interview participant recounting how some of his group members preferred individuals to dominate because this mimicked traditional authority structures:

When an individual dominated, people liked it. That's a bit of a weird thing to say. But people like having direction. (S28)

On the other hand, another interview participant highlighted that group members in his group were susceptible to groupthink (Janis, 1971). He noticed how points of view went unchallenged and without critique owing to time constraints, fear of conflict, and fear of disrupting the consensus-building that featured in the group:

At times there did seem to be a hint of herd mentality to the CL tasks, and this would be one drawback of the CL experience. At times, a group member would offer a view and rather than critiquing this insight, most members tended to agree instinctively. As well as time constraints, possible reasons for this were the fear of group conflict or disturbing the interdependence and team ethos that was present. (P7)

Despite the fear of conflict noted in this excerpt, disagreement and resolution are integral to CL, as noted by Peter Hawkes, cited in Wiener (1986):

the CL teacher is interested in the way the students come up with their consensual answer, the rationale for that answer, the opportunities for debate among groups, the suggestion of how knowledge in a discipline is arrived at rather than in leading students toward an already acknowledged 'right answer'.

By comparison, to counteract the potential for groupthink, another participant spoke about the appointment of a devil's advocate who would put forward an alternative view:

There was often the odd disagreement. We let the debate happen. Every week we asked someone to be the devil's advocate in order to put a spin on it and to put another view forward. Every week there was one person there who was to disagree with what the group was saying in order to avoid groupthink. (P13)

Wiener (1986) stated that students' 'commitment to CL' has to be based on 'a desire to confront the traditional view of knowledge'. If it is not confronted, then students cannot claim to have successfully engaged in CL.

The benefits of collaborative learning

Interview participants from the three waves of the study spoke about the benefits of group work which according to the survey data appeared to outweigh the negatives of learning collaboratively. Compared to 9% of respondents who indicated that they did not enjoy CL, 58% of respondents noted that they enjoyed the experience (with 33% remaining neutral). When asked if they preferred the traditional mode of lecture delivery to working in a group, 31% responded negatively and 31% responded favourably with 38% remaining neutral.

Many interesting sub-themes under this theme emerged from the data including: (1) the importance of knowing other participants in the group; (2) the opportunity to become a group leader; (3) learning from the guest speakers – experts in the field (principals/deputy principals); (4) learning from peers; (5) learning about myself; (6) learning new skills for working with others; and (6) learning about the CL methodology for use with senior cycle post-primary students in particular. We highlight two sub-themes here, namely, (2) the opportunity to become a group leader; and (6) using a CL methodology in school.

An opportunity to become a group leader

Having the opportunity to become a group leader each week piqued the interest of many participants across the six years of the study, especially the idea of democratic leadership, as noted in the following response:

This module has demonstrated to us that, when implemented effectively, CL has the capacity to cultivate higher-order thinking through the vehicles of dialogue, inclusive practice, democratic leadership, diversity of thought and self-reflection. (P2)

The module enabled students to acquire the skills to become a leader through the practice of such skills which is in keeping with the insights of Cochran-Smith (2005) and Darling-Hammond (1996, 2013) on the need to practice and learn about 'shared decision making, communication and planning':

Naturally, dominant voices will emerge from any group so the goal of the leaders should be to encourage all voices to have an equal say within the tasks given. This can also be said for dealing with members who are quieter and not contributing as much for whatever reason. A strong leader will be able to prepare a strong group and consider the qualities of inclusion, wellbeing, effectiveness, and creativity amongst other members. (P5)

As noted in this excerpt, the role of the group leader was pivotal in promoting a more inclusive group structure.

Collaborative learning in post-primary school

Interview participants across the three waves of the study agreed that CL should be part and parcel of teaching and learning at post-primary school. 87% of respondents from the

survey data stated that the methodology works well with junior students when it is implemented in a structured way with the majority of respondents noting that CL is at the heart of the New Junior Cycle specification and learning outcomes (for information about the New Junior Cycle, see *Curriculum online*, National Council for Curriculum and Assessment, n.d). One needs to set this view however against Bruffee's opinion that at best only semi-autonomous learning can take place among teenage students who have been enculturated into individualist learning practices (Bruffee, 1987). Moreover, all respondents who commented on the Leaving Certificate curriculum mentioned that the CL methodology would not work. Of the interview participants who discussed this issue, one participant stated that the rigidity of the current Leaving Certificate examination – the terminal high stakes examination in the final year of post-primary school – does not lend itself to learning collaboratively or fostering critical thinking skills but reverts instead to patterns of rote learning:

It's an awful pity that the Leaving Cert doesn't lend itself more to learning collaboratively. It's very rigid and to be honest, there isn't too much scope for higher order thinking or anyone's opinions. (S66)

This observation is in keeping with Andreas Schleicher's (2021, cited in O'Brien, 2021) criticism of the Irish education system, the view that the current Leaving Certificate program does not enable students to think outside the box or to manage ambiguity.

The authority of faculty members

The issue of the authority of faculty members is mentioned in the literature on CL and surfaced more in the anonymous surveys than the interview data. Since CL requires 'an authoritative instructional presence' (Flannery, 1994) with copious planning, preparation and expert guidance, there is an assumption by some students that lecturers are not doing their job when they 'refuse' to present themselves as the 'sage on the stage' or even 'guide on the side' in the university lecture hall. Despite our high level of planning which was noted by 87% of respondents (with 13% remaining neutral), some additional comments in the survey data highlight the annoyance of some students who would have preferred to have learned through traditional methods of teacher-led instruction than work with other peers in baseline social units or groups.

However, under indicators set down for Level 9 programs, in accordance with the requirements of Section 7(a) of the *Qualifications (Education and Training) Act* (Government of Ireland, 1999), students are required to demonstrate competence in handling unpredictable learning contexts – 'Act in a wide and often unpredictable variety of professional levels and ill-defined contexts' – and to 'Take significant responsibility for the work of individuals and groups; lead and initiate activity' (see *National Framework of Qualifications: Grid of Level Indicators*, Level 9) (Quality and Qualifications Ireland, 2019).

A drawing from the survey data (S9), illustrates the expectation of one such pre-service teacher who believed that the two authors should have continually presented weekly lectures to the students instead of wasting time 'watching' them do group work.

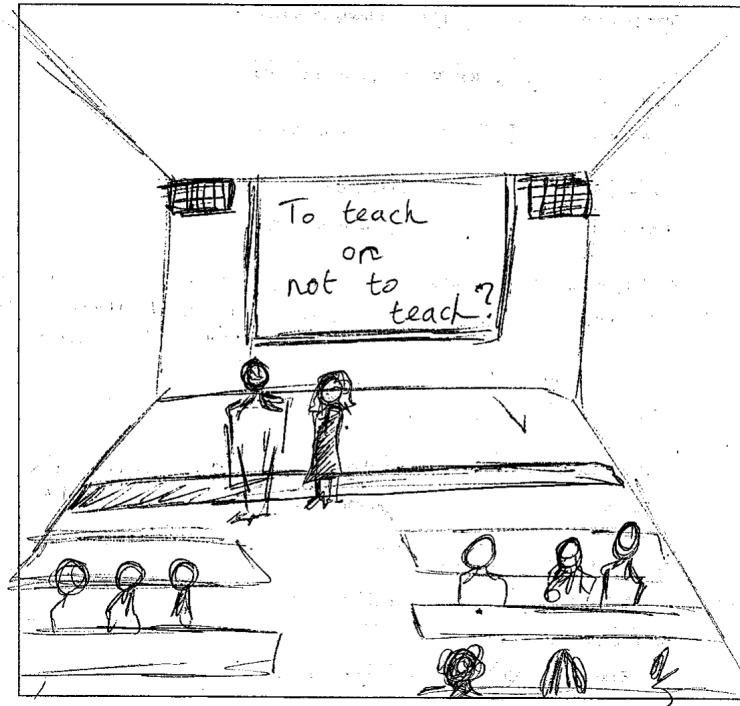


Figure 1: To teach or not to teach?

Four anonymous comments from the surveys also complained that the lecturers had abrogated their responsibility to tell them what to write:

Why aren't you like the other lecturer who tells us what to write. (S33)

Tell us what you want in the individual assignment as it is very confusing. We're not mind readers. (S86)

When we have a rubric we have the security of knowing that we can give you back the right answer. (S25)

Just give us the info and let us go. (S99)

The above comments show how these students valued the lecturer's input over any other form of knowledge. The students needed the security of being told 'what to know' and 'how to give it back'. They showed an understanding of knowledge as a fixed content in the lecturer's head, thus contradicting the autonomous model of knowledge promoted in CL. An essential feature of CL is for students to work out the required knowledge for themselves. Usually this requires the exercise of their judgement and the development of new knowledge in response to a task. Bruffee highlighted the importance of the interpretation of learners and the potential for creative and imaginative thinking that arises from collaborative work when he stated:

collaborative learning places students working in groups on their own to interpret the task and invent or adapt a language and means to get the work done (Bruffee, 1987).

The issue of providing students with a rubric that outlines how to ‘answer’ the assignment question correctly was picked up by two interview participants. Both participants agreed that rubrics ‘spoon-feed’ students by directing them to what to write and how to write, that they lessen the creative potential of students, and that they give an unfair advantage to students who write up assignments the night before they are due:

Compared to other assignments there was a bit more to think about in the collaborative learning assignments. It wasn’t like, this is what you do. I know for one assignment we were told: “you must write this, you must write that.” It’s really broken down for you. I think some people wanted it that way so that they knew they were doing everything right. I think people just wanted to be spoon-fed and that was it really. (P12)

I disagree with spoon-feeding at Level 9. I don’t agree with any rubric at Level 9. You’re at Masters’ level. You need to figure it out. I think there is a certain cohort of students who because of their secondary school experience and the undergraduate experience want to be spoon-fed. I think it actually gives an unfair advantage to people who are doing their assignment the night before. And I think the whole point of university is that you can be creative and have something to add. Sometimes it works, sometimes it doesn’t. But that’s the learning experience. (P13)

The views held by the two above interview respondents correspond to that of Torrance (2007; 2012; cited in Panadero & Jonsson, 2020) who stated that giving students explicit criteria can turn their attention away from productive learning to a narrow focus on ‘criteria compliance.’ Torrance believed that the ‘core aspiration of education should be on students’ autonomous thinking rather than on the convergent thinking produced by transparency in assessment processes and criteria’ (Torrance, 2007; 2012). The desire to find the ‘right answer’ is, as Sahlberg (2009) notes, the product of an education system where-students are ‘educated out of creativity’. He goes on to say that three of the most complicated barriers in education are ‘competition, standardisation, and test-based accountability’ which prevent the development of creative knowledge, skills, and habits of mind. We concur with Sahlberg when he states that as they age, young people have less courage to try other ways of thinking. The more they try to avoid being wrong, the less they learn to think for themselves. For change of this order to happen, Sahlberg noted that the three most enabling factors are ‘collaboration, risk taking and learning to be wrong’. These three features are also integral to CL.

Conclusion

This study began with the presumption that students who are used to individualist learning patterns can learn how to think and learn collaboratively, even if early attempts to do this will not always be successful. The dominant view of learning in our schools attempts to match an overly objective view of knowledge (i.e., facts) to an overly subjective view of the self (the sovereign ego) (Long, 2022). To soften this procrustean match, CL highlights the negotiated character of knowledge and sets out to value thinking

'outside the box'. Lecturers and teachers could take the lead by developing genuinely CL outcomes for their subject areas. In a society of major distractions and fragmented attention spans, such as our own, we need to learn ways to develop an understanding of knowledge that resists muffled obedience to authority figures or public personalities. Think of what an important contribution that would make to society.

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Appendix 1: Survey

1. I enjoyed the Collaborative Seminar

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

2. I prefer the traditional mode of lectures to group work seminars

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

3. Classes were well prepared and organized

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

4. I felt apprehensive about this module when I first heard about it

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

5. There were no social loafers in my group

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

6. Attendance of group members was excellent at all times

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

7. There were no dominant voices in my group

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

8. Collaborative Learning works well at Junior Cycle

Strongly disagree Disagree Neutral Agree Strongly agree
☐ ☐ ☐ ☐ ☐

Comment _____

9. Any other comments and/or suggested improvements

Appendix 2: Interview guide

Focused life history

- During your time at university were you ever involved in a module like the Collaborative Seminar?
- When you heard about this module, were you apprehensive on hearing that there was going to be group work involved and that your marks would depend on the group working together?
- Would you have preferred if this module had been delivered in a more traditional manner, such as lectures, note-taking etc.?

Details of experience

- Can you tell us about your experience of CL in this module? Can you name one successful experience and one unsuccessful experience?
- Did you experience any learning surprises during the group work sessions?
- What was your opinion of the six contemporary issues? Were they broad enough? If you were to drop a contemporary issue, which one would you drop and why? Have you any suggestions for new contemporary issues?
- Some research suggests that CL encourages learners to learn by encouraging them to engage verbally and to share insights (Gillies, 2006, p. 273). Would this have been your experience of the module's group work sessions?
- How should the collaborative seminar groups be organised? By the weekly tutorial group? Random selection? Were students content or not to be in a collaborative group with half of their tutorial group?
- Did group members have different roles every week?
- Did group members like having a leadership role when they were the leader that week?
- What was your view of the 'Group Learning Contract' which groups formulated at the beginning of the module? Did it help or not?
- How did your group approach the group task? Did the group have a method?
- Did everyone have a voice to speak? Were there any dominant voices? Any silent voices? How were these managed?
- Of the five problem-based scenarios, which one in your opinion worked best and why? Was there any task that didn't work as well? Why not?
- What role did pre-reading the assigned articles play in making a group meeting successful?
- How did you evaluate the difference between the contribution of those who had read the material and those who had not?
- Did you have a favourite reading? A least favourite reading? Would you change any readings? Why/ Why not?
- What would motivate a group member to come to a group meeting?
- What would demotivate them?
- Were there freeloaders in your group? If so, how did you psychologically adjust to freeloading? How did the group manage? Did it do anything? If so, what did it do? If not, why not?

- Did every group member write up a group report? How was it negotiated among group members?
- Was the bi-weekly group report edited by other group members or did the sole responsibility lie with one individual?
- How did it feel to be the one who had to write the group report?
- Did you use social media to communicate?
- Did you experience any conflict in your group? If so, how was it managed?
- How did the group respond to getting a group mark as part of their overall mark?
- What are your thoughts on rubrics?
- Why did some students want the lecturer to tell them what to write in their individual and group assignments?
- Why were some students annoyed when the lecturer didn't tell them what to write?

Reflection on the meaning

- Did you learn anything about yourself and the way in which you relate to others in a group setting?
- Did you learn about any of the following: leadership skills, problem-solving skills, working as part of a team, time management skills, communication skills, presentations and report writing skills, self-reflection, learning how to manage different opinions, learning how to manage freeloaders, learning how to manage yourself, or anything else?
- Would you consider a collaborative method relevant for your teaching subject in school?
- Would you consider a collaborative structure more appropriate at junior or senior level or both?
- Would you like to say a few concluding comments or remarks? What you thought about the experience overall, whether it was positive or negative or mixed, and any suggestions for the future?

Appendix 3: Example of collaborative seminar scenario

Contemporary issue No. 3: The arts in education /creativity

You have begun a new post-primary teaching position on a full-time contract for the next 12 months. As part of your brief, you have been requested by the Deputy Principal to lead a subject planning meeting. You have been asked to persuade the teachers at this meeting to use more creative and imaginative approaches in their teaching to aid and enhance pupils' learning. It was mentioned in passing that a small cohort of senior teachers who will be present at this meeting are resistant to change. They prefer to use the 'chalk and talk' method, which they have been using for years, and which they believe is a 'tried and tested' approach. As they prefer to have silence in their classes, they have complained on numerous occasions about the noise levels in adjacent classrooms where teachers are using active learning methodologies. The senior teachers are of the opinion that active learning methodologies are nothing more than a distraction in teaching and learning.

1. How would you negotiate this situation with the teachers who are resistant to change in line with the Deputy Principal's request? What would you do?
2. Define creativity. How is it fostered in teaching and learning?
3. What are the benefits of using creative approaches and methodologies in teaching and learning for pupils? For teachers?
4. What investigations need to be carried out in relation to the senior teachers' concern over noise?
5. How will you convince the senior teachers of the importance of creativity in education?
6. What creative approaches have you used in your own teaching?

In your collective response, refer to the assigned reading and the guest speaker inputs on this theme.

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