EMPIRICAL STUDY

The Two Sides of the Same Coin: Analyzing the Implementation of a Lesson Study from the University's and School's Perspectives



María-Elena Gómez-Parra 1 & Cristina Muñoz Aranda2

¹University of Cordóba and ² Nelson Mandela School, Spain

RESUMEN (Spanish)

La participación en un proyecto internacional suele erigirse como una oportunidad, más aún cuando la colaboración escuela-universidad es un plus en el proyecto. DICO+ es un proyecto internacional financiado por la Agencia Nacional Francesa en julio de 2018 (ref. nº 2018-1-FR01-KA201-047904) y coordinado por la ESPE de Bretagne. El objetivo principal de DICO+ es desarrollar prácticas cooperativas innovadoras en sus clases, basadas en la experimentación del enfoque Lesson Study (LS) a través de 70 escuelas europeas (ambas, de Educación Primaria y Secundaria), con 1800 profesores en los 7 países involucrados en la asociación: Francia, España, Lituania, Países Bajos, Rumanía, Italia y Hungría. En este capítulo se analizarán los puntos de vista de la Universidad de Córdoba y del colegio Nelson Mandela sobre la implantación de una unidad de LS durante el curso 2018-2019. El proceso de implementación (antes, durante y después), la participación del equipo de LS en la formación del profesorado, el colegio, los alumnos y los padres son algunos de los elementos bajo la lente de esta comparación, cuyos resultados son considerados positivos por ambas partes (es decir, UCO y colegio Nelson Mandela). Este estudio pone de relieve la fructífera colaboración escuela-universidad, cuyas observaciones finales afirman que el desarrollo estratégico de este tipo de asociaciones debería proliferar entre los sistemas educativos, ya que el impacto potencial es previsiblemente positivo en muchos ámbitos.

PALABRAS CLAVE

Lesson Study. Implementación; Análisis comparativo, Universidad: Colaboración

ABSTRACT (English)

Participation in an international project usually stands as an opportunity, even more when school-university collaboration is a plus in the project. DICO+ is an international project funded by the French National Agency in July 2018 (ref. no. 2018-1-FR01-KA201-047904) and coordinated by the ESPE de Bretagne. The main aim of DICO+ is to develop innovative cooperative practices in their classes, based on the experimentation of the Lesson Study (LS) approach across 70 European schools (both, from Primary and Secondary Education), with 1800 teachers in the 7 countries involved in the partnership: France, Spain, Lithuania, The Netherlands, Romania, Italy and Hungary. This chapter will analyse the University of Córdoba's and the Nelson Mandela school's viewpoints on the implementation of a LS unit during the 2018-2019 academic year. The process of implementation (before, during and after), the LS team participation in the training of the schoolteacher, the school, students and parents are some of the elements under the lens of this comparison, whose results are considered positive by both sides (i.e., UCO and Nelson Mandela school). This study highlights the fruitful school-university collaboration, whose final remarks state that strategic development of such partnerships should proliferate among educational systems, because the potential impact is foreseeably positive in many areas.

KEYWORDS

Lesson Study; Implementation; Comparative analysis; University; School; Collaboration

RÉSUMÉ (Français)

La participation à un projet international représente généralement une opportunité, α fortiori lorsque la collaboration école-université est une valeur ajoutée dans le projet. DICO+ est un projet international financé par l'Agence nationale française en juillet 2018 (réf. n° 2018-1-FR01-KA201-047904) et coordonné par l'ESPE de Bretagne (France). L'objectif principal de DICO+ est de développer des pratiques coopératives innovantes dans les classes du consortium, en s'appuyant sur l'expérimentation de la méthodologie de la Lesson Study (LS) à travers 70 écoles européennes (enseignement primaire et secondaire), et impliquant 1800 enseignants dans les 7 pays engagés dans le partenariat : France, Espagne, Lituanie, Pays-Bas, Roumanie, Italie et Hongrie. Ce chapitre analysera les points de vue de l'Université de Cordoue et de l'école Nelson Mandela (Espagne) sur la mise en œuvre d'une unité de LS au cours de l'année scolaire 2018-2019. Le processus

MOTS-CLÉS

Lesson Study; Implémentation; Analyse comparative; Université; Collaboration

de mise en œuvre (avant, pendant et après), la participation de l'équipe de LS à la formation de l'enseignant, l'école, les élèves et les parents sont quelques-uns des éléments examinés dans le cadre de cette comparaison, dont les résultats sont considérés comme positifs par les deux parties. Cette étude met en évidence la collaboration fructueuse entre l'école et l'université, et conclut que le développement stratégique de tels partenariats devrait se développer parmi les systèmes éducatifs, car leur impact potentiel est vraisemblablement positif dans de nombreux domaines.

1. Theoretical backdrop

There is no doubt that cooperative learning (CL) contributes, to a large extent, to facilitating student learning at all educational stages. The benefits of CL have been widely demonstrated by the literature in the field and, among them, we can highlight the following: i. social skills (Camacho-Minuche et al., 2021); ii. teacher support (Liebech-lien, 2021); iii. students' academic and social learning (Johnson et al., 2014; Kyndt et al., 2013; Roseth et al., 2008); iv. language and cognitive aspects (Jakavonytė-Staškuvienė, 2021); student interaction (Keramati & Gillies, 2021); and students' attitudes (Chen, 2021), among others.

Lesson Study (LS) is a particular type of CL, where teachers deeply and structurally cooperate to develop a CL lesson. Dudley (2015, p. 4) summarizes the essence of the LS approach in this way:

LS has its roots in Japan, where it has been practiced by Japanese teachers for 140 years or more. And since the beginning of the twenty first century LS has become a global phenomenon. LS allows teachers to transform the way they teach the children they are teaching *now* in the lessons they are teaching *now*. It takes place in their classrooms. It enables them to problem solve and to share their practices, to understand each others' pupils' learning and each others' teaching; and through this to learn from and with each other.

In the next section, we will discuss the LS approach in more depth and analyse the advantages of implementing a LS in both educational and non-educational contexts, though LS takes place mostly in classrooms.

1.1 The Lesson Study Approach

The Lesson Study approach promotes cooperative work among individuals to carry out a specific task. LS methodological steps will be detailed in the next sections of this chapter.

Chen (2019, p. 1) defines LS as: "Lesson Study is a skills-based training approach, adopted within a professional learning community, that identifies and defines practical wisdom to create knowledge to improve teaching practice." Lesson Study (from the Japanese original term *jugyokenkyu*, a word composed of *jugyo*, which means 'lesson', plus *kenkyu*, meaning

| 3

'study' or 'research') was born in Japan as a teaching method based on an open approach. It has become a common method used by Japanese teachers to conduct their lessons (Estrella et al., 2020). In most Japanese teaching, the teacher begins with a review of the previous lesson and then presents the problem of the day in the form of a question. Students must understand the problem and work (usually in groups) to discuss ways to solve it. Thus, discussion and reflection become an integral part of the learning process. This general background is the perfect breeding ground for the birth of LS, where discussion and reflection become an integral part of the learning process.

The literature is profuse on research on LS in the field of Mathematics (e.g., Fernández & Yoshida, 2004; Isoda & Olfos, 2021; Richit et al., 2021; Widjaja, 2021, among many others), though the approach is being implemented in many other areas, such as English (e.g., Laoli et al., 2022) or STEM (e.g., Aykan & Yıldırım, 2022). Also, research on LS is found on different educational levels such as Higher Education (e.g., Cerbin, 2011), or Primary and Secondary Education (Saito et al., 2015, O'Shea et al., 2015); and different professional areas, including Teacher Education (e.g., Cajkler & Wood, 2015).

Thus, teachers constitute an integral element of the process, as they are entailed to work structurally after a training period, which stands as a differentiating element in the LS approach. Perry and Lewis (2009) describe the methodological procedure of the LS, where teachers formulate the learning goals of the unit, then, they plan a 'research lesson' where the procedures are analysed and planned. In the next step, one team member (i.e., a teacher of the group) teaches one lesson, and the rest of the team observe to gather evidence, which is used to improve the lesson and the instruction. Finally, the teacher team implement the improved lesson in other classrooms. The teaching cycle, therefore, is improved through cooperation, implementation, reflection, and re-teaching of the improved lesson.

1.2 The international context: DICO+

DICO+ stands for *Dispositifs Inclusifs de Cooperation (Inclusive Cooperation Set-Ups* in English), a KA201 project funded by the French National Agency in July 2018 (ref. no. 2018-1-FR01-KA201-047904) and coordinated by the *ESPE de Bretagne*. The project website http://dicoplus.eu/accueil-Royaume-Uni.html contains specific information about the project members, objectives, and offers resources for LS teacher training. The main aim of DICO+ is to help teachers –in both, pre- and in-service training– to develop innovative cooperative practices in their classes, from the earliest age of the students. DICO+ was a three-year project, based on the experimentation of the LS across 70 European schools (both, from Primary and Secondary Education), with 1800 teachers in the 7 countries involved in the partnership: France, Spain, Lithuania, The Netherlands, Romania, Italy and Hungary.

The sharing of European practices enabled project members to compare approaches and implementation of the LS approach in different school systems in Northern, Southern and

Eastern Europe. DICO+ covered many disciplines taught at school, among which Mathematics was common for them all. Then, English, Geography, Music, History, Science, French, Biology, and Ethics, among others, were added. The special focus on the implementation of LS within DICO+ was to promote social inclusion through the language of schooling.

Classroom implementation of LS allowed consortium members to develop tools for pre- and in-service teacher training, which can be downloaded at http://pod.dicoplus.eu.

1.3 Implementation of a Lesson Study

Some of these DICO+ Lesson Study units were implemented at a Spanish school (at both stages, Early Childhood –ECE– and Primary Education –PE), by strictly following the protocol of DICO+. One schoolteacher and six UCO members cooperated to design, implement and review the Lesson Study units, which were included as part of the DICO+ project. According to Laoli et al. (2022, pp. 2239-2240): "The implementation of lesson study can increase basic knowledge in learning, increase the professionalism of educators, and build a learning community."

Wood and Cajkler (2018) describe the LS methodological procedure around five phases:

- a. First, a group of teachers identify a learning challenge experienced by their students.
- b. Next, the teaching group plan the development of a lesson (usually research-based) to address the challenge.
- c. Thirdly, while one member of the teaching group teaches the lesson, the other members of the teaching group (who may be trainee or practising teachers) observe the session, with particular emphasis on the students' reactions and learning.
- d. Fourthly, the teaching group evaluates the session based on their reflections and observations (which have been carried out during the previous step).
- e. For the last step, the group focus on their own learning as teachers, reviewing the challenge and their experience. If there is consensus, the group continues the process by implementing the revised session in a comparable group. Sometimes sessions are recorded, which facilitates the final process of review and analysis of the session by the teaching team.

Successful implementations of LS units can be found in the literature (e.g., Hasan et al., 2021; Gómez-Parra, 2021, among others), so the benefits of this approach are acknowledged by both practitioners and researchers (e.g., Wahyukti, 2017; Guner & Akyuz, 2020, among others).

2. Comparative analysis of the methodological procedure for the implementation of a Lesson Study

In this section, we will compare the methodological procedure for the implementation of a LS within the context of the international project DICO+. This analysis will be carried out from two complementary sides: a. The schoolteacher's viewpoint. b. The University teacher's position.

2.1 The University teachers' position

The team of the University of Córdoba (UCO) for the DICO+ project was composed by three lecturers and three PhD students. Fernández and Yoshida (2004, p. 9) explain that:

Teachers conduct lesson study in many different venues. [...] Preservice teachers are also very often involved in lesson study during student teaching. They will prepare a study lesson in collaboration with their university-based mentors and the teacher that they have been assigned to work with in their school site.

So, UCO lecturers guided the process and guided PhD students to collaborate and help the schoolteachers to design and review the Lesson Study units. The final version of the Lesson Study units was reviewed by UCO lecturers before implementation.

The first step for the UCO team was to identify the participating school and teachers from the Spanish side. The decision was taken after a process of analysis where the following elements were assessed:

- a. Educational level: Early Years, Primary and Secondary.
- b. Participation of the school (both, teachers and children) in international projects.
- c. Willingness of participating teachers to be trained on the Lesson Study approach.
- d. Geographical location of the school: urban and rural areas.

Four schools which met these criteria were selected for participating in DICO+. The first round of implementation was carried out during the academic year 2018-2019 in two schools: a school for ECE and PE, located in a rural area, and a Secondary Education school, which was placed in an urban location. The second round of implementation was carried out during the academic year 2020-2021 in the same Early (ECE) and Primary Education (PE) school as the first round, plus a Secondary Education school in a rural area. The reason why two schools in rural areas were chosen for this second round is that COVID-19 was at historic highs, so many schools in Spain forbade access to external teachers.

Once the schools were selected, the UCO lecturers contacted the headteacher and the teachers. The four schools accepted the invitation right away, so the next step was to explain the objectives, the requirements of the project (e.g., initial training for participating teachers), and the target student groups among whom Lesson Study would be implemented.

The comparative analysis herein will describe the methodological process carried out in the ECE and PE school, located in a Spanish rural area, for the two rounds of implementation of the DICO+ Lesson Study.

The UCO team started to work collaboratively with the schoolteachers in the design of the Lesson Study. The UCO lecturers set the level of Primary Education (eight-year-old students) and the subject (English). Once the target group and the subject were set, the schoolteacher reviewed her year planning to schedule the implementation of the Lesson Study. Key conditions were taken into account:

- A. Sufficient time would be provided for the initial training of the schoolteacher and PhD students by the UCO lecturers.
- B. The topic of the Lesson Study had to fit into the year planning of the target group, so that it would be one of the activities that the pupils would do for their English course.
- C. Time would be provided for, at least, two reviews of the Lesson Study by the *LS team*, which was composed of 6 members: the schoolteacher, 2 UCO lecturers, and 3 PhD students.
- D. The Lesson Study unit would be implemented in two groups, providing one-hour session for each.

The LS team started to design the Lesson Study unit. The topic was 'Things I usually do in the mornings', so a series of 3 structured cooperative activities were planned for 1-hour session. Activities would be the same for both class groups (composed of 22 students each). The Lesson Study unit also followed the recommendations of *Interprimair* (as a member of DICO+ project) by considering the document 'Are the basic conditions for cooperative learning visible / noticeable in the lesson?', which were the following:

Positive Interdependence

The LS team designed activities so that students were interdependent to achieve the learning objectives. Working together facilitates the achievement of the learning objectives. Positive interdependence means that students when working together can achieve better results than if everyone had worked independently. The LS teacher teaching the session should ensure that the pupils could not carry out the assignment independently of each other.

• Individual responsibility

The LS was specifically designed so that each student would be responsible for their own contribution to the assignment. A student could be judged personally on his/her contribution. The classroom teacher should ensure that each student would be engaged in different parts or phases of the activity, which should not imply that the tasks must be divided: the pupils' involvement could vary in frequency, in duration, in intensity and in significance (individual approachability). This should prevent pupils from "daydreaming & hitchhiking".

• Direct simultaneous interaction

During group work there should be quite a lot of interaction among the students. The students should exchange ideas and information. Interaction should be 'simultaneous' because it should take place in several groups at the same time. As a result, many more students should speak than would be the 'normal' case with a classroom lesson. During the collaborative learning session, tables and chairs should stand in such a way that direct interaction is promoted.

Cooperative skills

The classroom teacher should pay explicit attention to developing cooperation skills. She should also evaluate the skills involved and explain them to the students before the starting of the session.

Cooperation skills could be addressed in two ways: Firstly, in addition to a substantive (content) objective (purpose) of the lesson, a social objective could be set for each cooperation assignment. The pupils then should specifically practice this skill in the functional context of the cooperative activity. Secondly, the teacher could learn a cooperative skill explicitly through role-plays, for example. The target groups of this sessions were used to working cooperatively, so the skills and structures were very familiar for them (e.g., they already knew some of the most usual roles used in cooperative learning, such as the facilitator, project manager, timekeeper or notetaker, some of which were used by the LS team in the design of the cooperative activity).

Evaluation of the group process

After the students have worked together, the cooperation would be evaluated, mainly under the teacher's supervision. The evaluation covered both the substantive and the social objectives.

Therefore, for each session, the LS team:

- i. Formulated the learning objectives according to the English teacher year planning.
- ii. Determined the size of the group (22 students per class).
- iii. Chose the method in which the students could be split into smaller groups.
- iv. Determined which roles will be designed and allocated to group members.
- v. Furnished the space, including how and where to set the two cameras for the recording of the sessions.
- vi. Included the materials that would be used by group members.

Teambuilding, class building, facts knowledge, thinking skills, communication skills, and sharing knowledge were all included in the design of the two sessions of English for these two Primary Education groups.

The LS team explicitly decided what was going to happen and how; decided how and when the classroom teacher would explain the assignment and the character of the cooperative lesson to the students; and finally established that the classroom teacher would lead and evaluate the lesson. The LS team would finally review and reflect on the results to improve the unit.

The Lesson Study unit was reviewed in two rounds by the LS team to assure that the procedure was correct and agreed to DICO+'s recommendations.

The implementation of the LS unit was scheduled for January 2019 in the two groups of Primary Education of the rural school. So, the LS team organized the setting by installing the video-recording cameras following the recommendations of the DICO+ project: one of the cameras would be fixed in one of the corners of the classroom, and the other camera should be recording groups around the tables. The schoolteacher would be responsible for the teaching of the session, whereas three UCO team members (i.e., one lecturer plus two PhD students) would be recording the session and observing the implementation of the Lesson Study unit, whose analysis was collected in DICO+ observation sheets. After implementation, the 44 participating children had to fill in a questionnaire designed and validated by Delphi method. It contains 13 multiple-choice or dichotomous response questions in English. This questionnaire was translated into Spanish and re-validated by Delphi, yielding a Cronbach's alpha of .775 and a McDonald's Omega of .781, which indicates very high scale for validity and confidence, according to Campo-Arias and Oviedo (2008).

The observation of the three UCO members of the LS team can be summarized in the following areas:

- The school: It was a very good school, which supports the participation of teachers and students in every kind of programs (e.g., environmental, genre and sport programs are some of these). The principal welcomed the UCO team and confirmed that the school was committed to the internationalisation of the school, so DICO+ was a very important programme for them all (children, teachers, parents...)
- The schoolteacher of English: She always showed a proactive attitude towards the
 project, and her willingness to be trained beforehand was positive. She led the LS
 session in a professional way, making students participate and feel active members.
 Moreover, she always kept the control of the class, so that students easily performed
 according to the LS plan.
- The students: Several relevant features grabbed the attention of UCO LS team members. On the one hand, students showed a very good level of English, both oral and written. They communicated in English along the whole session, either when they were involved in an activity or when they were chatting with classmates about their outdoor recess. When the teacher of English was asked about it, she answered

that students knew they had to use English with her always, so it was not a surprise for her. On the other hand, students felt really willing to participate in the LS, and Cooperative Learning (CL) procedures were familiar for them. The teacher explained that they were used to groupwork in CL. The last salient feature of the students was related to video recording. Students showed a very natural attitude towards video, which was also striking for UCO observers, and this made recording of the LS very easy for UCO lecturers, at the same time that the result was very natural because students did not 'overperform'.

• Parents: They were viewed by UCO teachers as supportive and pleased with the participation of children in this project. They were invited to participate in DICO+ final event of dissemination, which took place in the UCO (June 2021). They declared that they were positively surprised to check the level of English of their children, and were amazed at seeing their performance in the Conference Room of the University, answering to international participants' questions in a natural and communicative way. Then, they declared that they would support their children in every activity as, in their opinion, such projects will help students to become more international citizens of the 21st century.

2.2 The schoolteachers' viewpoint

One schoolteacher from the Nelson Mandela School participated as member of the LS team for the DICO+ project.

• Experience prior to the implementation of LS

The DICO+ project was the first international experience of the schoolteacher. Her background in the implementation of new methodologies within the framework of a European project was very scarce. When she was invited to participate in the implementation of a new methodology based on LS, in collaboration with the University of Cordoba and other European Universities, her answer was immediately positive. Despite her limited experience in these projects and the fear of facing the unknown, she accepted to participate with the feeling of learning something new, which could have a positive impact on her students.

Relevant meetings with the members of the University of Córdoba were held to gather details, on the one hand, on the details of the project and, on the other hand, to know what the participation of the school in DICO+ would entail.

Working with the University of Córdoba

For the Nelson Mandela School, the DICO + project opened the door to collaborating closely with faculty members and students of the UCO, a collaboration school-university which is not that usual in the Spanish context. The schoolteacher declared that it was overwhelming for her at the beginning, but everything run smoothly.

Three phases can be distinguished in this process:

a. Elaboration of the LS

The UCO members of the LS team contacted the schoolteacher and started working together. In these meetings, data and recommendations were discussed, which dealt not only with the school, but also with the specific characteristics of the students, as well as with the particularities of the LS: e.g., the space, resources, and time available and the timing of the programming that the schoolteacher had to develop each year. With all this, the UCO members of the LS team prepared the Lesson Study unit proposal, which the schoolteacher supervised and returned to the group to refine it until agreement to reach the Lesson Study unit which would be implemented in January 2019.

The coordination among all LS group members was effective, which resulted in a Lesson Study Unit adjusted to the characteristics of the class group.

b. During implementation

The working group of the University showed a great capacity for adaptation and know-how during the recording of the sessions. The Primary Education students participating in the implementation of this Lesson Study unit were used to being recorded regularly in some sessions in class, though recording from non-school members was new for them. UCO members knew how to adequately maintain the distance, kindness, and closeness enough to generate confidence among the students and, after the first few minutes of class, the session was developed as if no external member to the school was around.

c. After implementation

After the implementation of this LS unit, the LS team visualized the recordings and drew conclusions, focusing on the details and situations that had occurred during the implementation. Common observation and sharing of specific details allowed the LS group members to prepare the seminar that took place in Vilnius.

Participation of the Nelson Mandela School in DICO+ has meant a sea change for both the school as an institution and for the professional career of the schoolteacher (Wiseman & Cooner, 1996).

On a professional level, DICO+ was the first international experience for the schoolteacher. Initially, she did not feel confident about her abilities to participate in such an international project, since collaboration between school and University is not a common relationship in the Spanish educational system. Moreover, the collaboration of the LS team for the implementation of a methodology that was new to the schoolteacher and to the students instilled confidence in her. From the schoolteacher's viewpoint, putting into practice a new methodology (i.e., LS) and having the opportunity to be recorded in a teaching session have meant a real opportunity to analyse, draw objective conclusions, and improve her teaching praxis.

Nowadays, LS-based methodologies are fully incorporated into her teaching, which has improved her self-efficacy as a teacher (Nundy et al., 2009). Time and experience confirm

| 11

that, as a result of this implementation, participating students have improved their linguistic competence, they are able to play a role in CL and, at the same time, cooperate within the group towards the achievement of a common goal. DICO+ has helped participating students to realize that they are capable of doing much more than they had initially thought, which has strengthened their self-esteem and self-confidence, and has allowed them to reduce stress situations (especially meaningful for those children who showed learning difficulties). In addition, working side by side with UCO staff has been for the schoolteacher an incentive to continue improving. For participating students being involved in an international project has improved their self-confidence (Ertmer et al., 2011), as it was also their first time as they discovered that they had the necessary skills (both linguistic and non-linguistic) to accomplish this task. Furthermore, for pupils' parents to see the school as a place of enrichment and personal growth through their children's eyes was revealing, a feeling that was confirmed upon performance of a Lesson Study unit in DICO+ final event of dissemination (UCO, June 2021).

Participating in an international project such as DICO+ has given the schoolteacher the opportunity to learn about a new dimension of teaching practice in general, and language teaching in particular. It opened the door to internationalization in her professional career. As a result of participation in DICO+ and of the cooperation with UCO teachers, new projects and collaborations have arisen for her within the Erasmus+ programme, so nowadays the schoolteacher feels confident in her abilities and possibilities to continue learning and contributing to the future generations of the 21st century.

3. Discussion and conclusions

The design and implementation of a Lesson Study unit has been a fruitful and positively rewarding experience, in general terms, for the members of the LS team. The cooperation among the LS members was established in well-established academic grounds, which made work along the years easy and engaging. The bulk of the meetings was devoted to discussing the best or most productive ways for children to develop the tasks of the LS session. Meetings were usually organized in round tables (when they were organised face-to-face), which allowed all LS team members to participate in discussions. LS members always ended with the impression that we had all learnt a lot from the experience, a feeling which is supported by the literature:

LS provides a context where teachers can take risks with their practice and feel safe to share their reciprocal, professional vulnerabilities. It gets to the parts that other professional development doesn't reach! LS works because it allows teachers to see, share, tap into and learn from usually invisible stores of tacit professional knowledge that are normally inaccessible as a learning resource. It allows the inexperienced to learn from the experienced, the generalist to learn from the expert – but also the reverse of these. (Dudley, 2015, p. 4)

Moreover, the cycle where LS team teachers move from planning to research lessons, to post-lesson analysis and discussion and to re-implementation (in specific cases) is very interesting and not a usual practice in Spain. This cycle creates conditions which helps teachers feel safe when taking important pedagogical decisions. It also allows them to explore areas to improve their self-confidence and engage in micro-level planning sessions. All these were positive features experienced by the LS team, which helped to build a sense of community, making it feel like a zone where ideas can be shared and developed by the group (Mercer, 2004).

Moreover, participating students in the implementation of the LS unit declared having learned more, a result in line with Dudley (2011), who conducted research into the experiences of school leaders using LS in their schools, also exploring the extent to which LS had changed practice and improved pupil learning in the school. Gómez-Parra (2021) analysed the participation of teachers and students in DICO+. Primary Education pupils declared that they like to help others to learn together and help their classmates to learn new things. Such attitude and behaviour of helping others in their CL sessions are, according to the results of Dzemidzic Kristiansen's study (2020), highly beneficial for their own learning.

School visits by the UCO team members of the LS team assured "successful practice" (O'Shea et al., 2015, p. 79) of the Lesson Study unit, as the setting could be analysed beforehand by external school members to check that the implementation could be taken according to DICO+ requirements.

Parents constitute an essential element in this process, as they realized how good their children communicate in their second language (i.e., English) only after participation in DICO+. This operated a change in their mindsets, which was also positive because when they realized how many benefits it could bring for their children, they declared that they would support participation of the school in international projects. Cheng (2019, p. 58) states: "culture change within a system for improving teaching takes time and requires consensus from school stakeholders, including administrators, teachers and parents."

The participation of this school in DICO+ has brought a number of benefits for the school itself, benefits which have been analysed in this chapter: Improvement on pedagogical practice, training of teachers, improvement of students' attitudes and learning, internationalisation of the school, and improvement of parents' view of both the school and the educational system. So, the sustainability of such projects can depend, to a great extent, on the success of the first implementations, as the schoolteacher of this project has gained self-confidence and, nowadays, the school participates in other international projects, two of which are run by the school itself, as they are funded by the Spanish National Agency (SEPIE). Following Saito et al. (2015, p. 25):

SCHOOL'S PERSPECTIVES

"In order for attempts at school reform under LSLC¹ to impact learning for all in a sustainable manner the making of time for learning by reviewing the whole school management is most crucial. Such a continuous nature of learning can only take place when time is made to sow the seed of an enthusiastic interest in and commitment to professional issues."

Therefore, education stakeholders should welcome Lesson Study "as a way to improve their professional practices and build trust with both the public and the parents." (Cheng, 2019, p. 61). Lesson Study has proved to be successful, a fact which has been confirmed by the literature and the comparative (and complementary) analysis presented in this chapter. The more research dimensions that can be added to this approach will only bring more benefits to practitioners and researchers across the globe. Therefore, strategic development of school-university partnerships should proliferate among educational systems, because the potential impact of this fruitful collaboration is foreseeably positive in many areas.

References

Aykan, A., & Yıldırım, B. (2022). The Integration of a lesson study model into distance STEM education during the covid-19 pandemic: Teachers' views and practice. *Technology, Knowledge and Learning*, *27*(2), 609–637. https://doi.org/10.1007/s10758-021-09564-9

Cajkler, W., & Wood, P. (2015). Lesson Study in initial teacher training. In P. Dudley (Ed.), Lesson Study. Professional Learning for our Time (pp. 107–127). Routledge.

Camacho-Minuche, G., Espinoza-Celi, V., & Ulehlova, E. (2021). Cooperative language learning elements to enhance social skills in English classrooms: a case study. *Higher Education, Skills and Work-Based Learning*, *11*(5), 1116–1129. https://doi.org/10.1108/HESWBL-08-2020-0176

Campo-Arias, A., & Oviedo, H. C. (2008). Psychometric properties of a scale: Internal consistency. *Revista de salud pública*, *10*(5), 831–839. https://doi.org/10.1590/s0124-00642008000500015

Cerbin, B. (2011). *Lesson study: Using classroom inquiry to improve teaching and learning in higher education*. Stylus Publishing.

Chen, R. (2021). A review of cooperative learning in EFL Classroom. *Asian Pendidikan*, 1(1), 1–9. https://doi.org/10.53797/aspen.v1i1.1.2021

Cheng, E. C. K. (2019). Successful Transposition of Lesson Study. A Knowledge Management Perspective. Springer. https://doi.org/10.1007/978-981-13-2472-7

Dudley, P. (2011). Lessons for learning: how teachers learn in contexts of Lesson Study (PhD Thesis). University of Cambridge.

¹ LSLC stands for "Lesson Study for Learning Community" which, according to Saito et al. (2015, p. 2): "suggests that reform of the culture of the school is needed in order to change learning levels among children, teachers and even parents".

Dudley, P. (2015). How Lesson Study works and why it creates excellent learning and teaching. In P. Dudley (Ed.), *Lesson Study. Professional learning for our time* (pp. 1–29). Routledge.

Dzemidzic Kristiansen, S. (2020). Exploring pupils' and teachers' perspectives on face-to-face promotive interaction in cooperative learning. *Education*, *3*(13), 1–16. https://doi.org/10.1080/03004279.2020.1833060

Ertmer, P. A., Newby, T. J., Liu, W., Tomory, A., Yu, J. H., & Lee, Y. M. (2011). Students' confidence and perceived value for participating in cross-cultural wiki-based collaborations. *Educational technology research and development*, *59*(2), 213–228. https://doi.org/10.1007/s11423-011-9187-4

Estrella, S., Zakaryan, D., Olfos, R., & Espinoza, G. (2019). How teachers learn to maintain the cognitive demand of tasks through Lesson Study. *Journal of Mathematics Teacher Education*, 23, 293–310. https://doi.org/10.1007/s10857-018-09423-y

Fernández, C., & Yoshida, M. (Eds.) (2004). *Lesson Study. A Japanese Approach to Improving Mathematics Teaching and Learning*. Lawrence Erlbaum Associates.

Gómez-Parra, M. E. (2021). A través del espejo: beneficios de las Lesson Study para profesorado y alumnado de educación obligatoria. Through the Looking Glass: Benefits of the Lesson Study for Compulsory Education Teachers and Students. *Digilec*, *8*, 53–65. https://doi.org/10.17979/digilec.2021.8.0.8634

Guner, P., & Akyuz, D. (2020). Noticing Student Mathematical Thinking within the Context of Lesson Study. *Journal of Teacher Education, 71*(5), 568–583. https://doi.org/10.1177/0022487119892964.

Hasan, R. M., Lukitasari, M., & Ernawati, Y. (2021). Students' achievement and teachers' perception in the implementation of lesson study-based cooperative learning. *Journal of Physics: Conference Series 1731 012004*. https://cutt.ly/xbEu0SH.

https://cutt.ly/xbEu0SH.

Isoda, M., & Olfos, R. (2021). *Teaching Multiplication with Lesson Study. Japanese and Ibero- American Theories for International Mathematics Education*. Springer. https://doi.org/10.1007/978-3-030-28561-6

Jakavonytė-Staškuvienė, D. (2021). A Study of Language and Cognitive Aspects in Primary School Pupils' and Teachers' Activities Through Cooperative Learning. *Educational Sciences: Theory and Practice*, 21(3), 88–106. http://dx.doi.org/10.12738/jestp.2021.3.007

Johnson, D. W., Johnson, R. T., Roseth, C., & Shin, T. S. (2014). The relationship between motivation and achievement in interdependent situations. *Journal of Applied Social Psychology*, 44(9), 622–633. https://doi.org/10.1111/jasp.12280_

Keramati, M. R., & Gillies, R. M. (2021). Advantages and Challenges of Cooperative Learning in Two Different Cultures. *Education Sciences*, *12*(1), 3.

Kyndt, E., Raes, E., Lismont, B., Timmers, F., Cascallar, E., & Dochy, F. (2013). A meta-analysis of the effects of face-to-face cooperative learning. Do recent studies falsify or verify earlier

SCHOOL'S PERSPECTIVES

findings?. *Educational Research Review,* 10, 133–149. https://doi.org/10.1016/j.edurev.2013.02.002

Laoli, A., Dakhi, O., & Zagoto, M. M. (2022). The Application of Lesson Study in Improving the Quality of English Teaching. *Edukatif: Jurnal Ilmu Pendidikan*, *4*(2), 2238–2246. https://doi.org/10.31004/edukatif.v4i2.2434

Liebech-Lien, B. (2021). Teacher teams—A support or a barrier to practising cooperative learning?. *Teaching and Teacher Education*, *106*, 103453. https://doi.org/10.1016/j.tate.2021.103453

Mercer, N. (2004). Sociocultural discourse analysis: analysing classroom talk as a social mode of thinking. *Journal of Applied Linguistics*, 1(2), 37–68.

Nundy, S., Dillon, J., & Dowd, P. (2009). Improving and encouraging teacher confidence in out-of-classroom learning: the impact of the Hampshire Trailblazer project on 3–13 curriculum practitioners. *Education 3–13*, *37*(1), 61–73. https://doi.org/10.1080/03004270802291889

O'Shea, J., Teague, S., Jordan, G., Lang, J., & Dudley, P. (2015). Leading Lesson Study in schools and across school systems. In P. Dudley (Ed.), *Lesson Study. Professional Learning for our Time* (pp. 59–85). Routledge.

Perry, R. R., & Lewis, C. C. (2009). What is successful adaptation of lesson study in the US? *Journal of Educational Change*, *10*, 365–391. https://doi.org/10.1007/s10833-008-9069-7

Richit, A., da Ponte, J. P., & Tomasi, A. P. (2021). Aspects of Professional Collaboration in a Lesson Study. *International Electronic Journal of Mathematics Education*, *16*(2), em0637. https://doi.org/10.29333/iejme/10904

Roseth, C. J., Johnson, D. W., & Johnson, R. T. (2008). Promoting early adolescents' achievement and peer relationships: The effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin*, 134(2), 223–246. https://doi.org/10.1037/0033-2909.134.2.223

Saito, E., Masatsugu, M., Tsukui, A., & Yeo, J. (2015). Lesson Study for Learning Community. A guide to sustainable school reform. Routledge.

Wahyukti, T. (2017, October). Enhancing Students' Cooperative Learning in an EFL Classroom through Lesson Study. In 4th Asia Pacific Education Conference (AECON 2017) (pp. 283–287). Atlantis Press.

Widjaja, W., Groves, S., & Ersozlu, Z. (2021). Designing and delivering an online lesson study unit in mathematics to pre-service primary teachers: opportunities and challenges. *International Journal for Lesson & Learning Studies*, 10(2), 230–242. https://doi.org/10.1108/IJLLS-10-2020-0080

Wiseman, D. L., & Cooner, D. (1996). Discovering the power of collaboration: The impact of a school-university partnership on teaching. *Teacher Education and Practice*, *12*(1), 18–28. https://eric.ed.gov/?id=EJ541985

Wood, P., & Cajkler, W. (2018). Lesson study: A collaborative approach to scholarship for teaching and learning in higher education. *Journal of Further and Higher Education, 42*, 313–326. https://doi.org/10.1080/0309877X.2016.1261093.