Chapter 9

Student-Teachers' Written Reports About Their Own Learning Processes from Lesson Study

M. Neus Álvarez, M. Laura Angelini,*

Inmaculada López-Lull and Chiara Tasso

Abstract

This chapter examines how lesson study is reported with pre-service teachers in initial teacher education programmes. Different voices are included talking about the ways in which lesson study has been reported in various settings so far. The chapter concludes with a qualitative study of student-teachers' reflections drawn from their reports, written after finalising the lesson study cycle at the Universidad Católica de Valencia. The analysis provides support for the premise that lesson study significantly promotes research in ITE and develops a more critical approach to literature about pedagogy and good practice in teaching.

Keywords: Lesson study reports; shared-teaching; reflective teaching; student-teachers' training practice; in-classroom research; teacher instruction

Introduction

Lesson study, which originated in Japan, has become increasingly popular in initial teacher education (ITE) in recent decades. Adaptations of this model based on implementing a simple transference method can be found in diverse educational contexts. However, such adaptations are prone to certain difficulties (Arani, Fukaya, & Lassegard, 2010; Kusanagi, 2014). In this chapter, we focus on researching and reporting lesson study and the most common types of reports found. We also examine how lesson study is informed by student-teachers in ITE from assignments to scholarly research. Results of a case study of its use in Valencia (Spain) exemplify how researching and reporting lesson study go hand in hand.

Lesson Study in Initial Teacher Education: Principles and Practices, 119–132

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Inmaculada López-Lull and Chiara Tasso

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doi:10.1108/978-1-78756-797-920191009

Researching and Reporting Lesson Study

Although traditionally research was considered a task reserved for academics, nowadays teacher research is highly valued as a way to enhance reflective practice and professional development (Schön, 1995). Moreover, according to Vetter (2012) teachers who conduct action research on their own practices become more effective teachers and gain greater professional efficacy. Therefore, there is a growing interest in teachers conducting research as part of their professional development. In England, for example, new policies have been implemented to promote effective dissemination of educational research for the benefit of end-users, for example, in 2013 the Department for Education (DfE, 2013) issued the document *Improving the quality of teaching and leadership* which intended to enhance teachers' performance by improving their development through a special focus on research and dissemination (Cain & Allan, 2017).

However, a major challenge is making this research useful for the educational community. Some scholars perceive that their work will have little actual impact on end-users. Furthermore, research is often seen by academics as part of their professional development rather than a way to address social needs (Ion, Stîngu, & Marin, 2018). Therefore, engaging teachers in research would be an effective way to connect education research to real classroom needs while awakening teachers' awareness of their key role in improving practice. The focus on teacher as researcher has implications for ITE, which needs to prepare student-teachers to be able to conduct systematic inquiry in their classroom. Lesson study is a vehicle that can help new teachers to begin their professional lives as teacher-researchers.

Not only does research for their development have to be taken into account but also student-teachers' involvement in the way their training is designed. Research using lesson study can allow student-teachers to decide the focus of classroom-based inquiry based on their own interests, related to their teaching task in a both theoretical and practical way. It empowers student-teachers with the freedom and flexibility to explore their own map of educational concerns, which relate to the needs of their pupils.

Therefore, lesson study has been reported as a framework in which teachers are the true protagonists throughout the entire lesson study research process (Leavy, 2010; Leavy & Hourigan, 2016). With lesson study, teachers lead their own professional development and training, as they are responsible for the design of the entire process of the lesson study cycle, from determining the research topic, including the formulation of the learning aims and outcomes or choosing the case students to creating the assessment tools. Moreover, teachers identify the strengths and limitations of the research they conduct. When planning the research question, teachers analyse the context and its limitations, then explore the topic to arrive at the way they want to tackle the learning challenge. As a

result, they specify the question in a way that allows them to use their emerging strengths in order to improve their teaching practice (Elliott, 2015). Transposed to the context of ITE, this rationale leads to a view that student-teachers benefit from the collaboration and responsibility for professional development that flow from engagement in lesson study.

Written reports give proof of lesson study effectiveness, and its possible flaws (Sims & Walsh, 2009). In Japan, lesson study takes place at three different levels: the individual school level; the district or regional level; and the national level (Takahashi, 2006 cited by Fujii, 2014) and although the lesson study cycle is the same at all levels, the purposes are different and therefore there are different types of reports. National-level reports are mainly research orientated and conducted by academics who try to evaluate new materials or teaching methods while school-based lesson study usually focuses on school needs. Regardless of the level, everyone conducting a lesson study cycle is expected to write a report with a summary of their lesson study process, the approaches and experiences of a full cycle of planning, teaching, observing and evaluating, reporting both findings and reflections. Research lesson reports in Japan vary in their content, but they usually include what group members have learned during planning, conducting, and debriefing the lesson, the notes from the debriefing, and sample pupil work. Reports may also include a transcription of a lesson or part of a lesson that shows the pupil-teacher interaction and highlights the learning of the topic. They also include the lesson study goal, the rationale behind this goal, reflections about lesson study at the school, a summary of achievements and a list of the research tasks (Takahashi & Yoshida, 2004).

These reports are usually published for other teachers to read. As a result, in Japan, lesson study teachers publish more than lesson study 'academic' scholars (Takahashi & Yoshida, 2004). When publishing these results, teachers share their results in order to help other teachers or student-teachers gain insights into how they might improve their own practice. They may find ideas, approaches and activities that they can use in their own lessons, find solutions to specific challenges in the classroom, leading to them having a broader repertoire of strategies for classroom use and greater understanding of effective teaching practice. For all these reasons, writing up lesson study reports for sharing with others is not only an important practice but an ethically correct process.

Reporting Lesson Study in ITE

ITE is a continually developing area of activity, constantly seeking and studying ways to nurture student-teachers' abilities and teaching practices. Lesson study has proved to be an effective method of professional development in ITE (Cajkler & Wood, 2016) as it comprises training in many of the spheres of knowledge, skills and competences teachers should possess to successfully execute their teaching. This includes reflective thinking about their teaching and theory (Myers, 2012) and learning from evidence based on practice and focussed on teaching (Lewis, Perry, Friedkin, & Roth, 2012). Usually, when lesson study is used in ITE, students are requested to write a report which may be the main assessment tool for a

particular programme module. ITE reports usually include three main parts: the first part consists of a theoretical background derived from the student-teachers' literature search, the second part describes the lesson study process undertaken and the final part refers to the student-teachers' findings, reflection and learning from the research lessons (Angelini & Álvarez, 2018). It is common to find in the first part of the ITE lesson study report information about the lesson study method along with the literature review on the research topic. The second part contains description of the procedure followed, including the most relevant data collected from observations prior and during the lesson, the lesson plan including expected results, pupils' interviews and the reflections on the research lesson and possible amendments. If the cycle includes more than one research lesson, these research lessons are also detailed and explained in the report. Data for the final report are usually gathered from several sources: observation notes, the researcher's journal, research meetings, video recordings of teaching practice, pre-practice group reports, group interviews, the lecturer's notes, and individual reflections post-treatment (Bahçivan, 2017; Leavy & Hourigan, 2016). The final part of the report should evidence student-teachers' learning from the lesson study process. Generally speaking, reports by student-teachers are expected to successfully demonstrate a broader understanding of learning typologies, the knowledge and skills taught through the syllabus of each institution, and the strengths and weaknesses of lesson study, as well as other details required by each institution (Akerson, Pongsanon, Rogers, Carter, & Galindo, 2017). While parts 1 and 2 are usually well structured with clear guidance on what and how to report, part 3 is commonly open with plenty of freedom for the student-teacher to reflect on his/her learning (Santagata, Zannoni, & Stigler, 2007).

In the specialist literature on the application and effectiveness of lesson study, the ways in which lesson study cycles are reported share some commonalities but there are also some differences in terms of its various adaptations to meet specific educational goals and programmes (Bjuland & Mosvold, 2015; Ebaegu & Stephens, 2014).

Student-Teachers' Reporting in ITE

Using the ITE lesson study literature as a basis for analysing how student-teachers report their engagements with lesson study, it becomes clear that several common aspects are included in student-teachers' writing. Reports usually compile all the general information about the study, which includes the context, the research question, the pupils' profiles, how the study was carried out and all the issues resulting from the study. Common foci found in student-teachers' reports include accounts of (i) improvements in content knowledge (Cavey & Berenson, 2005); (ii) the development of collaborative practice and reflection (Marble, 2006); and (iii) the shift from teacher-centred to more pupil-centred pedagogy (Fernandez, 2005).

Some student-teachers' reports consist of conceptualising knowledge (Leavy & Hourigan, 2016). This is the content knowledge dimension of teachers' learning (i.e. what student-teachers know about what they teach) as a framework to report the knowledge gained from teaching through lesson study. Akerson et al. (2017)

claim that many researchers have emphasised the positive impact of teaching experience and reflection on the development of pre-service teachers' pedagogical content knowledge (PCK) (i.e. what student-teachers know about teaching). PCK is seen as a major component in the development of teacher education (Shulman, 1987). Writing about lesson study contributes to enhancing PCK as the lesson study assignment report forces student-teachers to reflect and evidence their learning, making the learning visible for both university teacher-educators and themselves (Cerbin & Kopp, 2006; Gómez & Gómez, 2015).

The data collection not only provides information itself to inform practice but goes hand in hand with a coherent explanation of the process used by the student-teachers in designing the lessons and setting up the inquiry, which leads to the presentation of evidence in the report, indicating that they have understood the process they have been through and can show what they have learned. In addition, it is also very important to consider how teacher-educators support student-teachers to reflect on, organise and report their work in writing. In order to help student-teachers to reflect better and more profoundly on lesson study implementation, Martin and Clerc-Georgy (2015) developed a lesson study reporting protocol consisting of three elements. First, a 13-statement questionnaire based on Honigsfeld and Cohan's (2006) research asks student-teachers to indicate their level of agreement on a five-point Likert scale on the impact of lesson study on current teaching effectiveness, on becoming a more successful participant in a collaborative educational setting, and on the likelihood of their seeking out advice from other teachers on planning and implementing lessons. Secondly, a general open questionnaire in relation to the context deals with various aspects of lesson study such as strengths and weaknesses, contributions to the profession, and difficulties encountered. Thirdly, an individual self-evaluation allows student-teachers to identify knowledge gains during their training sessions and reflect upon knowledge gained and their actual practice during the teacher placement. These three elements not only help student-teachers when structuring their report, but also help them to develop a more critical view and make connections between the theory studied and the practice.

A different reflective technique has been developed by Bahçivan (2017) who based his work on previous microteaching experiences that support microteaching as a beneficial tool to improve student-teachers' PCK, technological pedagogical content knowledge (TPCK), knowledge about reform-based teaching methods, subject matter knowledge and knowledge of learners. Bahçivan (2017) focussed on the teaching itself by incorporating microteaching into the lesson study framework. Bahçivan found that microteaching helped create opportunities for student-teachers to practice a teaching method in a worry-free environment with peers as learners. He constructed a systematic intervention of action research by following Elliott's (1991) five steps of action research: step 1 'general idea'; step 2 'reconnaissance'; step 3 'general plan'; step 4 'developing next action step'; and step 5 'implementing next action step'.

Bahçivan (2017) states that a blended model of microteaching and lesson study in ITE provides scaffolded training opportunities to student-teachers prior to stepping into a real classroom (see the idea of 'rehearsal' in Chapter 10). Student-teachers' co-design of lessons and their implementation among peers have been reported as central

to the quality of their learning in the ITE period. This type of practice in a worry-free environment facilitates collective learning and enhances reflection and sound adjustments of the lesson for the real practice (Griffiths, 2016; Utami, Mashuri, & Nafi'ah, 2016) of a classroom. A systematic process of collecting data with audio-recorded interviews, video recordings and observational notes about classroom practice supports student-teachers' reports at the conclusion of a research cycle.

In Bahçivan's study, student-teachers were assigned to write two different types of report. The first one was a team report similar to a regular lesson plan with objectives, materials, subject matter knowledge, timing and materials for the planned research lessons and an individual post-practice report, where they had to reflect on how they would teach the same objectives to the same students if they had another chance and justify their answer. Bahçivan (2017) claimed that the blended model of lesson study and microteaching was beneficial in ITE training. However, one may argue that considering this blended model with microteaching to be 'lesson study', when elements as critical as real classroom interaction with real pupils are missing, may not seem to be a very powerful model. Others, however, have argued for the use of microteaching and reported it to be effective (e.g. Fernandez, 2005).

Reporting Lesson Study: From Assignments to Scholarly Research

Lesson study aligns with reflective teaching as it allows teachers and researchers to explore teaching practice by creating multiple pathways for improvement (Cerbin & Kopp, 2006). Chassels and Melville (2009) focus on the development of habits in lesson study, dealing with critical observation, analysis and reflection and how they deepen into reflection on teaching practice. Through lesson study, teachers (pre-service and in-service) are given the opportunity to integrate educational research into their planning and teaching. Educators may thus become more research focussed as they identify and examine specific aspects of lessons and share their findings with colleagues (Makinae, 2010). Hurd and Lewis (2011) proposed a structured model, which appears in Fig. 9.1, to report lesson study at the conclusion of a research cycle.

Hurd and Lewis's (2011) structured model offers an account of the whole process. From another equally important perspective, reporting learning in writing, as suggested, serves to enhance and sustain methodological changes and inform the whole institutional context about what makes teaching and learning effective within the scope of a group of lessons. Lesson study can thus be written about in report form to document improvement against certain teaching standards or contribute to professional or academic qualifications, research, or other forms of professional recognition (Dudley, 2013).

When reporting lesson study research cycles, the voices of all agents involved should be considered. In ITE, the agents are the student-teacher, the school-based mentor, the university teacher-educator, and the pupils. Pupils should be able to express their opinions and perceptions and these considerations should be taken into account during the whole cycle, especially when planning the research lesson and any further amended versions and when reporting on them. However, several studies of teachers engaged in lesson study have shown that the pupils' voices

Fig. 9.1: Final Report Designed by Hurd and Lewis (2011).

may disappear in reports on lesson study, especially in ITE (Simón, Echeita, & Sandoval, 2018; Warwick, Vrikki, Færøyvik Karlsen, Dudley, & Vermunt, 2018).

The fact that pupils' voices are missing from ITE lesson study reports may also be because student-teachers are more concerned about their own performance and their own teaching than about pupils' learning which is not really surprising as this has traditionally been the focus of ITE. However, lesson study shifts or tries to shift this focus from teacher teaching to pupil learning (Ansawi & Pang, 2017). When pupils' voices appear in the report one could argue that student-teachers have made this shift. Moreover, Simón et al. (2018) sustain that pupils' comments and opinions can be particularly beneficial throughout the lesson study process and in the final report because the focus today is on placing pupils at the centre of the learning process. Approaches to inclusion of pupils' voices vary in all contexts where lesson study is used, but, among others, include:

- Interview with case pupils (Dudley, 2015).
- Participative forms of lesson study involving pre-interviews and lesson evaluations by pupils (Messiou et al., 2016).
- Checklists of what has been learned (pupils' self-assessment from a checklist of learning outcomes for the lesson).
- Analysis of pre/post-tests.
- Analysis of pupils' in-class work.
- Entry and exit tickets to check learning.

These in turn provide insights into the impact of the whole lesson study process and enable practitioners to design and plan lessons accordingly as pupils will be more truly closer to the centre of the teaching-learning process.

Lesson Study in Valencia: A Case Study

The data in this study were collected from two ITE lesson study groups at the Universidad Católica de Valencia: one is associated with English as a foreign language (EFL) teaching in undergraduate courses, while the other is linked to

a postgraduate teacher-training course on the Official Masters Programme for Secondary School Teachers. The lesson study model in Valencia (Spain) was developed and adapted based on the Norwegian lesson study model designed by Larssen and Drew (2015). In Valencia, however, a longitudinal approach has been used since 2015, by which we mean that research lessons are planned by two student-teachers and taught to the same group of pupils with a weekly gap between them, rather than a research cycle conducted in the same week with a gap of just two days (i.e. the cross-sectional approach used in the Norwegian model). This adaptation provides student-teachers with perspectives and insights regarding what they should modify and improve. The student-teachers in Valencia who perform lesson study do not teach the same lesson twice in different classes, as advocated by Hurd and Lewis (2011). Instead, they improve Research Lesson 1 from a methodological point of view. Primary student-teacher students' lesson study is developed as shown in Fig. 9.2.

Prior to student-teachers' arrival in the school, school-based mentors receive training to help student-teachers apply the lesson study method in their practicum context. School-based mentors and student-teachers follow Dudley's lesson study handbook (Dudley, 2014). Meanwhile, student-teachers decide on their field of research, usually inspired by the theoretical lessons from their training course. They formulate their research question and start reading related literature.

In Valencia, student-teachers spend five weeks as the regular basis for their internship in schools, five days a week, five hours a day. During this period, they experience an 'ordinary' internship with general activities from different university

Fig. 9.2: Lesson Study in Valencia (Spain).

subjects plus lesson study. Lesson study is conducted when teaching EFL, the first two weeks devoted to observing pupils and identifying case pupils. In the third week Research Lesson 1 is planned and is taught in week 4. Student-teachers teach the lessons in pairs. One delivers Research Lesson 1, while the other conducts structured observations of three case pupils and their learning. The process is then repeated for Research Lesson 2, but the student-teachers switch roles. By working in pairs, student-teachers get involved in the whole process, playing both roles in an active way as both participants design, reflect and report the two lessons, observing and taking notes in one of them, while teaching the other one.

During Forums 1 and 2, student-teachers and university teacher-educators, as well as student-teachers and school-based mentors, carry out review meetings whose main purpose is to allow debrief on the learning in Lesson 1 and focus on preparing Lesson 2. In addition, the Forum seeks to provide guidance on the lesson study process, suggestions for planning and literature references if needed while sharing experiences and ideas.

Turning to our data collection and analysis of this process, legal issues related to research ethics and data protection were diligently adhered to, and the research was duly authorised by the head of department and the heads of the participating schools. The written reports were uploaded onto the university online platform.

In our analysis of the data, our interrogation of the student-teachers' lesson study reports was qualitative in nature, compared and contrasted with the information gathered in individual interviews and the notes taken in the forums. The interviews attempted to link the theory studied during the course to in-school experiences. In particular, the interviews encouraged student-teachers to reflect upon and discuss their interpretations of the process (Cohen, Manion, & Morrison, 2011; Dörnyei, 2007; Palaologou, Needham, & Male, 2016; Scott & Usher, 1999).

Being systematic when gathering the data was crucial. The researchers of the present study carried out student-teacher interviews together and note-taking was central to recall some critical events that might otherwise have been forgotten. Prior to the interview, the researcher indicated that participation in the study was voluntary and had no impact on the final grade of the subject.

Our study of the student-teachers' reports followed the protocol for grounded theory set out in Charmaz (2006), in which information is first coded, then sorted into preliminary categories until the data are saturated and subsequently analysed to select central conceptual categories that give rise to the results.

Analysis of the coded data first brought into focus three preliminary categories:

- linkages between theory and practice;
- student-teachers' professional development; and
- pupils' learning.

The analysis of the written reports collected showed that student-teachers develop a more critical view of the context where they teach, the school, curricula, learning aims and outcomes, and mentors' notions of different aspects of education, as evidenced by the following extracts from two written assignments:

Pupils are encouraged to speak in English during the lessons. However, mixed level classrooms seem to be a great challenge for the teachers in this school, particularly because only some pupils have better command of English as also study in a private language academy. (S6)

My mentor teacher has been living and teaching in the UK and uses a ESL approach in her lessons. In general, pupils respond well although there are some struggling pupils who also need some L1 input. (S1)

In their writing, student-teachers are able to make reflective judgements about methodologies, methods and classroom techniques first studied at university and later implemented during teaching practice, for example:

Pupils responded better if we followed their teacher's routines. We have realized the pupils need to be familiar with the development of the lesson. (S3)

It is true that pupils are more motivated with games and dynamic activities. However, they seem to adapt more to the lesson if we vary the activities into dynamic and calm. During calm activities, they focused more on internalizing the language, its rules, vocabulary and so on. In dynamic activities, pupils were more spontaneous and reacted using the language, if possible. The right balance between both dynamic and calm activities proved to be our challenge when planning. (S9)

However, most reports focus on pupils' motivation and engagement rather than on the evidence about knowledge acquired. In this respect, the reports lacked a degree of precision and depth. This clearly shows that the vast majority of student-teachers still need to improve their evaluations of pupils' learning:

Pupils were enthusiastic and most participated in the activities. (S1)

My pupils had a short attention span and it was difficult to have them quiet.

With the games, they were more motivated. (S6)

Pupils have fun and were motivated during the lesson. (S11)

Furthermore, lesson study provides student-teachers with the opportunity at the planning stage to anticipate problems and explore these through direct observation of particular case pupils before conducting research lessons. In turn,

they strengthen their classroom management skills while improving their ability to teach in English. As for the pupils' voices in the analysis of the reports, some pupils had the chance to indicate their satisfaction with the student-teachers' lessons as they were interviewed right after each lesson, primarily in relation to the use of games, storytelling, and story songs in the EFL in preschool and primary education. Likewise, student-teachers in secondary education also referred to the satisfaction element in the lessons, although some fail to recall what they have learned. Reports by student-teachers in ITE and by practising teachers in the Masters Programme share similar reflections. The virtues of the methodologies and classroom techniques in the teaching of young learners such as games have a twofold effect: disinhibition to participate in EFL lessons and vocabulary retention.

In conclusion, the results of the implementation of lesson study in ITE in Valencia so far indicate that lesson study helps train innovative, sensitive professionals who are capable of responding to today's educational demands. However, more insightful interpretations of pupils' learning processes must be carried out by student-teachers. Future research should also analyse the school mentors' assessments, providing a triangulated study to validate the findings and conclusions presented herein.

Final Conclusions

This chapter highlights the significance of lesson study in promoting research in ITE and developing a more critical approach to literature about pedagogy and good practice in teaching. We have found that lesson study can enable practitioners to adjust their teaching to respond to pupils' learning needs. Moreover, through lesson study in ITE, evaluation becomes structurally consistent because it draws upon different evaluation tools such as observation notes, the researcher's journal, and researcher meetings, video recordings of teaching practices, pre-practice group reports, forums, the lecturer's notes, and individual reflections post-treatment. The benefits of these multiple sources enrich the holistic approach to evaluating by the four key agents in the ITE lesson study cycle: pupils, student-teachers, mentors, and university scholars. Lesson study thus constitutes a community of practice and learning. This community of practice helps build a solid structure that combines dialogic learning, reflective discussions, and decision-making, challenging participants to move forward in their teacher development. Reflective reporting is an essential step in the lesson study process because it leads to the dissemination of studies conducted by teachers and student-teachers. It leads to the reinforcement of ideas, approaches and strategies enabling learning from lesson study cycles to have time to become embedded. As mentioned earlier, there are various ways of reporting lesson study, all of which have a common goal: to share findings in an attempt to reconcile research and classroom practice, thus bridging the theory-practice divide, discussed in Chapter 3.

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