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Author(s)
RUPP, Michael James

Citation
International Journal of Social and Cultural Studies, 8: 17-34

Issue date
2015-03

Type
Departmental Bulletin Paper

URL
http://hdl.handle.net/2298/32362
Social Constructivism as the Theoretical Underpinning for the Employment of Collaborative Approaches such as Lesson Study Towards Teacher Development

Michael James RUPP
Kumamoto University

Summary

Lesson study is a Japanese teacher development framework, known as jugyō kenkyū (授業研究), which has been gaining traction outside of Japan, particularly in mathematics education (Lewis, 2008). In Japan, it is mostly used in the context of primary education in a collaborative form, and non-collaboratively thereafter. Lesson study has been shown in the literature to be an effective way of increasing teacher autonomy and intrinsic motivation while contributing to practical solutions not provided by the traditional transmission model of teacher development. This paper outlines how collaborative lesson study is a viable answer to the problems facing the postmethod language educator and shows how the ideas of social constructivism form the theoretical underpinnings supporting the use of collaboration in teacher development.

Teachers should be examples of how learning works. We inquire, explore, examine, process, and consider. We value people over things and excitement over test results.

(Kaplan, 1987, p.7)

1.0 The Postmethod Condition

Over the past forty years, there has been a shift in how we view standard teaching methods theory. There has been evolution away from the transmission model of teacher education, which is underpinned by a behaviorist approach and this has led to the postmethod condition (Kumaravadivelu, 1994) or the “death of method.” This refers to the situation in which modern language teachers have come to realize there is no standardized approach to classroom instruction. Though this shift away from methods has occurred, the ramifications of this change in theoretical approaches to teacher development are not yet consistently reflected in practice. Lacking a definitive method, educators are left to find their own way, without clear guidance. While this can be disconcerting, we will see that it can also be empowering for the educator or teacher developer, as
they can express their autonomy by taking charge of their situations. This paper will argue that one answer to the postmethod condition is the collaborative form of lesson study.

Due to a transition away from behaviorist models of education, teaching development experts are now faced with the challenge of providing meaningful guidance to teachers, despite being in what Kumaravadivelu (1994) describes as the postmethod era. Being in the postmethod era implies that there are no standardized methods teachers can apply to their teaching. Classrooms are seen as being too complex for traditional teacher development models to be of use due to the parameter of particularity (Kumaravadivelu, 2001; 2005), which states that each teaching situation has its own particular needs which cannot be met by a standardized approach and that, "language pedagogy, to be relevant, must be sensitive to a particular group of teachers teaching a particular group of learners pursuing a particular set of goals within a particular institutional context embedded in a particular sociocultural milieu." (Kumaravadivelu, 2001, p. 538)

Action research is a teacher development framework that allows teachers to research their own parameters of particularity. Action research paradigms such as lesson study have been documented as a means of helping teachers achieve greater autonomy and motivation as they allow teachers to take control of their circumstances, while at the same time being a means of increasing their sense of membership in the community of practice (Lave, 1991; Lave & Wenger, 1991) of professional teachers and improving their collegial networks.

Vygotskian social constructivist theory has emerged to fill the gap created by the 'death of method' and the collaboration inherent in social constructivism can provide the theoretical underpinning supporting the use of collaborative research frameworks such as lesson study for aiding in teacher development. Thus a way has been found to provide a viable answer to the problems facing the postmethod language educator. Lesson study has a long history in Japan, but language education research on collaborative employment of lesson study at the secondary and tertiary education levels is not well documented, particularly in the English literature.

2.0 Traditional Teacher Development and Limitations of the Transmission Model

The transmission model of education refers to the traditional scenario of
the teacher, the one with the knowledge, transmitting it in a monologic fashion to the students who receive the information passively. Thus the role of the teacher is that of a top-down authoritarian deliverer of facts. According to Freeman (1991), this kind of model is ineffective because it places the learners in a passive role and does not allow them to construct their own knowledge. This model has also been criticized by Dewey (1916) as not being appropriate and being too authoritarian for democratic societies. Freire (1968) also attacks this form of banking education in his Pedagogy of the Oppressed, pointing out that such a model reflects an oppressive society, embodied by the all knowing, all powerful, disciplinarian teacher for whom students are mere passive objects of learning, meekly listening with little agency or autonomy.

This sort of teacher centered model, while having been seen as an effective way to transmit information to large groups of students in an efficient manner, also has the danger of overemphasizing rote learning, without necessarily developing an ability to think about and understand the information at a deeper level. There certainly may be subjects and learning situations where this model is the most practical and efficient solution, but language education in particular, with its complex interactions between teachers and students, cultures, personalities, learning styles and other variables, is likely poorly served by such a model.

2.1 The Positivists and Behaviorism

Ellis (1990) points out that trying to treat real learning environments as if they were methods laboratories is fraught with problems because we can never be certain that teachers will actually carry out instructions. This gap between the pristine theoretical world and the messy reality of the classroom blurs the distinctions between methods that have very different theoretical underpinnings. Williams and Burden (1997) describe how researchers in the relatively new field of educational psychology had recognized the limitations of the transmission model and endeavored to scientifically study the field of language education. They employed the behaviorist approach towards language education, which was derived from the positivist school of thought. They emphasized hard scientific empirical data and followed the principles of classical conditioning. Human learning was seen to be analogous to animal training. Classical conditioning, or stimulus-response techniques, came to be used in the audio-lingual method of language learning, which was supported by B.F. Skinner’s behaviorist principle. The audio-lingual method was an attempt to break down
linguistic knowledge into clear digestible chunks, which are to be perfectly mastered at the student’s own pace, before moving on. Williams and Burden (1997) point out that this system places the learners in a passive role and disregards the cognitive processes of the learner. Moreover it can be done with little attention to meaning and at the same time can ignore the value of interaction, negotiating meaning and learning from mistakes. These problems did not stop the audio-lingual method from becoming widely used, perhaps due to the simplicity of its implementation along with the seemingly impressive theory of learning which underpinned it.

2.2 Chomsky and the Pennsylvania Project Failure

According to Richards and Rogers (2001), in the 1960s, a popular British language teaching tradition, known as Situational Language Teaching was beginning to be called into question, in part due to Chomsky’s (1957) criticism of its underlying structuralist linguistic theory. In the 1960s, the Pennsylvania Project (Kumaravadivelu, 2005; Smith, 1970) was conducted as an attempt at a large scale, scientifically controlled study comparing the audio-lingual method with cognitive theories of language learning and teaching. This study ended in what was termed 'a traumatic disaster' for the researchers, who concluded that language teaching-method comparison was not a viable research activity.

This state of affairs culminated with Allwright’s (1991) proclamation of the death of the method, a situation which requires both learners and teachers to become more autonomous. Kumaravadivelu (2005) also claimed that postmethod pedagogy necessarily centered on teacher autonomy. The lack of one ideal method placed teachers in a situation in which they were required to take matters into their own hands by utilizing classroom based research frameworks such as action research and lesson study. Lesson study, in particular benefits from the social constructivist paradigm, wherein knowledge is socially constructed in a dialogic manner.

3.0 Moving towards Social Constructivism

Cognitive psychologists responded to the behaviorists’ lack of attention to what goes on in the mind of the learner by analyzing mental processes from a variety of perspectives. They examined factors such as attention, perception, aptitude and memory (Williams & Burden, 1997). Later the constructivists, following the work of Piaget, believed that learning was more a matter of constructing a unique individual meaning from
experience as opposed to seeing learning as a mere process of knowledge accumulation. Piaget’s constructivist approach looked at the individual from a strictly biological development perspective, whereas Bruner (1977) related the ideas from an educationist point of view, focusing on the “cultivation of excellence.” He believed the developmental purpose of school learning had to be emphasized and that the defining criterion for primary school subjects should be whether the knowledge would both be worth knowing as an adult and also make the person a better adult.

Kelly (1955) was another constructivist who worked as a clinical psychologist and psychotherapist. He developed the *personal-construct theory*, which viewed ordinary people as ‘scientists’, who were trying out theories in order to construct their own personal understanding of the world (Williams & Burden, 1997). Salmon (1998) takes this notion further, developing the social aspects, or shared reality of both teachers and learners. Here we can view teachers and learners as being equally involved in an effort to gain a shared understanding of the activities in the classroom.

### 3.1 Moving towards a Humanistic Approach

The next stage in educational approaches revolves around humanist and social interactionist ideas which lead to the social constructivist model. Humanists looked deeply at the individual’s thoughts, feelings and emotions. Beginning with Freud’s psychic viewpoints, then Erikson’s *eight stages of human development*, later Maslow’s *hierarchy of human needs*, it was followed by Rogers (1969) who suggested that learning should occur in a non-threatening atmosphere of “unconditional positive regard” (Williams & Burden, 1997). The trend quickly moved towards respecting the psychological state of the individual.

We can see how far from the authoritarian transmission based model thinking had moved by the 1960s. Rogers embodies the humanist ideals of being a warm and empathetic teacher, creating bonds of trust with the learner. As Williams and Burden (1997) note, the implications of the humanist approach are that of an individualized, differentiated attempt to meet the learner’s needs, moreover learners are to be encouraged to be more autonomous, making choices about what and how they learn, and the curriculums themselves are no longer to be set in stone. Naturally greater learner autonomy also requires greater teacher autonomy in order to have the flexibility to meet such diverse goals.
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3.2 The Social Interactionist View

Gradually, the merging of the cognitive and humanist approaches led to a social interactionist view, for which the ideas of Vygotsky (1978) and Feuerstein (1991) have had a great influence. The social interactionists see learning as not occurring independently but rather through the social nature of our interactions with others. Williams and Burden (1997) note that the social interactionist viewpoint can provide a theoretical underpinning to the communicative approach to language teaching. Vygotsky’s *zone of proximal development* (ZPD) concept centers around the idea that learning takes place when a *more knowledgeable other* (MKO), is able to provide support in order to get the learner to the next level. The zone here represents the range of activities the learner can perform with assistance. In the case of children, the more knowledgeable other is usually an older peer or adult, and in the case of adults, it is someone with a high competence in the skill to be learned. This is similar to Feuerstein’s (1991) theory of *mediated learning experience*, which also emphasized the importance of the social nature of learning. ZPD in the context of lesson study (see figure 3, below) can be seen as an egalitarian mingling of lesson study group member knowledge where all the participants potentially have areas of knowledge, experience or ideas which can be of benefit to other members, regardless of age, education level or experience.

*Sorting out the terminology*

The various terms describing constructivism have a degree of overlap and also vary according to whom the theory is being related to. Kim (2001) provides a clear explanation of the differences among these terms as follows:

- **Constructivism** is a branch or variant of social constructionism in which people create meaning through their interactions with each other and the objects in the environment.

- **Vygotskian Constructivism** refers to social interaction in development of cognition wherein social learning precedes development and the MKO scaffolds the learner into the ZPD. Here social interaction leads to increased knowledge.

- **Piaget’s Constructivism** describes how knowledge is actively constructed and it is more of a theory on how a child’s thinking evolves over time.

- **Social Constructivism** is about how reality is constructed through
human activity and how members of a society together invent the properties of the world. This in turn allows people to create meaning through their interactions with each other and the objects in the environment. In this view, learning is seen as a social process and occurs when people are engaged in social activities.

With these definitions clarified, we will next look at ‘the sociocultural turn’ that has come into being in second language education.

4.0 Social Constructivism and the Postmethod Educator

Ball and Cohen (1999) discuss how the modern educator must also be a researcher in what they term ‘a pedagogy of investigation’ requiring the educator to professionally frame and analyze their teaching and learning to improve their professional knowledge. As will be shown later, the collaborative lesson study framework meets these requirements very well.

Johnson (2006) describes 'a sociocultural turn' which has occurred in L2 teacher education, which has seen a shift in learning, making it into a dynamic social activity, emphasizing that knowledge goes beyond fact accumulation and encompasses negotiated learning processes through social experiences. This social aspect of learning in the professional community is also echoed in the situated learning and communities of practice (CoP) concepts from Lave and Wenger (Lave, 1991; Lave & Wenger 1991) with knowledge being socially co-constructed in the context of the situational environment. This relates to the concept of collaborative teacher development wherein the teachers learn from each other in the community of educators. In the case of teacher collaborators the ZPD concept could also apply to peers, without the need for a more knowledgeable other, as seen in the parent-child relationship, where the parent is viewed as more knowledgeable than the child. In the peer ZPD context, teachers bring different experiences and ways of conceptualizing problems when collaborating, regardless of age or experience. We are always within some ZPD, even when interacting with our peers or junior members of our group. Johnson (2006) notes that the sociocultural turn is a move away from the positivist paradigm towards a view of L2 teachers as lifelong learners and active participants in professional development. Ball and Cohen (1999) also make the case for supporting active and autonomous teachers, criticizing the wasteful top-down style workshops in the US, which are disconnected from teachers’ realities and thus of no use. Laskowski (2007) found a similar situation in Japan, with one Japanese
teacher of English complaining:

“What they say in the guidelines has no connection with what is happening in the classroom. I think they are made from people in higher positions who do not understand the realities of the classroom”. (p. 163)

The problems facing postmethod educators are still vexing teachers around the world, and ministries of education still often fall back on the transmission model even though we have many better collaborative options.

5.0 Collaboration in Teacher Development

As Friend (2000) points out, collaboration does not occur spontaneously, but rather requires a concerted effort and sustained commitment. Goddard and Tschannen-Moran (2007) also note that it is not taught in university and that there is a lack of support for those trying to collaborate, even though there are well documented benefits such as improved efficacy, collegiality, and positive attitudes towards teaching (Tschannen-Moran, 2001; Shachar & Shmuelevitz, 1997). In my collaborative lesson study research, I found such benefits as well, and also ran into the lack of support for collaboration, mainly in the form of a myriad of other more ostensibly important things for teachers to be doing throughout the day. Collaboration can be quite difficult, even with the most willing groups of teachers, as it is necessary to take time out of an already busy schedule and also due to the energy required of the already exhausted teachers. The basis for the benefits of collaboration naturally stem from the dialogues and communication of the group members. Thus it is worth investigating the nature of dialogic inquiry.

5.1 Dialogic inquiry and collaboration

Wells (in Lee, 1999) describes how sociocultural and social constructivist theories have come to greater prominence when dealing with the challenges of education in this rapidly changing world. He describes how Lave and Wenger’s situated learning concept allows us to look at our situated activities, such as our workplaces activities in a new way, as chances for change and growth. As such, learning becomes an integrated part of life, rather than a separate activity. This is reminiscent of the concept of lifelong learning, a term commonly used in Japan when discussing education reform - しょうがいがくしゅう (生涯学習), which is also frequently used in the Chinese idiom 话到老、学
到老), or “live to old, study to old.” The lineage of this assertion stretches back to Solon (c. 638-c. 558 BC), one of the founders of Athenian democracy, stating in Plutarch (1914) Solon (Chapter 31-3), "I never cease to learn as I grow old."

Lifelong learning in the workplace CoP involves construction of knowledge through dialogue with peers. According to Wells (1999), dialogic knowledge construction, which is the basis for the learning involved in the collaborative lesson study framework, has the following three key features.

1. It is an intrinsic part of “doing things.”
2. It is created between people.
3. It occurs in their collaborative meaning-making through discourse.

Lesson study provides an example of the first feature, because the goal or object of the activity is defined in this case, by the lesson. The lesson defines the situated nature where learning can occur in a setting with common or overlapping goals. The second feature is also implicit in lesson study, as it requires people to work together on the lesson. This is the social aspect of knowledge construction. The third feature is enacted through lesson study as the members negotiate meaning through discussion, reflection, observation and the sharing of knowledge and ideas. Franklin (1996) sums up this process of the creation and recreation of knowledge as being “in the discourse between people doing things together.”

When thinking about learning and teaching in the modern, post-transmission model world, some of the important implications are summed up in the following list by Wells (1999, p. 59):

1. The classroom is seen as a collaborative community.
2. Purposeful activities involve whole persons.
3. Activities are situated and unique.
4. Curriculum is a means not an end.
5. Outcomes are both aimed for and emergent.
6. Activities must allow diversity and originality.

The idea of the curriculum being a means not an end, is similar to the idea in lesson study which is that the actual benefits of lesson study are seen as coming from the process of collaboration, resulting in teacher development, rather than from on narrowly focusing on trying to make a ‘perfect lesson’.

In order to clarify the central role that dialogue has on knowledge building, Wells (1999) came up with the construct of the spiral of knowing.
In it, ones’ experiences are enhanced by the information gained from others through collaboration. The goal of understanding is attained through knowledge building conducted through progressive discourse, which is focused on solving the problems encountered in the activity. The two-headed arrow relating action and the cycle of knowing shows how cycles of knowing can dynamically interact with the outcomes of the activity. This cyclical nature of development has similarities to the cyclical improvement found in the lesson study cycle.

Figure 1. The spiral of knowing (Wells, 1999).

The first segment in the spiral, experience, refers to the collaborative first-hand engagement in activity; information is what comes from others, be it speech, print or other artifact; and the process of knowledge building is what leads to the goal of understanding. The key to this is “progressive discourse” of activity-focused dialogue (Wells, 1999).

Here again we can see parallels to the collaborative lesson study framework, where the focused object is answering the question of how to create an effective lesson and enact the personal and professional development goals of the teacher.

6.0 Action Research and Lesson Study

Ferrance (2000) notes that action research (AR) originated with the work of Kurt Lewin, a social psychologist who coined the term for work he conducted in the 1940s in which he connected research with actions needed to solve problems. Lewin created a cyclical pattern, which repeated steps of planning, acting, observing, and reflecting. Ferrance credits Stephen Corey of Columbia University as being one of the first to
implement action research in an educational context and cites Corey’s thinking on the empowering and autonomy building nature of this new research tool:

"We are convinced that the disposition to study … the consequences of our own teaching is more likely to change and improve our practices than is reading about what someone else has discovered of his teaching." (Corey, 1953, p. 70)

AR involves teachers researching their own classrooms in a systematic way. It assumes that teachers are the best people to decide which problems are relevant to them, that they become more effective when they examine their own work, that they can help each other through collaboration and that collaboration leads to professional development. It can be done alone or collaboratively and it focuses on finding knowledge for improvement, not knowledge for knowledge’s sake. Simply put, it focuses on the ‘how’ rather than the ‘why.’ According to Ferrance (2000, p.9), the explicit steps involved in action research are:

1. Identification of problem area
2. Collection and organization of data
3. Interpretation of data
4. Action based on data
5. Reflection
6. Next steps

6.1 Action Research and Collaboration

Although AR can be carried out alone, Stringer (2007) notes that, “The most successful and productive action research occurs where individual participants have the opportunity to talk extensively about their experiences and perception” (p. 87). The benefits of collaborative action research are also mentioned by Burns (2010, p. 8), “… [M]y teacher colleagues have emphasized the many advantages of working collaboratively with other teachers as this allows for new ideas and insights to be shared.” Burns (2010, p. 44) also writes, “In addition, a group of colleagues working on a common research topic or area can create a very supportive way of doing action research that allows you to extend and challenge your own reflections and findings through ongoing dialogues.” It is this sort of back and forth conversation, along with the mental support gained by sharing responsibility that opens up new possibilities and ways of thinking that might never have been achieved otherwise.
6.2 Action Research and Teacher Autonomy in the Postmethod Condition

Action research is a direct way for the teacher to engage in autonomous behavior, as it is motivated solely by the teacher and every aspect of the plans are created and evaluated by the teacher. Vieira (in Oxford, 2003) notes that developing action research plans can help teachers to free themselves from the paralyzing constraints of their situations and challenge the limits of their freedom, giving them ‘space for maneuver.’ Izumi (2009), also notes that it is an effective method of training professional teachers and improving lessons, and after studying its usage with Japanese teachers and ALTs, concluded that it helped develop autonomy, and was desirable for teacher training and professional development.

6.3 Action Research in the Form of Lesson Study

Lesson study originated in Japan about 100 years ago, but did not became well known in the United States until 1999, through the Third International Mathematics and Science Study (TIMSS). The term lesson study is a direct translation from the Japanese, jugyo kenkyu (授業研究), and is also occasionally known as ‘lesson research.’ It usually involves observation of a lesson by a group of teachers who collect data on teaching and learning and then collaboratively analyze it. (Noffke, 2009).

In Noffke (2009), lesson study is defined as: a system for building and sharing practitioner knowledge that involves teachers in learning from colleagues as they research, plan, teach, observe and discuss a classroom lesson. Lesson study’s inquiry cycle is consistent with the common, three-pronged description of action research (Noffke, 1997).

Lewis (2011) summarized the differences (Table 1, below) between the lesson study approach towards teacher development and the traditional transmission model.

<table>
<thead>
<tr>
<th>TRADITIONAL</th>
<th>LESSON STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begins with answer</td>
<td>Begins with question</td>
</tr>
<tr>
<td>Driven by outside “expert”</td>
<td>Driven by participants</td>
</tr>
<tr>
<td>Communication: trainer ⇒ teachers</td>
<td>Communication: among teachers</td>
</tr>
</tbody>
</table>

Table 1. Traditional Teacher Development contrasted with Lesson Study (Lewis, 2011, p. 7)
Lewis (2008) created a five-stage version of the lesson study cycle as: goal setting; lesson selection and planning; teaching with peer observation; debriefing the lesson; and consolidation of learning.

Lewis (2008) points out that the instructional improvement does not come from the improvement in lesson plans *per se* but rather that the planning, curriculum study, research lesson, data collection, revisions, etc. lead to improvement.

### 6.4 Lesson Study and the Complexity of Teaching and Learning Environments

In describing the topic of teacher development in the postmethod condition, Laskowski (2009) explains that classrooms are too unpredictable and complex for a scientifically designed approach towards teacher development. There are too many variables and personalities interacting in
unpredictable ways. This dynamic makes any blanket statements about teaching pointless with regards to the specific reality of a particular classroom, for a particular teacher on a particular day.

This is where the benefits of the collaborative approach of lesson study can help the postmethod instructor find a way to solve real problems in a real classroom, with peers who have a much closer understanding of the complexities involved. It is interesting to note that action research was being introduced to Japan in the 1990s just as lesson study was being imported to America (Laskowski, 2009). There could be a case made for the idea that Japan has to some extent forgotten or begun to neglect this teacher based research paradigm, the value of which is becoming widely recognized around the world. Lesson study research, particularly in mathematics education, is a vibrant research field in the US (Burroughs, 2010; Fernandez, 2002; Fernandez & Yoshida, 2004; Lampert & Ball, 1998). In Japan, collaborative lesson study appears to be more frequently conducted at the elementary school level. This is perhaps because the teachers must teach a variety of subjects, making the benefits of collaboration, due to differences of expertise, more tangible. This is in contrast to the secondary school level where teachers are specialists in their fields.

Figure 3. Showing how shared learning occurs through the lesson study (LS) framework

In figure 3 above, any lesson study member may have something to offer any other member, regardless of age or experience, equally participating in
a dialogic construction of knowledge through social mediation resulting in shared learning.

6.5 Key Differences between Action Research (AR) and Lesson Study (LS)

The main difference between AR and LS is the focus of the research. According to Laskowski (2009), though they both involve observing, thinking, taking action, reflecting and revising, LS focuses on the lesson, which is a teaching and learning episode while AR, on the other hand, focuses on solving a problem through the use of cycles.

Regarding the reasons for focusing on a lesson, Laskowski (2011) points out that the lesson underpins all of the vital components inherent to a teacher’s methodology. Another key point Laskowski clarifies is that lesson study, while aiming at teacher development, must maintain the position that everything about the planning and teaching is focused on the learner, rather than teacher behaviors. By removing the focus from the teachers and making the object of scrutiny the intended learning, we take unnecessary pressure off of the teachers, while at the same time focus our priorities where they should be, on the learner.

7.0 Conclusion

In this paper I have attempted to show that Vygotskian sociocultural theory supports the notion of using collaborative lesson study as a means of re-engaging educators trying to recapture their autonomy in the face of the postmethod era. There are few studies showing the effects of using collaborative lesson study in the secondary and tertiary levels of language education in Japan, which I believe represents a research gap necessitating further study.

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