

# A first time lesson study that turned into a learning study

Lesson study  
that turned  
into a learning  
study

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## Abstract

**Purpose** – The purpose of this paper is to present an implemented lesson study (LS) in English as a second language course for 11-year-old students in the fifth grade. The aim of the research lesson was to learn how to describe a person systematically.

**Design/methodology/approach** – Two LS cycles in two different classes were conducted and evaluated using systematic observation, case student interviews and student feedback. The data were analysed by the involved teacher team and the mentor.

**Findings** – The study shows that and how LS and variation theory promotes theory-based lesson preparation and postprocessing as well as team orientation among teachers without LS experience. Second, the lesson data show how elements of variation theory lead to a significant improvement in student learning activity.

**Originality/value** – This paper provides insights how teachers apply a first time LS and variation theory and how this effects student learning positively.

**Keywords** Learning study, Lesson study, Variation theory, English as a second language, Second language learning, Teachers perspective

**Paper type** Case study

## 1. Introduction

This study was carried out during a two-year Professional Development Course (CPD) for English teachers. The course was one of several courses for different subjects within the long-term university programme “Pedagogy and Didactics for Teachers” (PFL) of the University of Klagenfurt, Austria. The purpose of PFL is to help teachers to critically reflect on their own professional activities. Action research and peer learning in professional communities are its methodological basis. PFL aims at encouraging teachers to develop higher self-determination, problem-orientation, closeness to the teaching activities at school and professional communication (Posch, 1986; see also Rauch *et al.*, 2014). The philosophy of PFL and the course in which the present study emerged are described in two articles (Hanfstingl *et al.*, 2018; Hanfstingl and Pflaum, 2019, resubm). The teachers were familiarised not only with the techniques of action research, but also with the basics of Japanese lesson studies (LS) according to the approach of Dudley (2014).

As part of the curriculum, participating teachers are asked to conduct an action research study in their own class, with professional support from a mentor who is member of the PFL

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course team. One of the participating teachers was keen to try a LS in her class together with her other English teacher colleagues. This teacher is the first author of the present contribution because she is author of the documentation of this case study (parts 2 to 4). The co-author, who is responsible for framing the paper (parts 1 and 5), supervised the first author and helped her to carry out the study at school, analyse and reflect on the results of the two cycles and finally write down her experiences to share with other language teachers. This paper focusses primarily on the teachers' experience of how LS can contribute to their perspectives on the classroom, on their students and on how learning works. It turned out that the logic of variation theory (Lo, 2012, 2015; Lo and Marton, 2011; Marton and Pang, 2008) made a special contribution to improving the quality of teaching. The second purpose is to illustrate an LS in which teachers more and more successfully integrated variation theory.

## 2. Case study

During the two years of PFL we, the team of English teachers, have learned several lessons about our and the students' learning processes. For example, we learned that there are different approaches to instructional development that especially focus on student-centred teaching, which allows students to learn and discover things individually and at their own pace. Learning is a very personal journey; therefore, it is of utmost importance for teachers to keep an eye on student learning processes. Action research and LS are important strategies for researching on one's own teaching (Feldman *et al.*, 2018). We learned that LS directs our attention to students' learning, that lesson planning as a team reduces stress to be responsible as an individual for the students' learning process and that the participation of the team in the research lesson increases their shared responsibility (Dudley, 2014). LS fulfils a number of conditions that several studies validated to be particularly effective for teachers' training and instructional development. Timperley *et al.* (2007) analysed seven effective contexts for promoting professional learning opportunities that impacted a range of student outcomes. Three conditions are relevant for our study (p. 27): the engagement of teachers in the learning process; iterative cycles of thinking about alternatives and becoming aware of learning gains resulting from changed teaching approaches; and participation in a professional community of practice with opportunities to process new understandings and challenge problematic beliefs, with a focus on analysing the impact of teaching on student learning.

How variation theory came to our mind? Originally, we were not planning on using variation theory because it was our first LS and we were afraid to overwhelm ourselves and the students. However, based on the results of the first cycle, we have learned that we could improve students' learning outcomes by using this approach. What we particularly appreciated was that variation theory focusses on students' subjective perspectives on a phenomenon and its interpretations, and that as teachers we need to understand these interpretations to help students learn (Marton, 1981). The use of variation theory helped us to better structure our teaching and understand where the students' problems lay in understanding the content. We, the English teacher team, were surprised that one of the reviewers showed us that we had used variation theory already in the first cycle. This point we illustrate in part 4.

We conducted the LS in school year 2016/2017 as a team of five English teachers working in a rural lower secondary school in Austria. When I, the first author, was informed about Dudley's (2014) approach to LS, I wanted to learn more about the philosophy and goals of LS and maybe even try one. I introduced my colleagues into LS and its ideas in a first team meeting. We all had team teaching experience in English lessons but never had conducted a LS. We decided to try LS with students of the fifth grade and to run two LS cycles in two parallel classes. Both classes are very similar in terms of group size and activity level, therefore a good comparison between the first and the second cycle seemed

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possible to us. We opted for a very simple and pragmatic allocation of roles: Both cycles were carried out by me, the first author. The other four teachers visited both cycles and focussed on observing the learning activities of the case students. How the case studies were selected is explained in Section 3.3.

### 3. First cycle

#### 3.1 *Learning goals for the lesson*

Every beginning of the school year, we create learning designs, subdivided into core ideas, longer-term goals, achievement goals and knowledge goals based on the curriculum. For the LS, we selected the learning design “Describing People”, aiming primarily at listening and speaking competences. Since personal descriptions in real life are more likely to be done orally, the writing competence remained in the background. We divided the lesson plan into different parts and fixed the learning goals for the lesson, which are summarised in the following.

The students can...

... describe people’s looks and clothes orally.

The students know...

words:

- parts of the body
- clothes
- colours
- adjectives for describing people
- adjectives for describing things

Grammar:

- have got (affirmative, negative)
- structures: He/She wears...

The students understand that...

... the description of a person helps to find the person again.

... an accurate, detailed description enhances the chance to identify the person when looking for him/her.

Task:

Students are asked to provide a detailed description of a lost mother/father, when looking for her/him in a city.

#### 3.2 *Lesson plan for the first cycle and didactical considerations*

According to the learning goals above, we developed the following schedule for the first 50-minute research lesson (Table I).

What are the didactical considerations behind this lesson plan? Apart from grammar and the four skills of listening, speaking, reading and writing, the use of vocabulary is the essential element for communication in a foreign language (Cameron, 2001; Nation, 2001). Takač (2008) and Milton (2009) point out that it is essential to repeat recently introduced terms in various activities in order to give learners the opportunity to better internalise the new vocabulary. Thus, the preliminary exercise at the beginning of a lesson has to activate existing vocabulary knowledge. By showing pictures and naming the words in the class, the learners are provided with visual and auditory input at the same time. Different methods should be regularly offered in foreign language teaching so that as many of the learner’s factors influencing the language acquisition process as possible are included.

	Time	Topic	Method	Expected student answers	Competence
Beginning	10 min	Revision of already learned vocabulary and grammar	The teacher shows pictures of different clothes; the students say the correct English word short revision of the structure "have/has got" on the board in turn, students say a sentence about the person sitting next to them	Trousers, T-shirt, pullover, skirt, etc. "Andreas has got short hair." "Maria has got blue eyes"	
Main part	10 min	Reading task – description of people	Two reading texts are handed out; the students read them silently; they match each text with the correct picture; then it is discussed why the second text cannot be matched clearly with any of the pictures	The students read and recognise that a detailed description is necessary to find a person again	Reading
	10 min 7 min	Speaking	The teacher shows the task on the board: You are in London with your mother/father. Suddenly you cannot see your mother/father anymore. You ask people if they have seen her/him. Describe what your mother/father looks like then the students describe their mother/father to the person sitting next to them	The students listen and read the task on the active board the students describe their mother/father	Speaking + listening
	15 min	Presentations	Some students present their description to all of their classmates and the teacher; the other students provide feedback	The students describe their mother/father or they listen and give feedback	Speaking + listening
Ending	5 min	Feedback to the teaching team	The students write down what they have learned in this lesson		

**Table I.**  
Lesson plan –  
first cycle

In order to be able to better link memory structures with one another, it makes sense to combine linguistic and pictorial elements, because the more diverse the brain is addressed, the easier it is to establish links (Pinter, 2006).

The part with description of the classmate next to oneself aims to repeat the structure "have got", the vocabulary of the body parts as well as the adjectives. This should facilitate the subsequent speech exercise. The experience of our LS team also shows that particularly weaker students often find it difficult to incorporate adjectives into sentences. This second exercise at the beginning of the lesson is intended to provide support by consciously connecting the vocabulary (body parts and adjectives) and using them concretely in a sentence related to a real person.

The aim of the reading exercise was to independently recognise what constitutes a good personal description on the basis of the two contrasting reading texts. We intentionally used the method of inductive learning here. In contrast to the deductive approach, in which the teaching is controlled by the teacher, the inductive method focusses on observing how the students discover and recognise rules. Instead of practicing a concept given by the teacher with examples, the teacher provides several examples with the inductive approach, so that the learners can recognise how the concept works or according to which rules it is constructed (Sik, 2015; Shaffer, 1989). We were of the opinion that the use of the inductive method could be more profitable here, since the learners have to deal intensively and independently with the topic and thereby experience for themselves that a detailed description is essential for a good personal description.

The speaking task was intended to offer the children a situation as authentic as possible in which they can demonstrate their competence. The students' interest in a learning topic depends to a large extent on whether it has a connection to their environment and is therefore relevant to them at all. This in turn has an impact on their performance (Hattie, 2009). The subsequent practice phase with the partner should serve as preparation for the presentations and thus take away the inhibitions of having to speak immediately in front of the whole class. Tension or anxiety leads to the inability to achieve positive learning results. On the other hand, various studies have shown that it is possible to improve performance if stress situations are reduced. Hattie (2009) points out that it should be the task of every teacher to consider suitable methods that do not hinder the learning success of the students.

Through the short feedback phase, the students should learn to assess speech performance and give constructive feedback. Giving feedback is an essential element in assessing and developing learning (Hattie, 2009; Hattie and Timperley, 2007). Experience has shown that students also appreciate it when their opinions are in demand in the classroom and are the basis for discussion and further development.

### *3.3 Selection of case students, creating the observation sheet and developing questions for the interviews with the case students*

At our third meeting we decided that I, the PFL participant and first author of this contribution, am the one who leads the lesson, both in the first and second cycle. The other four teachers take on the role of observers. The observing team members selected four students, one for each observer, whose learning activities they were going to monitor during the lesson (case students). The teaching person was not informed about the selection of these case students to avoid unconscious influences on the students. For the observation of the case students, we developed an observation sheet based on the lesson plan. On this observation sheet, on a scale from zero to five, the team members logged the activity level of the case students at five-minute-intervals. In addition, there was space for notes on the observed activities and/or students' responses, which should complement and/or explain the level of activity. Each of the teachers focussed on one of the case students.

The case students were selected according to their achievement level (high, medium, low), as far as it could be seen during that school year. For each of the three levels of achievement, one student was selected. Since the teacher team consisted of five people and four people were available to observe the case students, we agreed to take another student with average level.

In addition, we developed a short interview guide for the four case students:

- Motivation: What did you like most?
- Learning difficulties: What was unclear to you or what was difficult?
- Possible gaps: What else would you like to know?

The observing teachers asked the case students these three questions right after the lesson. Dudley (2014) argues that the interviews should take no longer than five minutes and that they should be done immediately after class. In our study, the four observed case students were interviewed individually.

3.4 Results of the first cycle

The data material for the first research lesson consisted of the team members' structured observation of the case students, the case students' interviews, the students' feedback provided at the end of the lesson and the teaching teacher's notes taken after the lesson.

3.4.1 Analysis based on the observers' view. Based on the observations of the observing teachers, we created a graphical representation of the performance in the respective teaching phases for each case student right after the first cycle. In a first step, this number was created with Post-it Notes on a flipchart, so that the teacher team could discuss and reflect this data directly. The vertical axis shows the intensity of the learning activities. The horizontal axis describes the essential phases of the teaching process (Figure 1).

We analysed together the learning activities of the case students and the notes of the observing teachers. The analysis showed that especially with the vocabulary revision a high motivation of the students was recognisable. The observed responses were consistent with the answers originally expected in the lesson-planning session. However, the results also showed that three out of the four observed students were distracted while forming sentences with the structure "have/has got" at the beginning of the lesson (students B, C and D).

Almost all students were observed to be busy with the reading task. Student A (high achievement level) was seen to finish the task relatively quickly and then get bored.

Both student B and student C (children with intermediate achievement levels) had problems with the reading task because the second text was not associated with a picture. Student D (low achievement level) seemed not to be very concentrated when doing the reading task.

All four students showed a similarity when doing the speaking task: everyone seemed to be a bit insecure at first and needed a long time to get started. However, when the presentation was in progress, the students seemed to enjoy the task they had been given. Remarkably, students B and C first began with describing details such as the eye colour or jewellery.

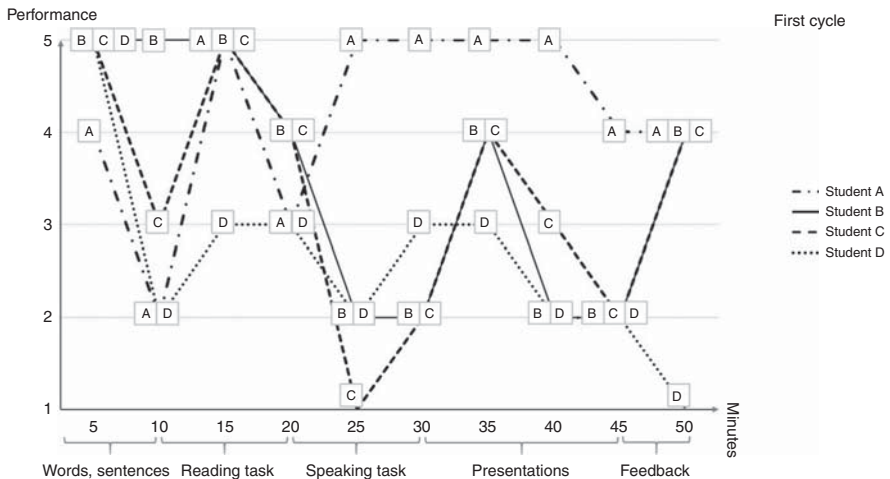


Figure 1. Learning performance of the four case students during the first cycle

Student C of the four case students was – coincidentally – among those children who volunteered for the presentation in front of the class.

It was clearly recognisable that the performance was quite different for each of the four case students. While student A's speaking practice had a high performance, the other case students were not rated particularly high. The students also showed a higher variance of performance at the beginning of the lesson (vocabulary revision, forming sentences) and during the reading exercise.

*3.4.2 Analysis based on the interviews with the case students.* In Table II, the case students' answers of the interviews are summarised.

*3.4.3 Analysis based on the teaching teacher's perspective.* This part is provided in the first person and it is the original summary of the teaching person's perspective who is also the first author:

I noticed that the children really liked the picture cards. I felt that the grammar "have got" was actually clear to all children. Moreover, I noticed that when describing the seat neighbour, some students were distracted. During the work with the reading texts, I immediately noticed which of the children recognized the intention behind this task. The discussion about a good people description seemed to be interesting for all the students. When the children started with the speaking task, I noticed that some students did not quite know how to get started. The two presentations were very successful in the areas grammar, vocabulary and pronunciation. However, I noticed that during the first presentation both students put special emphasis on the details of their description. The first child even began with the description of the accessories before even mentioning the size or hair colour of the person. In the second presentation, I noticed that the student described the mother's eye colour in the first sentence.

*3.4.4 Analysis based on the students' perspectives.* The evaluation of the written feedback from all students, which they gave in the last-five minutes of the lesson, revealed that most of the children said they had learned how to describe a person (14 out of 18 students). Seven students also mentioned that a detailed description was important for finding a person.

Case student	What did you like most?	What was unclear to you or what was difficult?	What else would you like to know?	Further comments
Student A (high achievement level)	Pictures; speaking task			Forming sentences with "have got" at the beginning of the lesson was too long and boring
Student B (medium achievement level)	Pictures; reading task; speaking task	Had problems imagining mother's looks; did not know where to start the description; started with the details – due to the previously discussed importance	More words so that the description can be more detailed	Would have needed more time to do the speaking task with the partner
Student C (medium achievement level)	Pictures; speaking task	Could not decide whether to describe father or mother; needed a lot of time to actually start speaking	More words so that the description can be more detailed	
Student D (low achievement level)	Pictures; speaking task		More words so that the description can be more detailed	

**Table II.**  
Analysis based on the interviews with case students – first cycle

### *3.5 Team reflection on the first cycle*

The data from the teaching teacher's perspective, the observation of the case students, the interviews of the case students and the written feedback from all students served as the basis for the discussion at the next team meeting. Observations of the case students' performance showed that the second phase of the lesson (revision of grammar, forming sentences) took far too long and was not necessary because the grammar did not cause any difficulties. It also showed that the performance was relatively low at the beginning of the actual speaking task, which happened – according to the students' interviews – because they could not concretely imagine what clothes their mother/father wore. Little concrete, and therefore not very helpful for the students, was the feedback on the speaking performances by the classmates, which was done in front of the entire class. Precise criteria for feedback could yield better results there.

### *3.6 Lesson learned*

Based on these team reflections, we were keen to enhance the teaching quality for the second cycle of our LS. Our students have learned that a good personal description depends on both general and detailed information. However, the students did not learn how to structure a good personal description. It was not clear to them that a personal description should start with general facts and only thereafter the details are mentioned, and not vice versa. We have learned that this is a case in which we could try to apply variation theory by defining the structure of a personal description as a learning object. The critical feature of this learning object is that the structure in which the personal description is presented is significant. The systematic variation of the structure of person descriptions represents the contrasting effect for the application of variation theory.

For the second cycle, we varied the structure of a personal description systematically: general information before details vs details before general information. In order to focus on this one critical feature of the structure, we have not changed the content of the personal description. After thinking about how we could realise that in class, we decided to offer the students three different types of personal descriptions, which they were required to graphically reproduce, one time beginning with general information, one time beginning with details. How we did this in detail is described below in Section 4.2. Through this procedure, students should see that when details follow the general description, a clearer picture of the person results.

## **4. Second cycle**

### *4.1 Lesson plan for the second cycle*

For the second cycle we wanted to keep the aspects of the lesson that worked well in the first cycle and add the exercise with the variation theory element. We also adapted the feedback and the talking exercise elements which did not work to our satisfaction in the first cycle. Table III shows the revised lesson.

### *4.2 Considerations for the second lesson plan and the application of variation theory*

The pictures at the beginning of the lesson were also used in the second cycle due to the positive feedback. During team reflection on the first cycle, we realised that the structure of the personal description has a significant influence on the success of the speaking task. To emphasise this, the team member who teaches the class should read out three descriptions to the students which they should draw on a sheet of paper. The first description was kept very short and hardly allowed a precise visualisation of the person. The second description began with a rough description (height, hair, etc.) and then went into details. The third description started with details like earrings, eye colour, etc. The intention behind it was



	Time	Topic	Method	Expected student answers	Competence
Beginning	5 min	Revision of already learned vocabulary	The teacher shows pictures with different clothes; the students say the correct English word	Trousers, T-shirt, pullover, skirt, etc.	
Main part	10 min	Structure for a good personal description	Students prepare colours; the teacher reads out three different personal descriptions; the students draw the person; discussion about what makes a good personal description	The students recognise that a detailed description is necessary to find a person again; they recognise that in a good description details follow general information	Listening
	10 min 7 min	Task criteria speaking (using a photo)	The teacher shows the task on the board: You are in London with your mother/father. Suddenly you can't see your mother/father anymore. You ask people. Describe what your mother/father looks like the criteria for a good personal description are discussed and written down on the board (fluency, detailed description, organisation/structure) The students describe their mother/father to the person sitting next to them with the help of the photo they have brought with them	The students listen and read the task on the active board the criteria are clear to all students the students describe their mother/father	Speaking + listening
	20 min	Presentations	Some students present their description to all of their classmates and the teacher; the other students give a short feedback	The students describe their mother/father or they listen and give feedback	Speaking + listening
Ending	5 min	Feedback	The students write down what they have learned in this lesson		

**Table III.**  
Lesson plan –  
second cycle

that the children should recognise that details are important for personal descriptions (comparing drawings 1 and 2), but that details should only be mentioned at the end of a description (comparing drawings 2 and 3).

Moreover, criteria have been set for students to give each other more efficient feedback (e.g. fluency, detailed description, logical order). Each student should note down the feedback on a sheet of paper. In order to avoid wasting time worrying about which clothes the students' parents wear, the children were asked in one of the pre-lessons to bring a full-body photo of one of their parents to the lesson. This photo then was the basis for the students' personal description.

#### 4.3 Selection of new case students and revising the observation sheet

The same teacher who taught the lesson in the first cycle should also teach the lesson in the parallel class. Also in this class four case students were selected, again according to the

criteria of their achievement level (high, middle, low), who were also unknown to the teaching person this time. Finally, we revised the observation sheet according to the new lesson plan.

4.4 Results of the second cycle

The data material for the second cycle research lesson is similar to the data material of the first cycle. It consisted of the team members' structured observation of the case students, the case students' interviews, the students' feedback provided at the end of the lesson and the teaching teacher's notes taken after the lesson.

4.4.1 Analysis based on the observers' view. As with the first cycle, we also visualised the activity in each teaching phase graphically based on the observers' records for each case student and graphically reproduced it with Post-It Notes on a flip chart right after the lesson. The vertical axis shows the intensity of the learning activity. Again, the horizontal axis describes the essential phases of the teaching process (Figure 2).

By reflecting the observation sheets we learned that again a high activity was noticeable in the vocabulary revision at the beginning of the lesson. Also, in the exercise for the development of a meaningful personal description, we observed high activity among all case students. For example, student AA (high achievement level) could very quickly implement the descriptions graphically. On the other hand, there was the observation of student DD, who was unable to follow the teacher's description of the third person, so this drawing completely differed from his seat neighbour's drawing. Moreover, it was exciting for the observing teachers to see which experiences the case students made when drawing the people described by the teacher. All four case students gave information about what was important for a good personal description when we discussed it in class afterwards.

During the speaking task all case students performed well. The most important factor here is that all groups started talking immediately. There were noticeably good results for students AA and CC. However, we noted quite different activities during the presentations in front of the class. While student AA – who could do her presentation in front of the class – and student CC showed a high activity, the other two case students' activity were not that high. Towards the end of the lesson the activity level decreased with all four case students.

4.4.2 Analysis based on the interviews with the case students. Again, we interviewed the four case students immediately after the lesson. Table IV summarises the students' responses.

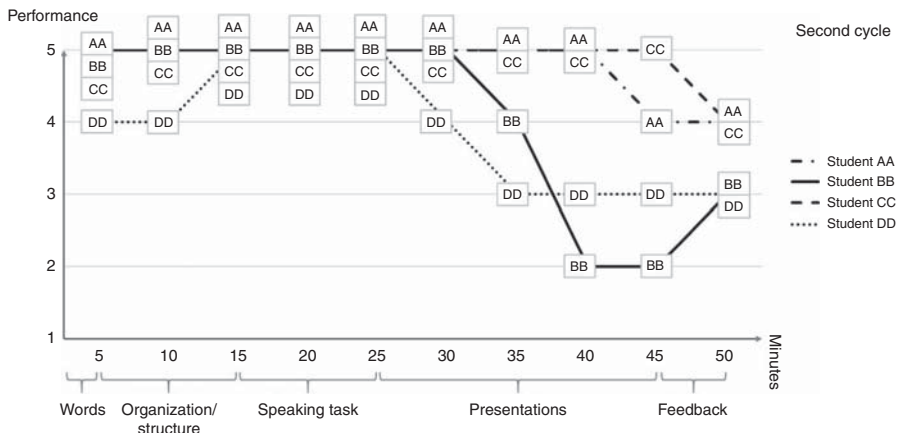


Figure 2. Learning performance of the four case students during the second cycle

**Table IV.**  
Analysis based on the  
interviews with  
case students –  
second cycle

case student	What did you like most?	What was unclear to you or what was difficult?	What else would you like to know?	further comments
Student AA (high achievement level)	Presentation in front of the class			Well-prepared because of the exact criteria, the knowledge about a good structure of a personal description and the words they had learned
Student BB (medium achievement level)	Pictures; speaking task	Had problems with the third drawing	More words so that the description can be more detailed	Could learn the structure of a good personal description through the comparison of the drawings
Student CC (medium achievement level)	Pictures; giving feedback			
Student DD (low achievement level)	Speaking task; drawings	Had difficulties with the drawings because of lack of time	More words so that the description can be more detailed	The good explanation by the teacher about how to give a good personal description helped the student

4.4.3 *Analysis based on the teaching teacher's perspective.* Again, this part is provided in the first person and it is the original summary of the teaching person's perspective:

At the beginning of the lesson, I had the feeling that many children wanted to say the picture words. When reading out the descriptions to the students, I realized that I had to slow down my speaking pace substantially to match the children's drawing speed. I also realized the differences in the children's work speed; while some could draw the descriptions immediately, others had problems with listening and drawing at the same time.

I was amazed by the fact that the intention of this task was immediately recognized by most of the children and therefore no longer needed to be explained by me. It seemed obvious to the children that details are important, and that the general description must be made before the detailed description.

The speaking task was well understood by the students. I explained the criteria accurately. I found the speaking task with the help of the photo to be very productive. The children started to speak immediately (compared to the parallel group) and I could only see a few pauses in their speaking when listening to individual groups, compared to the speaking activities of the parallel class.

The performances of the two children doing the speaking task in front of the entire class were very good and in line with the learning objectives of this lesson. Compared to the presentations in the first cycle, I noticed major improvements in the structure of the students' personal descriptions. They seemed to attach importance to organising the description in a meaningful way.

4.4.4 *Analysis based on the students' perspective.* In the written feedback, which was conducted in the last five minutes of the lesson, 17 out of 18 children stated that they had learned how to describe a person. It was interesting that nine students noted down that a meaningful structure, a good organisation and details were important for a personal description.

#### 4.5 *Team reflection on the second cycle*

The learning object – namely the problem of the structure of the text – was addressed by the drawing exercise. The observations, the interviews with the case students and the students' written feedback showed that this exercise had positive effects on the children's performance. Nevertheless, in our team we recognised that a differentiation within the drawing task would have been necessary in order to respond better to the different working speeds of the children.

Comparing the speaking activity in both cycles, we found that the students used more time for speaking through bringing a photo with them to class. Especially for students with lower achievement levels, a photo provides clarity, as can be seen in the comparison of the two students with low achievement levels (student D and DD).

Data shows that – all in all – we made the right decisions between the first and the second cycle. Regarding the first and the second activity curves (Figures 1 and 2), we found a significant improvement in the revised lesson plan. Both curves also show that we can improve the speaking activity by specifying precise criteria, making it also easier for students to provide constructive feedback for their classmates.

During the review process of this paper, a reviewer helped us to understand that, in fact, the lesson was based on two critical features, and one has already been implemented unintentionally in the first cycle. Between the first and the second cycle, we realised that the structure of the personal description matters. We have learned that students need to understand that a good personal description begins with general information followed by details about the person. However, what we have not realised is that the second critical feature is that there are two types of personal descriptions: general information vs detailed information about a person. We have already implemented this critical feature in the first cycle, although unintentionally, when they showed the students useful (first) vs useless (second) descriptions in the first ten minutes of the main part.

If we were to do this LS again, we would vary the two critical features of the learning object “People Description” as follows:

- Critical feature 1: two types of personal description: general description vs detailed description. Systematic variation: providing only general information vs providing only detailed information of a person.
- Critical feature 2: the structure in which the information is presented makes a difference: general description to detailed description vs detailed description to general description. Systematic variation: providing information from general to detailed vs providing information from detailed to general.

For a third cycle of this LS, this definition of critical features would be the starting point.

## 5. Final reflection and conclusions

The paper had two objectives: the first was to focus on the teachers’ perspective when familiarising themselves with action research, LS and variation theory. The description of the two LS cycles by the teachers themselves (parts 2 to 4) shows clearly how they learned from their team reflections and how they drew their consequences for their own teaching activities. In the first cycle, they were strongly oriented towards their learning design for the school year, which they had already developed before they came up with the idea of conducting a LS. However, they had a remarkable learning success during the whole process. For example, they recognised the advantages of teamwork according to LS. When preparing the research lesson the teachers of the LS team shared their ideas on how to implement the content in class. It was a new experience for them to see the different approaches and how they culminated in a joint design. For all team members, it was a new experience to see how colleagues start their teaching preparation and which ideas and previous experiences each individual teacher brought into the discussion. The teachers learned that the planning of a lesson with different approaches could work out better to enable student-oriented teaching. They also learned that preparing such a lesson means sharing responsibility for a lesson that relieves the individual teacher. Another result is that the professional cooperation within the team has been strengthened; the communication got focussed on the students’ learning process. In addition, they got motivated to pass on their

experiences to other teachers because they believed that the implementation of lesson and learning studies opens doors for innovative teaching approaches and new methods that do not yet have a tradition in the Austrian school system.

LS and the theory-based exploration of up-to-date learning and teaching approaches such as variation theory are predestined to improve the quality of teaching at several levels. The learning experiences of the teachers in this case study are in line with the aims of the PFL programme: higher self-determination, problem-orientation, closeness to the teaching activities at school and professional communication (Posch, 1986; Rauch *et al.*, 2014). LS and variation theory especially seem to focus teachers' attention on students' learning needs and on the critical elements of the learning content (see also Table 2 in Hanfstingl *et al.*, 2018; Ko, 2018). Variation theory encourages teachers to look at students' learning in a structured and theory-based way (Hanfstingl *et al.*, 2019; Lo and Marton, 2011; Marton and Pang, 2008). Recently, Marton *et al.* (2019) have highlighted the characteristics of variation theory in the context of educational objectives and have called for variation theory to be used to focus more on the learning content itself. Posch (2018), who sees the term action research as an umbrella term and LS as specification of it, points out the advantage of LS because one learning process takes place iteratively in two or three analogous cycles. The opportunity to run a second cycle in the present study helped a lot to deepen the learning progress on teacher and student level. After this research study, the PFL course team considers implementing LS and variation theory into the theoretical and practical foundations of the course.

The second goal of this paper was the presentation of a successfully performed LS in which more and more elements of variation theory were integrated. As already mentioned, originally it was not intended to implement variation theory in this LS for fear of being unable to cope. However, after the first cycle, the teacher team recognised which aspect was a critical feature for the students. The students were not capable to see that a personal description always starts with general information about the person and ends with details about the person. The team described it as a coincidence in joined reflection when they found that the structure of a personal description can be seen as critical feature and can be varied like variation theory suggests. They discussed this idea with their mentor and she also realised that it could be a very good and manageable way to improve the students' learning progress. At the end of the second cycle, everyone was surprised at how quickly the students had learned, which elements were essential for a good personal description and how concentrated they were working on the tasks.

It is hard to understand, how the team found the solution “accidentally” with variation theory. The teacher and first author, who taught the class twice during both LS cycles, heard of variation theory only in a very short and theoretical introduction without practical exercises due to lack of time. One possible explanation could be that variation theory, with its reference to phenomenography and its integration of several learning theories (Marton, 1981), bears a kind of intuitivity. Intuitivity means that variation theory takes into account theories based on natural and perhaps even innate processes, such as Jean Piaget's approach to cognitive development. Recently, Hanfstingl *et al.* (2019) provided a comparison between variation theory and Piaget's theory.

## References

- Cameron, L. (2001), *Teaching Languages to Young Learners*, Cambridge University Press, Cambridge.
- Dudley, P. (2014), *Lesson Study: A Handbook*, WordPress, San Francisco, CA, available at: <http://lessonstudy.co.uk/lesson-study-a-handbook/> (accessed 3 April 2019).
- Feldman, A., Altrichter, H., Posch, P. and Somekh, B. (2018), *Teachers Investigate Their Work – An Introduction to Action Research Across the Professions*, Routledge, New York, NY.

- Hanfstingl, B. and Pflaum, M. (2019), "Continuing professional development designed as second-order action research: outcomes and lessons learned", *Educational Action Research* (resubm).
- Hanfstingl, B., Benke, G. and Zhang, Y. (2019), "Comparing variation theory with Piaget's theory of cognitive development: more similarities than differences?", *Educational Action Research*, Vol. 323 No. 1, pp. 1-16, doi: 10.1080/09650792.2018.1564687.
- Hanfstingl, B., Abuja, G., Isak, G., Lechner, C. and Steigberger, E. (2018), "Continuing professional development designed as second-order action research: work-in-progress", *Educational Action Research*, Vol. 61 No. 5, pp. 1-12, available at: <https://doi.org/10.1080/09650792.2018.1490660>
- Hattie, J. and Timperley, H. (2007), "The power of feedback", *Review of Educational Research*, Vol. 77 No. 1, pp. 81-112.
- Hattie, J.A.C. (2009), *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*, Routledge, London.
- Ko, P.Y. (2018), "Beyond labels: what are the salient features of lesson study and learning study?", *Educational Action Research*, Vol. 22 No. 2, pp. 1-21, doi: 10.1080/09650792.2018.1530126.
- Lo, M.L. (2012), *Variation Theory and the Improvement of Teaching and Learning*, Acta universitatis Gothoburgensis, Göteborgs Universitet (Gothenburg Studies in Educational Sciences), Göteborgs, p. 323.
- Lo, M.L. (2015), "Boundary crossing and learning from variation", *International Journal for Lesson and Learning Studies*, Vol. 4 No. 2, available at: <https://doi.org/10.1108/IJLLS-02-2015-0008>
- Lo, M.L. and Marton, F. (2011), "Towards a science of the art of teaching: using variation theory as a guiding principle of pedagogical design", *International Journal for Lesson and Learning Studies*, Vol. 1 No. 1, pp. 7-22, available at: <https://doi.org/10.1108/20468251211179678>
- Marton, F. (1981), "Phenomenography – describing conceptions of the world around us", *Instructional Science*, Vol. 10 No. 2, pp. 177-200.
- Marton, F. and Pang, M.F. (2008), "The idea of phenomenography and the pedagogy of conceptual change", in Vosniadou, S. (Ed.), *International Handbook of Research on Conceptual Change*, Routledge, New York, NY, pp. 533-559.
- Marton, F., Cheung, W.M. and Chan, S.W.Y. (2019), "The object of learning in action research and learning study", *Educational Action Research*, Vol. 21, pp. 1-15, doi: 10.1080/09650792.2018.1489873.
- Milton, J. (2009), *Measuring Second Language Vocabulary Acquisition*, Cambridge University Press, Cambridge.
- Nation, I.S.P. (2001), *Learning Vocabulary in Another Language*, Cambridge University Press, Cambridge.
- Pinter, A. (2006), *Teaching Young Language Learners*, Oxford University Press, Oxford.
- Posch, P. (1986), "University support for independent learning – a new development in the in-service education of teachers", *Cambridge Journal of Education*, Vol. 16 No. 1, pp. 46-50.
- Posch, P. (2018), "Action research – conceptual distinctions and confronting the theory–practice divide in lesson and learning studies", *Educational Action Research*, Vol. 47 No. 4, pp. 1-15, doi: 10.1080/09650792.2018.1502676.
- Rauch, F., Zehetmeier, S. and Erlacher, W. (2014), "Thirty years of educational reform through action research: traces in the Austrian school system", in Stern, T., Townsend, A., Rauch, F. and Schuster, A. (Eds), *Action Research, Innovation and Change: International Perspectives across Disciplines*, Routledge, New York, NY, pp. 27-42.
- Shaffer, C. (1989), "A comparison of inductive and deductive approaches to teaching foreign languages", *Modern Language Journal*, Vol. 73 No. 4, pp. 395-403.
- Sik, K. (2015), "Tradition or modernism in grammar teaching: deductive vs. inductive approaches", *Procedia – Social and Behavioral Sciences*, Vol. 197, pp. 2141-2144, available at: <https://doi.org/10.1016/j.sbspro.2015.07.340>

- 
- Takač, V.P. (2008), *Vocabulary Learning Strategies and Foreign Language Acquisition*, Cromwell Press, Clevedon.
- Timperley, H., Wilson, A., Barrar, H. and Fung, I. (2007), "Teacher professional learning and development: best evidence synthesis iteration", available at: [www.oecd.org/education/school/48727127.pdf](http://www.oecd.org/education/school/48727127.pdf) (accessed 3 April 2019).

Lesson study  
that turned  
into a learning  
study

#### Further reading

- Lewis, C. and Hurd, J. (2011), *Lesson Study Step By Step. How Teacher Learning Communities Improve Instruction*, Heinemann, Portsmouth.

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