

# Teaching as a team – more than just team teaching

## *Collaborative teaching and learning in teacher education*

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### **Abstract**

This article focuses on the development of teacher trainees' co-teaching skills based on the results from a small scale ethnographic research project in initial teacher education for English as a foreign language in secondary schools. It describes the social and psychological foundations of collaborative teaching and learning drawing on insights from social interdependence theory and presents six models of co-teaching in the context of teacher education from a theoretical perspective as well as in their practical application with a focus on modern foreign language education.

## Im Team unterrichten – mehr als nur Team Teaching

### *Kollaboratives Lehren und Lernen in der Ausbildung von Lehrerinnen und Lehrern*

### **Zusammenfassung**

Dieser Artikel fokussiert die Entwicklung von Co-Teaching Fertigkeiten von Studierenden des Faches Englisch als Lebende Fremdsprache in der Sekundarstufe auf der Grundlage von Erkenntnissen aus einer qualitativen ethnographischen Studie während der Ausbildung. Er beschreibt die sozialen und psychologischen Grundlagen von kollaborativem Lehren und Lernen auf der Basis von Erkenntnissen aus der Sozialen Interdependenztheorie und präsentiert Modelle des Co-Teachings im Kontext der Lehrerbildung aus einer theoretischen Perspektive und in deren praktischer Anwendung im modernen Fremdsprachenunterricht.

### *Keywords:*

models of co-teaching  
collaborative and cooperative teaching and learning  
social interdependence theory in teacher education

### *Schlüsselwörter:*

Co-teaching Modelle  
Kollaboratives und kooperatives Lehren und Lernen  
Soziale Interdependenztheorie in der Lehrerbildung

## **1 Introduction**

With the implementation of New Middle Schools (NMS) in Austria and a paradigm shift in education towards differentiated instruction in heterogeneous settings rather than streaming according to learner ability, the professional requirements for teachers are clearly moving towards collaborative teaching and learning. However, there is a clichéd picture of teachers as “loners” and teaching as “one of the three things people do behind closed doors”. This cliché has repeatedly been reinforced by some opinion makers in education who claim that teacher trainees are not being educated to become efficient team players or to collaborate in planning and implementing teaching.

In order to investigate this stereotypical view, a short term and small scale research project was initiated in 2012 when co-teaching<sup>1</sup> was introduced into course work and teaching practice at the University College of Teacher Education in Lower Austria. When the involved fifth semester trainees returned from their blocked teaching practice in NMS, the cliché seemed to be confirmed, which is why the project was prolonged into their sixth semester and extended to the next two cohorts. Moreover, non-participant observation and interviewing in selected NMS all over Austria was initiated. The project thus developed into small scale but long term ethnographic research. Thus the research interest shifted from a genuine interest in the description of the

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current practice of co-teaching in teacher education to a more elaborate reflection on the phenomenon of co-teaching, its social and psychological implications based on social interdependence theory and its effects on learning opportunities.

## 2 Theoretical background

Collaborative teaching is generally defined as a mode of instruction where two or more educators take joint responsibility for planning, implementing and assessing teaching and learning in one classroom. Sharing ownership, resources, and accountability they pursue specific objectives although each teacher's level of participation may vary and change throughout teaching. Co-teaching has several different names and sometimes even means quite different things to different people. It is often called "team teaching", especially in a German speaking context, although it is not synonymous with team teaching in its traditional form.

As suggested by Cook & Friend (2004), the traditional view of team teaching describes situations in which two teachers combine classes that would normally be taught separately to share instruction that is often interdisciplinary without improving the teacher-learner ratio. In co-teaching, they maintain, two different emphases are blended: firstly, co-teaching aims at a drastically smaller learner-teacher ratio and secondly, it blends multiple approaches to teaching in varying classroom arrangements with the goal to ensure achievement of all learners (see Table 2). Co-teaching thus embraces the inclusive notion that all learners should be welcomed and appreciated members of a learning community even if their abilities differ (ibid. p.6).

### 2.1 Co-teaching research

Whatever term may be used, teachers' descriptions of their collaboration in co-teaching vary from their best to their worst classroom experiences. Taking this into consideration, it does not seem easy to merge the diverse strengths, experiences, and viewpoints of the people involved to make co-teaching a worthwhile experience for both teachers and learners. However, various studies have confirmed that teachers' shared efforts in co-teaching increase the chances for a greater number and variety of learning preferences to be addressed.

While there is ample evidence from small scale research that co-teaching is the key for bringing people with diverse backgrounds and interests together to share knowledge and skills to individualise learning (Murawski, 2009), large-scale research on the academic benefits of co-teaching is still rare. Only a few studies have empirically measured the efficacy of co-teaching on learning outcomes and compared results statistically: three were conducted in primary schools, one in secondary education, and all of them in inclusive classrooms. These studies suggest that co-teaching does not create better or worse teaching or results (Zigmond & Magiera, 2001). While learners generally react positively to co-teaching, teachers, parents, and administrators are not convinced by its benefits. Large-scale research that may change this scepticism is scarce because of the diverse definitions of co-teaching in various settings but also because of the cohorts, which are "typically not similar enough to provide meaningful comparative data" (Hanover, 2012, p. 13). Heterogeneity, however, is not only the reason for the scantiness of quantitative research on co-teaching - it is its very essence and rationale. Therefore, it is not surprising that qualitative approaches are more frequently found in the diverse and complex settings of co-teaching because they are considered to provide thorough and trustworthy insights from inside the classrooms.

In the context of this qualitative study it is noteworthy to say that there is empirical data which suggests that teachers do not feel they received adequate training for co-teaching and that they lack planning time and resources for co-teaching settings (Seay, Hilsmier, & Duncan, 2010). Moreover, research proposes that time constraints affect teachers' feelings about their effectiveness. They get the impression that the perceived lack of time makes it hard to meet curricular goals or forces them into traditional modes of instruction despite the presence of a second teacher. To ease this problem, block scheduling has been recommended in order to allow for practical, task-based, and active learning as well as processing time (Dieker & Murawski, 2003).

Taking these claims into consideration, the demand for more research into the effectiveness of co-teaching is obvious. Moreover, an analysis of the professional needs of future and practising teachers who should engage effectively in co-teaching seems important to design teacher education and development in a meaningful and supportive way.

## 2.2 Cooperation and collaboration

Johnson et al. (2013, p. 10) suggest that “...teaching requires training and skill in and of itself ... [and] ... considerable teacher training and continuous refinement of skills and procedures”, because it is a complex task. Taking this seriously, teacher education would have to see co-teaching not only as a form of organising teaching and a class in theory but it would also have to implement co-teaching in the trainees’ courses to provide them with the direct experience of collaborative teaching and learning and guarantee its implementation in teaching practice. Thus, teacher education would have to conceptualise theoretical foundations of cooperative and collaborative forms of coursework and provide opportunities for the trainees to practise co-teaching actively.

Cooperative and collaborative learning are both grounded in constructivist theory, which assumes that learners discover knowledge through active participation and transform it into concepts they can relate to. New learning experiences reconstruct and expand knowledge and understanding, which are outcomes of transactions and dialogue between the learners and their teachers as well as between them. The lecturers’ roles are those of facilitators and gatekeepers who open up the languages and cultures of the new social and professional groups (e.g. scientists, linguist, historians, artists...) the learners want to join rather than those of knowledge providers. Education thus becomes an acculturation process through constructivist conversation. Bruffee (1995) suggests that in the early phases of this process foundational knowledge is best learnt through a cooperative approach, which should help learners enter the established knowledge communities and comprehend their cultures and norms. Through renegotiating new knowledge and understanding in collaborative settings, more complex areas of the established knowledge can be made available to them and non-foundational knowledge is derived through reasoning and questioning.

Non-foundational education differs from foundational in that it encourages learners not to take existing knowledge or authority for granted. Solutions or methods for arriving at answers provided by lecturers have to be challenged to participate actively in the learning and inquiry process. Thus, a different and more complex kind of knowledge is created which differs substantially from fact based and information loaded foundational knowledge.

While cooperative learning is still associated with the teachers as the orchestrators of learning, collaborative approaches transfer the responsibility for learning to the learners. The two approaches can be applied to initiate a sequential development from cooperative to collaborative learning in secondary education. At the tertiary level the transition becomes a continuum from a more controlled and teacher-centred approach to a learner-centred one. Collaborative learning ties in where cooperation ends and lecturers and learners share responsibility for and control of learning.

It seems crucial that teacher trainees experience input and intake as processes of social interaction in cooperative scenarios. They should use their autonomy in extending their critical thinking and reasoning skills to become more involved in and take control of the learning processes through collaborative activities. Collaborative learning is based upon consensus building through group members rather than competition in which individuals want to outperform others. Teacher trainees should learn to apply collaborative practice in their professional learning groups and in planning and implementing teaching to prepare the ground for an effective and rewarding co-teaching practice in their future careers. In order to do so, they have to understand the impact of their actions as members of learning groups and as the initiators of such groups.

## 2.3 Social interdependence theory and co-teaching

According to Johnson & Johnson (2009, p. 366) “social interdependence exists when the outcomes of individuals are affected by their own and others’ actions”. This is most certainly the case in co-teaching, which is why the concept of social interdependence should be considered in the discussion of the development of successful teaching collaborations.

Social interdependence, which is grounded in social interactional theory as described by Koffka (1935), Deutsch (1973), Deutsch & Kraus (1965), and Lewin (1935), can either be positive, negative, or non-existent. It describes how team members structure their goals, how they interact with each other, and how their interaction patterns impact the outcomes of their collaboration. The effectiveness of co-teaching can thus be seen as dependent on the social interdependence of the teachers involved, their roles, and the power-distance relationship they share.

Positive interdependence in co-teaching exists if teachers engage in collaboration with a mutual goal that can best be attained together. It results in positive interaction, i.e. teachers encourage and facilitate each other's efforts in the process of co-teaching, sharing equal roles and the same responsibilities and rights. Positive interdependence is supposed to create a psychological process of substitutability, positive cathexis, and inducibility.

positive interdependence creates	⇒ positive substitutability	Teachers <i>share mutual goals</i> and <i>complimentary roles</i> , i.e. one teacher's actions substitute for and contribute to those of the other. They benefit from <i>responsibility forces</i> , i.e. each other's efforts to achieve the shared goal and develop <i>individual accountability</i> and <i>personal responsibility</i> .
	⇒ positive cathexis	Teachers <i>care</i> , i.e. they engage in higher quality relationships, and invest in positive psychological energy outside the "self" (the pupils, the team partner, the working unit...).
	⇒ positive inducibility	Teachers are open to critical friendship and input by others, i.e. they are open to being influenced by and to influencing others (the team partner, the working unit, the school, the scientific community...).
	⇒ promotive interaction	Teachers act in trusting and trustworthy ways, they exchange needed resources and process information collaboratively in a shared effort of understanding. This facilitates the development of new insights and higher level reasoning. Promotive interaction in class provides a model for the pupils on how the subject is communicated effectively.
	⇒ positive outcomes	Teachers structure positive outcome interdependence. This increases the achievement and productivity of the team through the awareness that one teacher's performance affects the success of the other's. Achieving and valuing shared results promote psychological health and self-esteem.

**Table 1:** The outcomes of positive interdependence

Teachers who do not pursue shared goals or do not have any, engage in negative interdependence. Negative interdependence often goes hand in hand with feelings of inequality caused by the power of one teacher and the resulting distance of the other. This causes oppositional interaction in which individuals behave in a way that discourages collaboration, which may obstruct each other's efforts. No interdependence exists if teachers do not share common goals and behave as if they did not have shared goals.

This article will describe the various consequences of social interdependence and frame the following six models of co-teaching in the light of positive interdependence:

1. One teach, one observe
2. One teach, one assist (also called *One teach, one drift* or *One teach, one support*)
3. Parallel teaching
4. Station teaching
5. Alternative teaching
6. Team teaching

## 2.4 Models of co-teaching

As already discussed, co-teaching is not a synonym for team teaching. It is actually an umbrella term for six different models of co-teaching as described by the literature (Fattig & Taylor, 2008; Friend, 2003; Murawski, 2009; Zigmond & Magiera, 2001). Co-teaching can be organised in many different ways. To plan collaborative teaching efficiently, teachers should be aware of its various models.

Co-teaching model	Description	Used ....
One Teach, one observe	Both teachers agree on an observation goal. One teacher observes, the other teaches. After the lesson, both teachers analyse the collected information together.	... in new co-teaching situations ... when pupils should be observed or assessed ... in formative assessment (e.g. to monitor progress, to analyse learner needs...)
One Teach, one assist (One teach, one drift)	One teacher teaches while the other provides unobtrusive assistance to the learners.	... in practice phases ... when some learners require special support ... in phases which initiate processes which require close monitoring
Parallel teaching	The teachers work on the same content simultaneously by dividing the class.	... when a smaller teacher-learner ratio is needed to improve efficiency ... to provide more opportunities for active participation
Station teaching	The teachers organise teaching in stations that can be done individually. One teacher assists the learners while the other supervises a station, if needed.	... when the new content can be organised in non-hierarchical stations ... in practice phases ... when several topics are to be covered
Alternative teaching	One teacher teaches the larger group while the other works with a smaller group of learners who are given specialised attention.	... when learner needs vary strongly ... when enrichment is desired ... when some learners are following a parallel curriculum
Team teaching	Both teachers work together to deliver the content to the class at the same time.	... when instructional conversation is appropriate and meaningful ... when the goal is to demonstrate some kind of interaction to the learners

**Table 2:** Six models of co-teaching (adapted from Cook & Friend, 2004, pp. 14-21)

Most co-taught lessons are a combination of several models of co-teaching and hardly any lesson is simply a “team teaching lesson” from beginning to end. On the contrary, two or more educators teaching simultaneously or alternately for the whole of a lesson would certainly create overload. Moreover, lessons are generally not entirely teacher led. In modern foreign language education, team teaching plays an important role in the introductory and input oriented phases of lessons. However, the other five models are most certainly applied more frequently. In particular if learner autonomy and self-directed learning are anticipated, the most common role played by both teachers is that of monitoring learner progress (Scruggs, Mastropieri, & McDuffie, 2007). This was also found to be the case in most maths courses where team teaching is rare (Magiera, Smith, Zigmond, & Gebauer, 2005).

### 3 Methods

This small scale mixed-method research project used ethnographic data collected at the College of Teacher Education in Lower Austria and at schools in Burgenland, Carinthia, Lower Austria, Styria, Upper Austria, and Vienna between 2012 and 2014 to investigate the practice of collaborative teaching and learning in teacher education as well as the trainees' training needs. Moreover, it aimed at understanding how teachers, mentors, and trainees used co-teaching and how they perceived their roles and the power-distance situation in planning, teaching, and appraisal. It sought to take a systematic and holistic approach to investigating the real-life experience of co-teaching to understand unstated characteristics and to uncover the cultural practices that surround its practical implementation.

The project drew on the following methods of data collection:

1. Collaborative action research including participant and non-participant observation carried out by teacher trainees during their teaching practice: lesson plans, research reports, questionnaire A.
2. Questionnaire B answered by novice teachers after their first and second year of co-teaching and questionnaire C<sup>2</sup> answered by teacher trainees after their second and fourth semester of teacher education.
3. Non-Participant observation of forty-nine co-taught lessons in NMS in Burgenland, Carinthia, Lower Austria, Styria, Upper Austria, and Vienna and semi-structured post-observation interviews with the teachers.

#### 3.1 Aims

The collaborative action research pursued two goals: the first focussed on the usefulness of the implementation of a co-teaching lesson plan as a planning and teaching tool, on the relevance of graded goals and assessment criteria, and the applicability of the six models of co-teaching. The second concentrated directly on the co-teaching experience. The research delivered nine research reports, eighteen completed questionnaires, and sixty-three lesson plans.

Questionnaire B answered by novice teachers focussed primarily on the application of the six models of co-teaching and various forms of classroom management<sup>3</sup> during teacher training and in the first years of teaching. Questionnaire C pursued the same goals and second and fourth semester trainees handed in fifty-eight lesson plans.

The non-participant observation in NMS followed a semi-structured plan, as did the post-observation interviews. In addition to the description of co-teaching of experienced teachers, the research explored the changes co-teaching had brought about in the context of NMS schools and the implementation of standards in foreign language education.

This article concentrates on the description of the current practice of co-teaching in teacher education and reflects its social and psychological implications based on social interdependence theory and its effects on learning.

It seeks to answer the following questions:

1. Which co-teaching models do trainees get to know theoretically and practically during their teacher education course at the College of Teacher Education in Lower Austria?
2. Which co-teaching models and forms of classroom management do the trainees apply during their teaching practice?
3. Which co-teaching models and forms of classroom management do novice teachers apply?
4. Which co-teaching models and forms of classroom management do experienced teachers apply?
5. How do the various co-teaching models affect the pupils' learning environment?
6. How do social interdependence and power-distance situations affect co-teaching?

#### 3.2 Sample

The collaborative action research was carried out with eighteen trainees in their fifth and sixth semester in secondary teacher education between 2011 and 2012 and was extended to the next two cohorts of trainees between 2013 (eleven trainees) and 2014 (twenty-four trainees). The total sample thus comprised fifty-three trainees.

Questionnaire B aimed at the original group of trainees after their second year of teaching and the next cohort after their first year, twenty-nine teachers in total. Twenty-one novice teachers answered it. Questionnaire C was answered by fifteen of the thirty-two trainees.

The forty-nine non-participant observations and ten interviews were carried out in ten schools and included twenty teachers with five to thirty-two years of teaching experience. Fifteen teachers were female and five were male. Three teachers from academic secondary schools, one teacher from a commercial college and another from a vocational college were co-teaching at NMS, the remaining fifteen teachers were secondary school teachers. All teachers held degrees in English.

Sample		Size	Return rate; results
Action research	Trainees, 5 <sup>th</sup> and 6 <sup>th</sup> semester	18	100%; 9 reports
Questionnaire A	Trainees, 5 <sup>th</sup> and 6 <sup>th</sup> semester	18	100%; 18 questionnaires
Questionnaire B	Novice teachers, 2 cohorts leaving 2012 and 2013	29	72.4%; 21 questionnaires
Questionnaire C	Trainees, 2 <sup>nd</sup> semester	32	46.8%; 15 questionnaires
Lesson plans	Trainees between 2011-2013	85	121 lesson plans
Observation	Teachers with 5-20 years of teaching experience: 3 academic secondary school teachers 1 commercial college teachers 1 vocational college teachers 15 general secondary school teachers	20	49 completed schedules
Interviews	s.a.	13	10 interviews with teachers from one academic secondary school, one commercial college, one vocational college, and ten general secondary schools

**Table 3:** Research tools and sample

The collaborative action research was part of a course and thus delivered nine reports. The fact that the reports were assignments delivered a perfect return rate but the compulsory setting may have had an impact on the results, which may have been more positive to suit the situation. This had to be taken into consideration in the analysis. The questionnaires and lesson plans were collected in a non-compulsory setting and anonymized. The participants in the classroom observation study volunteered to be observed and interviewed. They were guaranteed the option to withdraw at any time.

### 3.3 Limitations

This study was carried out at just one teacher education institution in Austria and its results must therefore be seen in this context. Furthermore, the very small sample and varying backgrounds of the participants contribute to the fact that generalisations cannot and should not be made. Nevertheless, the insights gained from this small scale study can be projected to other settings and the lessons learnt can be shared to inform the practice not only of the people involved but also of those interested in the topic.

### 3.4 Analysis of data

Due to the complexity of co-teaching as a phenomenon and that of the target group, this research required a multi-method focus achieved through the application of several different methods of data collection. Data analysis through triangulation included the constant comparison of data as well as coding and theoretical sampling as suggested by grounded theory (Glaser, 2002; Strauss & Corbin, 1998).

Triangulation was used to bring together overt actions and statements and the agents'<sup>4</sup> possible implicit opinions in relating actions, statements, meanings, and assumptions to emerging categories, patterns, and trends. Eventually, interpretations could be drawn. The integration of different kinds of data, which were

collected to provide various perspectives and observations, sought to contribute to a better understanding of co-teaching and its impact on teaching and learning situation, thus adding rigor and depth to the investigation.

Data from the structured parts of questionnaires A and B as well as from non-participant observation were processed using EXCEL. The results were meant to deliver descriptive and referential data to supplement qualitative data in the process of triangulation. Therefore, statistical analyses, which would not have been meaningful due to the variation in the participants' backgrounds and in sample sizes, were not carried out. Answers to open questions and interviews as well as narratives from action research reports were processed electronically using MAXQDA (Kuckartz, 2001), which allowed conceptual ordering, coding, and axial-coding. Questionnaires, observations, and interviews were designed and analysed to focus on three strands:

1. Questions or actions relating to the models of co-teaching or classroom management in combination with the phases of the lesson and language skills
2. Questions or actions relating to the impact of the models of co-teaching or classroom management on learning environment and opportunities for pupils
3. Questions or actions relating to co-teaching experience, attitudes, co-teaching relationship, and perceived needs and challenges

Triangulation was organised according to the framework of social interdependence (see Table 1) and that of co-teaching models (see Table 2). Emerging themes in the process of constant comparison of data were planning, limitations through time and resources, team building and administration, issues of power and distance between trainees, mentors, and co-teachers, as well as issues of distance between theory and practice.

## 4 Results

The results in the following sections represent a selection of data collected in a small scale study carried out at schools in six federal states and in one teacher education institution between 2012 and 2014. The study concentrated on the implementation of co-teaching in the context of teacher education and lower secondary education and aimed at informing the practice of the people involved and of those interested in the topic.

### 4.1 Co-teaching models used in theory and practice

By and large this study confirmed previous findings (Scruggs, Mastropieri, & McDuffie, 2007; Hanover, 2012) that *One teach, one assist* is the most frequently found model of co-teaching. All trainees and novice teachers confirmed in questionnaires that they had been taught how to use *One teach, one assist*. All of them had also observed mentors or peers implementing instruction through this mode and their lesson plans confirmed the picture. Eighty-six per cent of the total teaching time was identified as *One teach, one assist*. However, the lesson plans did not deliver any information about the nature or direction of the assistance provided.

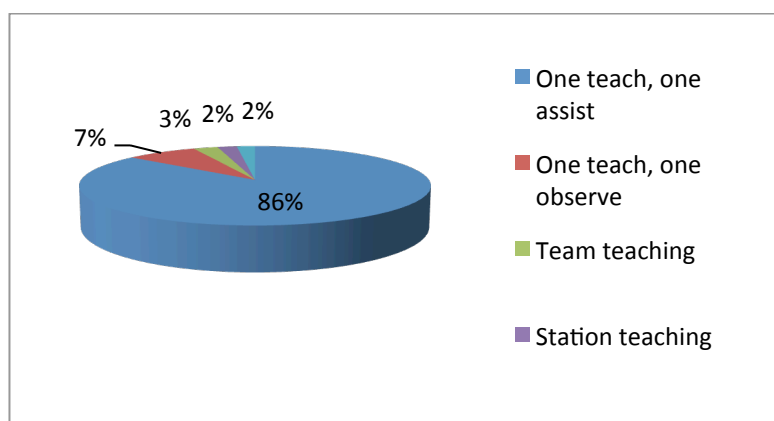


Fig. 1: Co-teaching models in 121 lesson plans

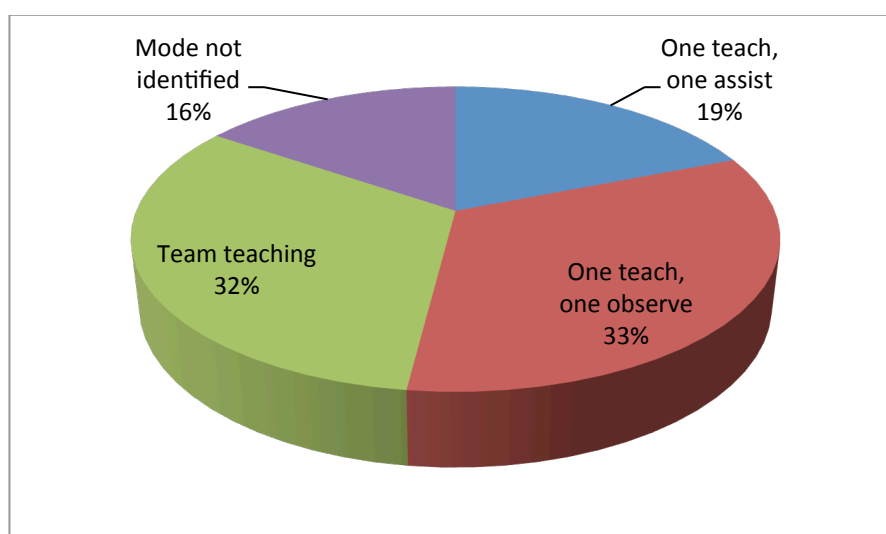


The trainees' lesson plans did not feature *Parallel teaching* or *Alternative teaching* and for about two per cent of the whole teaching time no information about the co-teachers' roles was given.

	Total	One teach, one assist	One teach, one observe	Team teaching	Station teaching	Mode not identified
Teaching time in minutes	6050	5195	156	458	124	117
Teaching time in %	100,00	85,87	2,58	7,57	2,05	1,93

**Table 4:** Co-teaching models and teaching time in 121 lesson plans

The observation plans of forty-nine co-taught lessons only appear to contradict the finding that *One teach, one assists* is the most frequently used co-teaching model. Only nineteen per cent of the teaching time was identified as *One teach, one assist*, which was clearly less than the teaching time spent on *One teach, one observe* or *Team teaching*. However, it has to be mentioned that more than 80% of the *Team teaching* time was either spent on one teacher assisting the other during teaching (through handing out books, handling CD-players or interactive whiteboards etc.) or on providing *assistance*, i.e. both teachers were supporting the learners in individual, pair work, or group work. Although most of the learners' work was based on differentiated materials or tasks during those phases, both teachers assisted all pupils moving around and helping wherever needed without any differentiation between learners or task to be recognised overtly. Their mode could therefore be considered as *Two Assist* rather than *Team teaching*. Taking this into consideration, "providing assistance" was also the most prominent collaborative teaching model in the observed lessons.



**Fig. 2:** Co-teaching models in 49 observed lessons

*Station teaching* was found in five lesson plans and comprised only two per cent of the total teaching time. However, within the lessons in which it was used, *Station teaching* took up an average of fifty per cent. The longest phase of *Station teaching* lasted for thirty-nine minutes, the shortest was twenty minutes long. The trainees placed *Station teaching* in the phase *Use* in all five cases.

The phase of using the foreign language was also the one chosen by the trainees to be organised as *One teach, one assist*. The next prominent phase for this mode was *Practice*. An important finding of this study is also that the trainees had allocated half of the teaching time to *Use*. Adding *Practice*, the trainees' lesson plans suggest that the learners were using the foreign language actively during seventy-four per cent of the teaching time. Most of this time was used up by individual work (66,94%) and by group work (9,58%). The trainees' lesson plans did not feature any co-operative group work activities and relatively little whole-class work (i.e. frontal teaching with 13,52%). This resulted in very little time spent for *Focussing* on new content or expanding existing content or skills through teacher input. *Focussing* took up about fifteen per cent of the whole teaching time. The major classroom management to be found in *Focussing* was whole class teaching. The remaining

teaching time was allocated to pair work according to the trainees' lesson plans (also see Table 6). These results match the novice teachers' feedback in questionnaires, where most of them said that they felt comfortable using frontal teaching, individual work, pair work, and group work. They also indicated that they used these arrangements regularly in their teaching. Nearly sixty per cent of the novice teachers reported regular use of group work, the other forty per cent said they used group work occasionally. Collaborative group work seemed to be less frequently used by the novice teachers. About ten per cent said they did not use this mode and nearly twenty per cent said they never implemented station work.

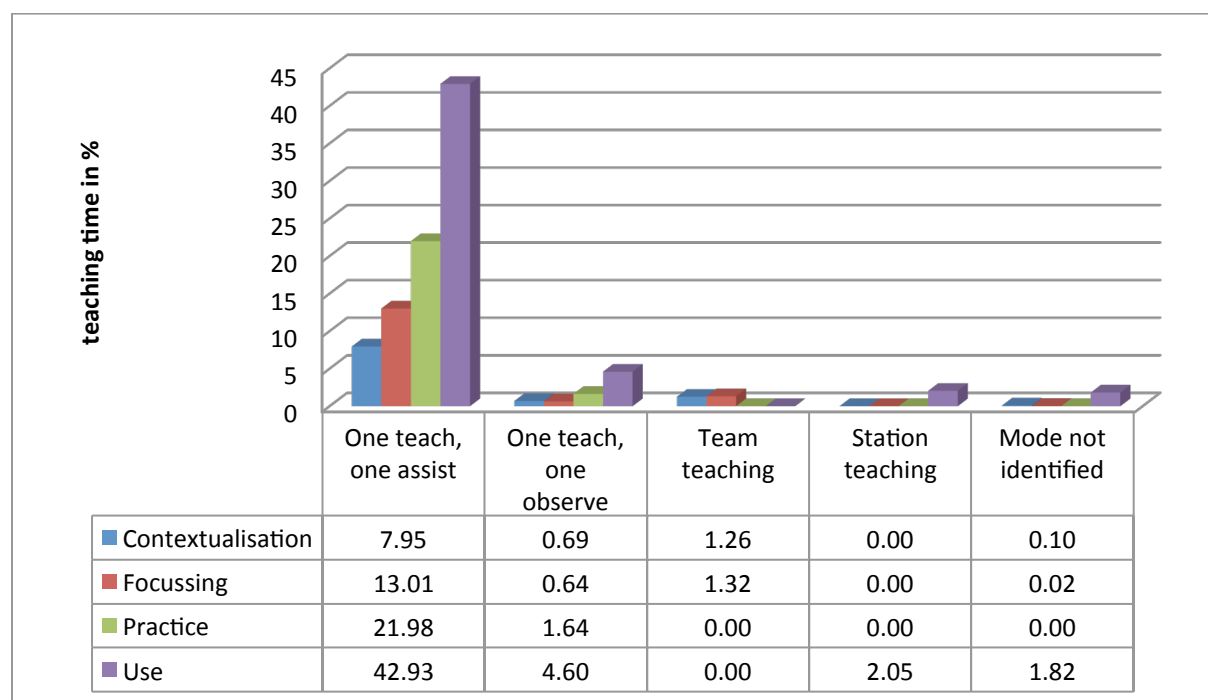


Fig. 3: Co-teaching models and phases of the lesson in 121 lesson plans<sup>5</sup>

Novice teachers use the following in their teaching:	regularly	occasionally	hardly ever	never
One teach, one observe	42,86	23,81	0,00	33,33
One teach, one assist	85,71	0,00	9,52	4,76
Parallel teaching	14,29	42,86	28,57	14,29
Alternative teaching <sup>6</sup>	9,52	9,52	57,14	14,29
Station teaching	9,52	71,43	0,00	19,05
Team teaching	66,67	0,00	28,57	4,76
Whole class teaching (frontal teaching)	71,43	14,29	14,29	0,00
Individual work <sup>7</sup>	85,71	0,00	0,00	0,00
Pair work	100,00	0,00	0,00	0,00
Group work	57,14	42,86	0,00	0,00
Collaborative group work	23,81	42,86	23,81	9,52
Station work	14,29	57,14	9,52	19,05

Table 5: Co-teaching models and classroom management used by novice teachers; results in %

The total lack of some co-teaching models or classroom management opened up the question of coverage in the trainees' course work. Although the curriculum suggests total coverage, thirteen per cent of novice teachers suggested that they had never heard about *Parallel teaching* or *Alternative Teaching* in their course

work. Moreover, a considerably large group of novice teachers said that they had never had the opportunity to observe co-teaching, as can be seen in Figure 4.

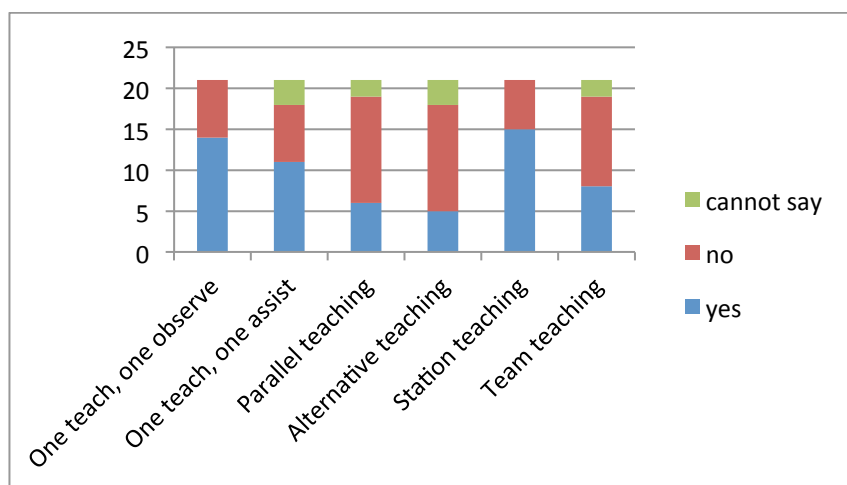


Fig. 4: Co-teaching models observed during teaching practice between 2012 and 2013

As far as modes of classroom management are concerned, all novice teachers said they had observed and implemented frontal teaching and pair work during their teaching practice. Thirteen per cent had never observed or applied individual work, group work, or station work. Fifty per cent reported that they had never observed collaborative group work in teaching practice and only twenty-three per cent had implemented it.

## 4.2 Co-teaching models and learning opportunities

The lesson plans and observation schedules were also analysed according to their focus on language skills to be able to make assumptions on learning opportunities for the pupils. Therefore, the implementation of activities focussing on various language skills was matched with the classroom management and co-teaching models the trainees or teachers were using. The results in Table 6 are given in per cent because of the varying sample sizes.

Reading and listening were not addressed with a focus on skill development but only used to deliver content. Therefore, they do not feature in Table 6. Moreover, classroom management or co-teaching models not observed or found in lesson plans were not indicated either.

	1T1O	1T1A	TT	ST	FT	IW	PW	GW
Integrated skills	14,30	1,66	12,08	-	15,67	12,37	-	-
Integrated skills	0,49	16,19	1,14	0,86	6,62	0,71	9,28	2,07
Writing	0,52	17,40	20,41	-	-	8,66	10,18	19,49
Writing	4,24	47,70	1,18	1,19	-	46,80	-	7,51
Oral production	-	-	-	-	-	-	-	-
Oral production	1,40	18,70	-	-	4,67	15,43	-	-
Spoken interaction	18,20	-	-	-	7,44	-	9,40	1,36
Spoken interaction	1,44	3,28	0,26	-	2,23	-	2,75	-

Table 6: Skills, co-teaching models and classroom management: teaching time in %

White fields = teachers, grey fields = trainees, 1T1O = One teach, one observe, 1T1A = One teach, one assist, TT = Team teaching, ST = Station teaching, FT = Frontal teaching, IW = Individual work, PW = Pair work, GW = Group work, SW = Station work

Most of the trainees' teaching time was devoted to teaching writing (54,31%), which was primarily organised as individual work (46,8%) but also as group work to a much smaller degree (7,51). The co-teaching models used for implementing writing were *One teach, one assist* (47,7%) and *One teach, one observe* and *Team teaching* to a very small degree. Oral production was also addressed through individual work and whole class teaching with

the co-teacher assisting or observing. Integrated skills were matched with all the kinds of classroom management found in the lesson plans. There was very little opportunity for the learners to interact in oral conversations in the trainees' lessons; about half of the time was organised as frontal teaching the other half as pair work.

The experienced teachers also used most of the teaching time for writing (38,33%) and integrated skills (28,4%). Most of the writing was done in group work or pair work with teachers acting as a team or one teaching and the co-teacher assisting. Most of the time, however, both teachers were assisting the learners on task. The teachers provided some opportunities for spoken interaction (18,2%), mostly in pair work or group work with one of them organising teaching, while the other observed. In 15,43% of the teaching time the co-teacher was either not giving the impression of involvement or had left the room.

### 4.3 The co-teaching relationship

In all of the observed lessons the leading teachers were easy to identify. They would generally open and close the lessons and give most of the instructions while the co-teachers could be spotted by the fact that they were usually the ones who would handle technology, materials, or discipline problems. There were also co-teachers who were only physically present in the room, observing or occasionally assisting but hardly ever speaking with learners or the other teacher.

Conversations between the two teachers in front of the whole class and addressing the learners were rare and clearly outnumbered by quiet interaction in between activities. Teachers explained in interviews that they did not often communicate with each other in front of the learners to avoid confusion. Modelling interaction for the learners was considered to be difficult because of the lack of planning time. It would be easier to present conversations with audio materials instead.

Planning for co-teaching was mostly carried out by the leading teacher and the co-teacher would be informed shortly before the lessons about the set-up. Materials were shared before the lesson for the co-teacher to be able to photocopy them for the class and to get to know them. Lesson plans were generally not exchanged. Most teachers also reported that the assessment was considered to be the task of the leading teachers who would be in the class all the time while the co-teachers were only collaborating in some of the lessons. This was a big issue in Lower Austria and Vienna, where many teachers reported that the co-teachers were frequently not present during the lessons because they were asked to fill in for teachers who were off sick or not available for other reasons. They felt left alone and not given the support they felt they should be getting. This phenomenon was not observed in the other federal states where teachers reported that their co-teachers were even replaced when they were off sick.

Some teachers' reports drew relatively depressing pictures of their co-teaching relationships. They talked about not being given the opportunity to collaborate or of not feeling welcomed by the NMS teachers. In contrast, teachers also said they had worked with co-teachers who had not bothered to get a course book until they were offered one after weeks of non-existent collaboration. Moreover, some teachers felt left alone or even ignored if they were paired up to teach English with a co-teacher who held a degree in another language and whose language competence was similar to the pupils'. Yet, there were also teachers who were enthusiastic about their collaboration and who would not want to miss the opportunity of professional exchange.

Results from questionnaires suggest that the novice teachers generally feel positive about collaborating with peers. Most novice teachers said that

- the team partner had a positive impact on their performance,
- they felt supported and motivated by their team partner's actions during the lesson, and
- it would be easier to achieve the goals and to maintain discipline in a team.

The novice teachers also said that they did not feel they were dependent on their team partner's actions or exploited by them. A slightly contradictive result was the opinion of many novice teachers that they would have to compete with their team partner.

Contrary to the experienced teachers, all novice teachers said in questionnaire B that careful collaborative planning was essential in co-teaching. Nevertheless, they shared their colleagues' view that planning for co-teaching was more time consuming than planning on their own.

For co-teaching to be successful the novice teachers mentioned trust and respect was essential. They did not think that the comparable levels of experience or expertise were of considerable importance in co-teaching.

## 5 Lessons learnt from looking into co-teaching classrooms

*One teach, one assist* (or *Two assist*) was found to be the most frequently used co-teaching mode in teacher education as well as in the practice of experienced teachers. However, there seems to exist a common misunderstanding about the meaning and the direction of the “assistance”. In most cases, co-teachers assist the other teacher through putting word or picture cards on the board, handling computers or CD-players, correcting homework assignments, making extra photocopies etc. This is clearly not the meaning of *One teach, one assist*. Actually, the direction of assistance should go towards the learners. Assistance should also not be restricted to showing the learners the right page or activity in a book or telling them to pay attention. As much as this may be necessary, teachers’ support should go beyond task related scaffolding but it should more specifically focus on content or skill related assistance. To achieve this goal, teacher trainees need to become familiar with strategies of needs analysis and diagnosis to learn to analyse which assistance the learners require in varying situations through *One teach, one observe* making use of observation or diagnostic tools in negotiation with their mentors or teaching practice supervisors. This holds especially true for teaching reading and listening strategies, which seem to be severely neglected. This assumption is based on the fact that none of the lessons or lesson plans had identified a reading or listening strategy as a learning goal although listening and reading were made use of regularly.

Future teachers must know how to develop learner profiles in order to guide the co-teaching and facilitate and professionalise the planning for the most frequently used model of co-teaching: *One teach, one assist*. In order to be able to do so, teachers must have a sound understanding of learning strategies. It is not enough to be able to deliver a programme or use a course book; the strategic and personalised work on certain strategies is crucial for success. This way, co-teaching can open up opportunities for identifying individual learners’ problem areas and for developing teaching strategies to resolve them.

Preparing the learners for the productive skills of speaking or writing, *Team teaching* often develops into *Two assist*, because in phases of active work on text production both teachers need to support the pupils. A sound understanding of individual learners’ needs can guide the development of scaffolding activities and materials that need to be provided to increase the chances for all learners to achieve a task and to come up with a product that fulfils a shared goal. In heterogeneous classes varying levels of readiness will be observed, still it should be the goal for all learners to reach the same goal, though not necessarily at the same level of complexity, linguistic range, or correctness. *Parallel teaching* and *Alternative teaching* are appropriate models for supporting learners according to their varying readiness and interests. A smaller teacher-learner ratio achieved through *Parallel teaching* or *Alternative teaching* can be especially useful in situations where supervised interaction or text production is the goal, or where individual learner needs have to be addressed. Moreover, station work and collaborative group work should be encouraged to provide the learners with more opportunities to engage in communication about content at higher levels of thinking such as evaluation, analysis, creative, or divergent thinking.

This study suggests that trainee teachers, novice teachers as well as experienced teachers could benefit from input and direct experience in using collaborative teaching and learning techniques. Moreover, action has to be taken to provide sufficient theoretical input about and practical experience with *all six* co-teaching models and the three central stages of co-teaching: planning, implementation, and assessment. To make this happen administrative support will be needed to enable co-teachers (also lecturers) to set aside sufficient time for planning in collaboration rather than in separation. To discard the cliché of the teacher as a “loner”, teachers will have to make their collaboration and positive interdependence visible through shared responsibility for the input as well as for the expected output and its assessment.

Co-teaching requires interpersonal skills in addition to methodological and subject specific skills. Careful training for co-teachers is needed to make the partnership work for the benefit of the learning it should foster. Successful co-teaching and co-learning should thus encourage positive interdependence. Moreover, co-teachers should be trained to assess their own performance in a team and to share critical friendship in their reflection on co-teaching to develop personally and professionally.

Although the lessons learnt from looking into co-teaching classrooms through this study are primarily important and relevant for the people involved in teacher education and professional development at the University College of Teacher Education in Lower Austria, the findings may encourage investigation of the same phenomena elsewhere. Sharing information and critical friendship within the community of educationalists interested in co-teaching may increase the chances that a better understanding of the components and the processes involved will lead to better and more intensive pupil learning.

## 6 Outlook

Co-teaching holds many opportunities for language teachers to implement a communicative approach to teaching. Thus, the opportunity to have a partner to model real communication and to engage in authentic conversation should be taken up as frequently as possible. Teachers should make regular use of dialogue and interaction through *Team teaching* to demonstrate the components of successful communication. Moreover, they should engage in dialogue on the use of learning or language strategies during and after activities to demonstrate how conscious strategy use can support understanding and foster learning. Table 7 summarises co-teaching models, phases of teaching, and goals.

Co-teaching model	Phase	Goal
One Teach, one observe	Practice Use	<ul style="list-style-type: none"> <li>... to identify learner needs or readiness to plan teaching and learning</li> <li>... to assess learner performance for formative or summative purposes</li> <li>... to collect information to provide instructional feedback</li> </ul>
One Teach, one assist (One teach, one drift)	Focussing Practice Use	<ul style="list-style-type: none"> <li>... to provide scaffolding for learners based on diagnostic data</li> <li>... to assist learners who need academic help at the moment</li> <li>... to assist learners who need personal attendance for non-academic reasons</li> <li>... to monitor learners who have problems that cannot be identified with diagnostic tools</li> <li>... to assist learners on task</li> </ul>
Parallel teaching	Focussing Practice Use	<ul style="list-style-type: none"> <li>... to provide more effective scaffolding in smaller groups</li> <li>... to provide more opportunities for active participation in spoken interaction</li> <li>... to practise the same strategy but using different input texts according to learner readiness or interest</li> </ul>
Station teaching	Focussing Practice Use	<ul style="list-style-type: none"> <li>... to support learner autonomy and introduce, practise, or use strategies that will enable lifelong learning</li> <li>... to present new content through self-directed learning</li> <li>... to practise skills or strategies with which the learners are familiar</li> <li>... to vary the use of strategies or topics according to learner readiness or interest</li> </ul>
Alternative teaching	Focussing Practice Use	<ul style="list-style-type: none"> <li>... to provide opportunities for learners who have to catch up with missed learning</li> <li>... to provide learners with opportunities for more complex language use</li> <li>... to provide learners with input that differs from the curriculum</li> </ul>
Team teaching	Contextualisation Focussing Practice Use	<ul style="list-style-type: none"> <li>... to provide learners with promotive interaction between the teachers to demonstrate authentic language input</li> <li>... to demonstrate learning strategies through the promotive conversation between the teachers</li> <li>... to make teaching more lively and authentic</li> </ul>

**Table 7:** Six models of co-teaching in language education

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<sup>1</sup> The terms collaborative teaching and co-teaching are used interchangeably in this article.

<sup>2</sup> Questionnaire C was identical with questionnaire B but did not include questions about current practice.

<sup>3</sup> Frontal teaching, individual work, pair work, group work, collaborative group work

<sup>4</sup> Trainee teachers, mentors, experienced teachers

<sup>5</sup> The University College of Teacher Education in Lower Austria uses a four staged lesson plan with *Contextualisation* as the initial and introductory phase, *Focussing* as the input phase and *Practice* followed by *Use*.

<sup>6</sup> Rest ticked "cannot say"

<sup>7</sup> Rest ticked "cannot say"