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The SpeakTeach method: Towards self-regulated learning of speaking skills in foreign languages in secondary schools: an adaptive and practical approach

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Chapter 3

Towards a practical approach to teaching speaking skills in modern foreign languages

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Abstract

A new teaching method will only be implemented in the classroom if it is not only of benefit to students but is also practical for teachers. In this contribution we propose an adaptive approach to teaching speaking skills in modern foreign languages, which we call the SpeakTeach method. To make it practical in the classroom, we based it on the Bridging Model for curriculum reform which assumes regular teaching made up of lesson segments. By using design principles shaped around the same lesson segments, teachers can recombine the segments and take advantage of the flexibility of the design principles to adapt the method to their own teaching. Based on questionnaires and visual representations of lesson series, we examined how 13 teachers applied the SpeakTeach method in their classes, what factors they considered and whether they retained the essence of the teaching method. In addition, a teaching impact instrument was used to establish whether the teachers did indeed find the method to be practical. The results show that teachers succeeded in applying SpeakTeach in practice and found the adaptive method to be significantly more desirable than their regular teaching practice. The flexibility of the SpeakTeach method could be an ingredient for curriculum reforms in general.

3.1 Introduction

The success of teaching depends in part on how far it is tailored to individual learning needs (Corno, 2008). Tailoring teaching to students' needs requires teachers to understand the baseline position from which individual students are starting and then to adapt their instruction, activities and feedback to what the students need in order to achieve the desired goals (Sadler, 1998; Van de Pol, Volman & Beishuizen, 2011). The importance of an adaptive approach is recognised in the teaching of modern foreign languages in regular Dutch secondary schools. A frequently heard problem in practice, however, is that teachers find it difficult to provide adaptive feedback, especially when it comes to an ephemeral skill like speaking. Giving adaptive feedback on speaking is found to be particularly difficult (Corda, Koenraad & Visser, 2012). Research has shown that feedback significantly improves speaking skills in language learning (Gass & Mackey, 2012; Lyster, Saito & Sato, 2013), but descriptive studies have found that the amount of feedback given on speaking activities in class is limited and unevenly distributed (Gass & Mackey, 2012). In addition, it has been found that the

amount, nature and focus of the feedback is not always geared to what students want or to their level of understanding (Lyster et al., 2013; Yoshida, 2008).

It is understandable that feedback is not always tailored to individual learning needs. It is not easy for teachers to determine what provision for learning speaking skills (in the form of instruction, feedback and activities) an individual student needs. It is not enough to focus on the speaking performance itself, account must also be taken of what a student understands and notices (Poehner, 2012); of the degree of self-regulation exhibited by the student (Sadler, 1998); and of affective factors that could be hindering the student such as speaking anxiety (Cheng, Horwitz & Schallert, 1999).

This complexity is further exacerbated by the multiple demands placed upon teachers by the context in which they are required to provide adaptive teaching (Janssen, Westbroek, Doyle & Van Driel, 2013; Kennedy, 2010). Secondary school teachers in modern foreign languages report that classes are too big and this along with lack of time impedes the training of speaking skills (after all speaking is not the only component of the curriculum) (Fasoglio, 2015). Because of the transient nature of speech, the shortage of time and large classes of students who all have different learning needs with respect to the speaking components of the curriculum, it is difficult to listen to all of the students, to provide them with feedback and to give them the opportunity to improve. Moreover, complex class ecology ensures that teachers cannot just focus on improving individual students' speaking skills. Many other aims have to be realised at the same time with limited time and resources, such as: making sure that while the teacher is paying attention to one student, the others remain motivated and are engaged in useful work; maintaining order in class; and covering the compulsory material in the curriculum (Janssen, Grossman & Westbroek, 2015). This means that an adaptive method of teaching speaking skills must not only enable teachers to tailor the material to their students' individual needs, but that the approach must above all be practical within the complex class ecology in which teachers work (Janssen et al, 2013; Janssen, Westbroek & Doyle, 2014a). After all, practical obstacles that teachers see and experience could detract from any proposed adaptive approach. It is a well-known problem that important aspects of reforms can be lost during their implementation (Fullan, 2007; Spillane, Reiser & Reimer, 2002).

Janssen et al. developed a methodology to make education reforms practical while retaining the essence of the reform: the *Bridging Model* (Janssen et al., 2013; Janssen et al.,

2015). The *Bridging Model* has been used with a number of reforms, such as developing practical approaches for open-inquiry labs (Janssen et al., 2014a); the concept-context approach (Dam, Janssen, Van Driel, 2013); guided discovery learning (Janssen, Westbroek, Doyle, Van Driel, 2014b); and whole-task-first teaching (Janssen, Hulshof & Van Veen, 2016).

This chapter reports on research using the *Bridging Model* to develop a practical adaptive approach to teaching speaking skills in modern foreign languages: the SpeakTeach method. The key question addressed in this chapter is: How can we make an adaptive approach to teaching speaking skills in modern foreign languages practical for teachers so that they can actively use it in their teaching while retaining the essence of the method? The conclusion also examines whether the findings could be applicable to other components of the curriculum and to other subjects.

3.2 Theoretical framework

3.2.1 Making education reforms practical

Many education reforms have little impact on practice because teachers find them impractical (Janssen et al., 2013). According to Janssen et al. (2013), teachers will only adopt a curriculum reform if they regard it as an improvement on their current teaching practice. The authors base this conclusion on research into boundedly rational or ecologically rational decision-making (Todd & Gigerenzer, 2012). In complex situations where several goals have to be achieved at the same time and time, knowledge and resources are limited, the way people take decisions differs in fact from what is often seen as the norm: generate a large number of alternatives, examine the consequences of each of these alternatives and then choose the best one (Todd & Gigerenzer, 2012). First of all, in complex situations people are often not in pursuit of an unachievable optimum, but striving to improve the current situation (Pollock, 2006). In other words, people are aiming to increase the expected value of their choices. The expected value of an alternative is determined by the product of two factors: (1) considered *desirability* of expected outcome; (2) expected *probability* that the person in the specific context and with the time and resources available will be able to realise the outcome by using the approach (Janssen et al., 2013). Furthermore, people in complex situations do not generate a large number of new alternatives, they adapt existing designs. An existing design is often considered to be made up of components, modules, and new designs come about through recombining and making small adaptations to existing modules (Holland, 2012). It

seems that in complex situations people usually endeavour to improve the existing situation by recombining and adapting the existing building blocks.

Conditions that a reform needs to meet in order to be seen as practical by teachers can be deduced from this research into decision-making (practicality theory, Doyle & Ponder, 1977; Janssen et al., 2013). First, teachers need to know how they can translate criteria for desirable teaching into concrete teacher behaviour and student activities (instrumentality). Second, the new approach has to be achievable within a set period of time and with the resources available (low cost). Third, the approach should not conflict with other aims that teachers are also required to fulfil in their lessons. This means that the aims of the curriculum reform have to fit in with current teaching practices and other goals that need to be met in class (coherence).

The *Bridging Model* was developed based on these insights to make education reforms practical without losing sight of the essence of the reform (Janssen et al., 2013). It is a modular approach in which a reform is described as far as possible in terms of existing segments, or building blocks, of regular practice. Teachers can make gradual changes in the direction of the curriculum reform by means of small recombinations, series of recombinations and/or adaptations of existing building blocks taken from their existing teaching. The practicality of the education reform is increased by recombining and adapting existing lesson segments. This ensures that teachers know how they can fit this approach into their own teaching practice (instrumentality), in a way that does not demand a lot of extra time and resources (low cost) and which fits in with their current teaching practices (coherence).

3.2.2 Design principles for a practical adaptive method for speaking skills in modern foreign languages

This section describes how we make the adaptive method for teaching speaking skills in modern foreign languages practical for teachers in regular secondary schools. First, the regular teaching practice is broken down into building blocks (Janssen et al., 2013; 2015).

Regular teaching in building blocks

Effective foreign language acquisition contains the following components (Driessen, Westhoff, Haenen & Brekelmans, 2008): input; learning activities aimed at content-oriented processing and learning activities aimed at form-oriented processing; output (writing and speaking

activities); and strategic skills. Strategic skills are strategies that are used both with receptive skills (reading and listening) and productive skills (writing and speaking) to compensate for gaps in knowledge of the language.

These components are familiar from language courses. Generally, but certainly not exclusively, a chapter in a foreign language course on a particular theme starts with input (texts to read and listen to), followed by exercises related to the input to train reading and listening skills and exercises for learning vocabulary, grammar and pronunciation (content-oriented processing and form-oriented processing). Next there is often a guided speaking activity aimed at reproduction (see the exercise typology of Neuner, Krüger & Grever, 1981) in which words, chunks and grammar that were presented in the input and exercises are drilled and mastered through practice. After that further input and exercises elaborating on the theme of the series of lessons are often presented to extend vocabulary and grammar. Finally, there is a free speaking activity in which the language learners use what they have learned to express themselves in their own words in a free communication situation (Neuner et al., 1981). Figure 4 shows this sequence of a standard lesson or series of lessons broken down into building blocks.

Students often work in pairs on speaking activities in regular lessons and the teacher walks around giving feedback to the pairs and then at the end of the activity briefly touches on important points with the whole class before moving on to another lesson component. This standard practice has a number of disadvantages: the feedback is not so much geared to the students' learning needs as based on a few speaking performances that the teacher happens to hear in the class and the students are often given no opportunity to improve their speaking.

REGULAR LESSON(S) SERIES



Figure 4: The position of speaking activities and feedback in a current regular teaching lesson series in building blocks

Design principles for adaptive feedback and improvement activities in the form of building blocks

To make the regular lessons outlined above more adaptive, students and teachers need to have insight into individual students' learning processes so that the lesson can be tailored to their learning needs and it is also desirable that students be given an opportunity to improve their speaking performance. The next step, according to the *Bridging Model*, is to design the principles aimed at achieving these goals to fit into the same lesson segments as are used in the regular lessons. Practical principles are formulated to slot these building blocks into the existing teaching practice in various ways so that the teachers can adapt their own teaching practice. Moreover, we have added an extra lesson component: a self-evaluation by the students. The design principles on which they are based are explained below.

Design principles to tailor lessons to students' needs and teachers' teaching practices

Design principle 1: Add a self-evaluation by the student to a speaking activity

A self-evaluation by the student is added to one or more speaking tasks in a lesson series. Students record a piece of speech, listen back to it, analyse it and write a plan for improvement. Self-evaluation was chosen because it serves both as a diagnostic tool for tailoring teaching (cf. *contingent* teaching, Van de Pol et al., 2011) and as a learning aid for the student (Lappin-Fortin & Rye, 2014; Poehner, 2012).

On the one hand, self-evaluations give teachers information about how and how well the students analyse their speaking performance, what they notice (Schmidt, 1990) and understand (Poehner, 2012) and how they want to improve. It is not necessary, therefore, that a student's assessment is correct. It is the student's subjective internal standard that the teacher is looking for in order to be able to tailor feedback and support. The aim in fact is to gain insight into how individual students assess themselves so that the teacher can align with their current level and degree of self-regulation (Sadler, 1998). This fits in with a sociocultural approach to learning with tailored support in what is known as the "zone of proximal development" (Vygotsky in e.g.: Lantolf & Poehner, 2011; Poehner, 2012).

On the other hand, self-evaluation can stimulate noticing (Lappin-Fortin & Rye, 2014) as well as self-regulation (Poehner, 2012) among students by allowing them to reflect on various aspects of their verbal language skills and the goals they are trying to reach. Moreover,

it can also have a motivational effect, encouraging students to take ownership of their own learning process (Blanche, 1988). It is not easy for students to evaluate themselves (Poehner, 2012). We support this process in four ways. Firstly, by having the students record their speaking performance and listen back to it. Speaking, in particular, demands many cognitive processes within a brief period of time (Levelt, 1989). Analysing a recording of their own speaking performance gives students time to reflect on their own speaking skills and how to improve them (Sadler, 1998). Secondly, we provide the students with aspects on which they can evaluate their speech recording and make suggestions for improvement activities. Thirdly, the students not only produce an evaluation with a plan for improvement, they can also indicate whether they need help from the teacher in carrying out their improvement activities. Finally, students repeat the self-evaluation several times and the teachers give feedback which is not only focused on the speaking performance, but also on improving their self-evaluations and plans for improvement. Depending on the curriculum, time and target group, self-evaluation can be used as often as seems desirable, with guided or free speaking activities, when the teacher decides or when the student decides, during class or as homework, at the same time for everyone in the class or when an individual is ready.

Design principle 2: provide activities for improvement and differentiation

After the students have produced their self-evaluations and plans for improvement, the teacher can use these to offer activities for improvement in follow-up lessons or as homework. These could include: reading texts, listening fragments, model dialogues and film clips as input; exercises for fluency, vocabulary, grammar, pronunciation and sentence structure; chunks to learn by heart; and compensating strategies. Material can be used for this that is already in the curriculum but now it is being used in response to the improvement plan, making clear to the students the alignment (see e.g. Biggs, 1996) between the speaking goals to be attained, the speaking activities, the support exercises and input. The order of the speaking task (with self-evaluation) and the existing input and exercises are then reversed, so that existing input and exercises become improvement activities and are used as tailor-made help. This offers opportunities for differentiation. Based on the improvement plans, the teacher may, for example, group students by improvement activity, by what they asked for help with or by their preferred form of working. The steering in the lessons can also be varied:

type and number of improvement activities, the order of doing things and the types of work may be determined by the teacher or the student.

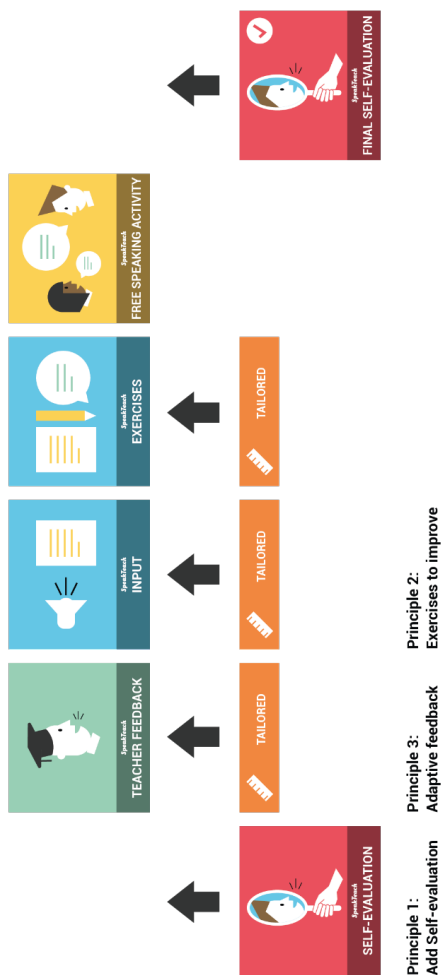
Design principle 3: Provide adaptive feedback

The self-evaluation, the improvement plan and in some cases the recording give teachers information that enables them to tailor their feedback to the learning processes of individual students. On that basis, in addition to feedback on aspects of speaking skills (such as getting the message across, vocabulary, grammar, fluency and pronunciation), teachers can also give feedback on the students' comprehension, capacity for noticing and regulative skills as well as affective factors (motivation effort, fear of speaking, etc.) (see Figure 1, Chapter 2). Adaptive feedback need not mean that feedback is only given individually. Group feedback is also possible, for example if a large group has the same need. Focus, feedback techniques, steering and grouping can be adapted depending on the learning needs that emerge from the self-evaluations, but also on the available time and what is possible.

Alignment

After the students have been given the opportunity to improve their speaking performance (with principles 2 and 3), they do the same speaking activity again or a similar one and evaluate whether their performance has improved (design principle 1 again, see Figure 5), after which they may be given further improvement activities or adaptive feedback. This principle can generate an iterative learning process, with alignment between learning objective, speaking activity and other learning activities. Alignment or the whole of the connected learning activities designed to achieve the speaking objective can be small or large, depending on where the self-evaluations are slotted into the lesson series. The degree of alignment varies depending on the design options chosen. The following design choices show an increasing degree of alignment: 1) the self-evaluation is used for a single random speaking activity in a series of lessons followed by improvement activities; 2) it is used with an easy (guided) speaking activity at the start of a series of lessons and with the final (free) speaking activity at the end of the series; 3) the final speaking activity with the self-evaluation is done right at the beginning of a series of lessons, after which all the activities in the series are planned to improve the final speaking activity.

A regular lesson(s) series



Result: a SpeakTeach lesson(s) series



Figure 5: Transforming a current regular teaching lesson series into a SpeakTeach lesson series

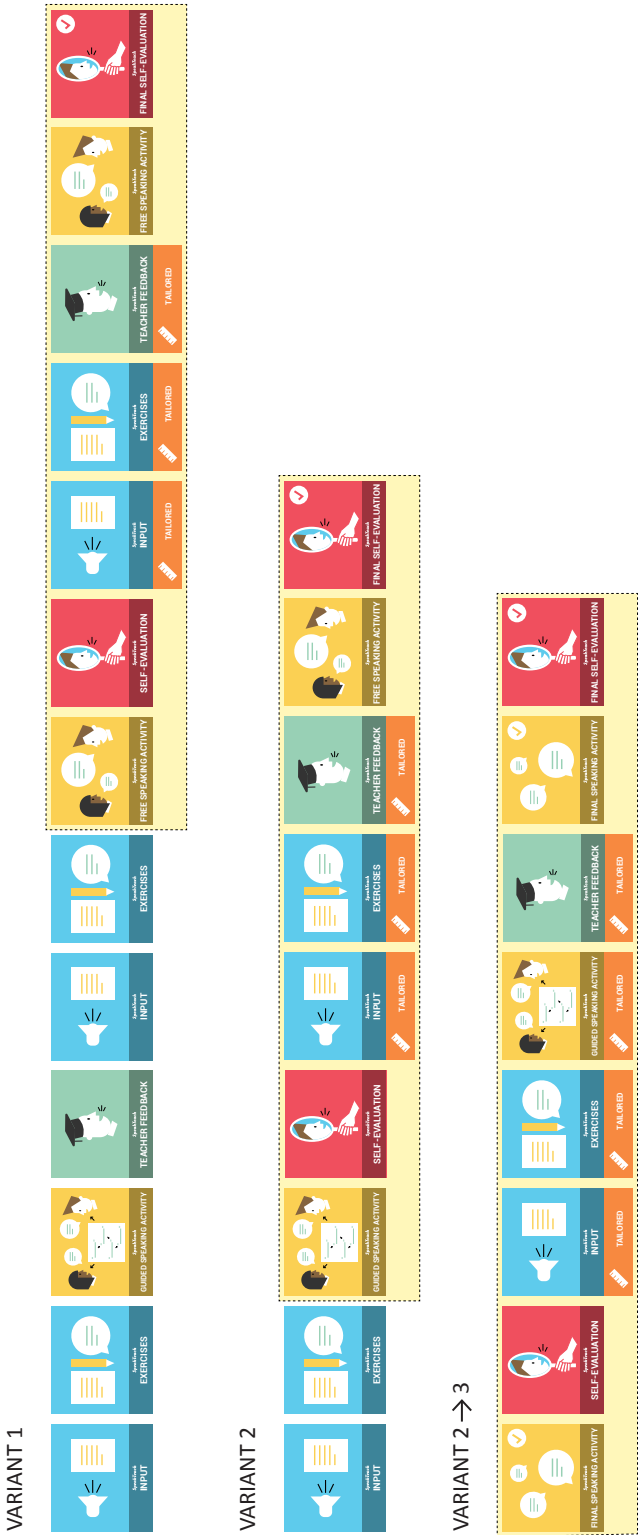


Figure 6: Different sequences of building blocks giving rise to variants of SpeakTeach lesson series

VARIANT 3

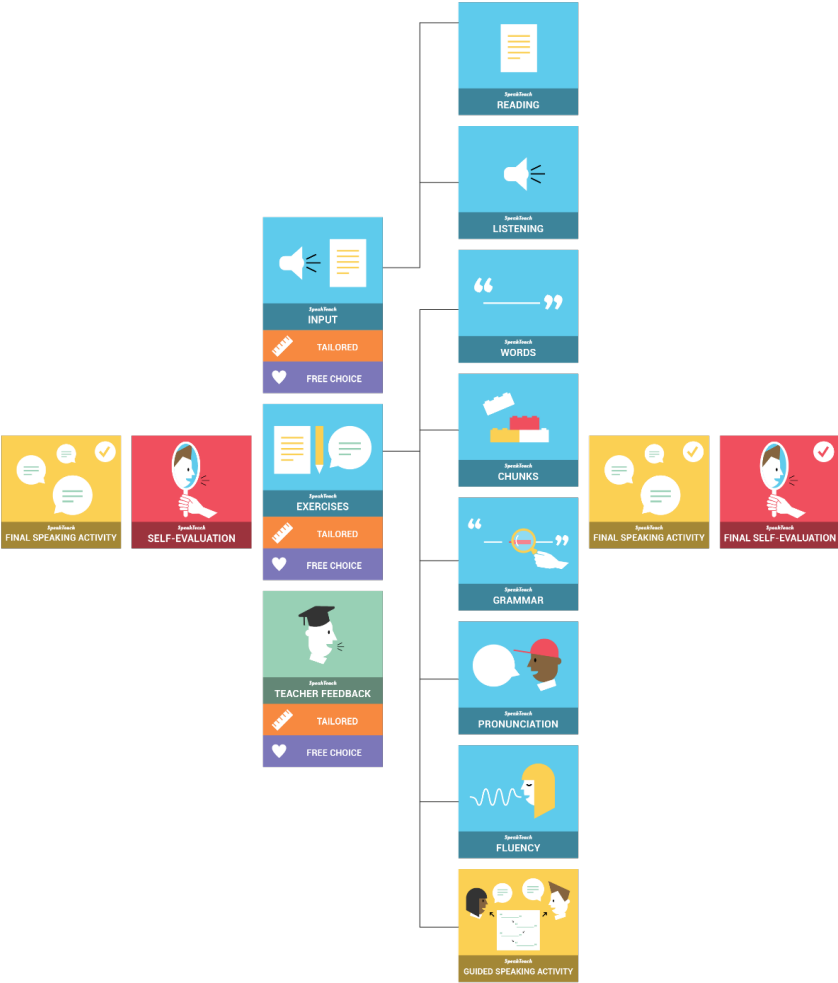


Figure 7: A variant of a SpeakTeach lesson series with maximum alignment, learner autonomy, differentiation of activities and adaptive feedback. The final speaking activity and self-evaluation are placed at the beginning of the lesson series. As a result, there is maximum alignment: all input and activities in the lesson series are employed to improve the final speaking activity.

The new teaching approach proposed here is not a single, fixed and prescribed method but at its core allows for all kinds of variations with the three design principles giving rise to variants with little to a great deal of alignment of speaking skills in the individual lesson or series of lessons, with little to a great deal of differentiation, that may be teacher-led or student-led to varying degrees, and with little to a great deal of adaptive feedback (see Figures 6 and 7).

3.3 Research aim and research questions

The theoretical framework outlined above proposes an adaptive teaching method for speaking skills in modern foreign languages which is based both on theory and knowledge from modern foreign language teaching and on Janssen's *Bridging Model* (Janssen et al., 2013; Janssen et al., 2014a) in an attempt to meet the conditions of practicality (Janssen et al., 2013). The aim of the research was to investigate how far teachers are actually able to apply the method in their teaching. Three research questions were formulated:

A. How are the three design principles of the adaptive teaching method implemented by teachers in their teaching and is the essence of the adaptive teaching method retained?

B. What are the reasons for the choices teachers make about how to embody the three design principles into their teaching practice? Are these choices made with adaptive considerations in line with the curriculum reform?

C. To what extent is the curriculum reform perceived to be practical by teachers and are the problems expressed with regard to teaching speaking skills resolved in their opinion?

3.4 Method

3.4.1 Participants

Experimental group

Thirteen modern foreign language teachers (three German teachers, five English teachers, three French teachers and two Spanish teachers) who were teaching in regular secondary schools participated in this research. They used the *SpeakTeach* teaching method in two year-2 vwo classes, two year-3 vwo classes, one year-4 vwo class, three year-5 vwo classes, two year-6 vwo classes, one year-2 havo class, three year-3 havo classes, one year-4 havo class,

three year-5 havo classes and one year-3 vmbo class⁴. As the teaching method is intended to be adaptive and practical and the research questions ask how (and why) teachers adapt the method and embody it into their teaching and whether in so doing the essence of the approach is retained, it was desirable that they tried the method out in a random class.

The teachers had responded to a mailing from the Department of Teacher Professional Development in Secondary Education at the institute where the author works. This invited them to participate in a professional development project as part of a study to trial a new teaching method for giving adaptive feedback and support with speaking skills in their own classes. Twenty-five teachers were able to take part. Only data provided by teachers who were able to attend all of the meetings were used. That was thirteen teachers. Eleven complete datasets were received in answer to research questions A and B.

Control group

A control group was also recruited through the Department of Teacher Professional Development in Secondary Education in order to determine whether any changes in the perceived practicality were due to the intervention. A mailing was sent out calling on teachers to cooperate in a study on adaptive feedback and support with speaking skills and asking if they and their students would be willing to complete a digital questionnaire about speaking skills in their current practice. The questionnaire had to be filled in twice. Seventeen foreign language teachers (five German teachers, five English teachers, six French teachers and one Spanish teacher) completed both questionnaires (measurements taken before and after the trial) about their teaching practice in year-3 vwo, year-4 vwo, year-5 vwo, year-6 vwo, year-2 havo, year-3 havo, year-4 havo, year-5 havo, and year-3 mavo⁵/vmbo classes.

⁴ The Dutch education system offers differentiated secondary education and the different types of schooling are commonly referred to by acronyms:

vwo is pre-university education, the most academic type;
havo is senior general secondary education; and
vmbo is preparatory secondary vocational education.

⁵ The control group was made up of classes from the same types of secondary education as the experimental group with the addition of one combined mavo/vmbo class. Mavo = junior general secondary education.

3.4.2 Intervention

The 13 teachers in the experimental group participated in a professional development trajectory of five meetings of three hours each spread over three months and implemented the *SpeakTeach* teaching method in their own teaching practice for four months. During the meetings the teachers produced a self-evaluation of their own teaching practice. This self-evaluation consisted of producing a visual representation in building blocks of a representative series of lessons, checking the advantages, disadvantages and difficulties of their regular teaching practice, and setting and prioritising goals. In addition, the three design principles and possible variants of the *SpeakTeach* methodology were discussed. On the basis of the design principles and in line with their own goals, the teachers designed *SpeakTeach* lesson series, which they then implemented in their teaching practice. The intervention was concluded with an evaluation meeting.

3.4.3 Research instruments

Designing lesson series and considerations during this process (research questions A and B)

The teachers in the experimental group completed a questionnaire (see Appendix VI) about each *SpeakTeach* lesson series that they had given. The questionnaire comprised ten closed questions to describe the lesson series: number of speaking activities; type of speaking activities; place of self-evaluation; type of structure; type of input designed to bring about improvement; type of support exercises designed to bring about improvement; type of work forms; who decided which input would be used and which exercises would be done; who decided in what order and with which forms of work; and the focus and organisation of feedback (see Appendix VI, B. *Specification of a SpeakTeach round*). The teachers were also asked about what they considered when opting for a particular form of that aspect; and they were asked whether these aspects were or were not tailored to an individual student based on the student's self-evaluation and/or choice.

In addition, the teachers produced a visual representation with the aid of the building blocks (such as Figures 4 and 5) to show the type and sequence of lesson segments making up their regular lessons and their *SpeakTeach* lesson series (see Appendix VI, B. *Structure of a SpeakTeach round*).

Practicality (research question C)

A teaching impact analysis (Janssen, Westbroek & Doyle, 2014a) was used to establish the practicality of the teachers' regular teaching and the *SpeakTeach* method (see Appendix IV and V (Part A)). To what extent teachers perceive a teaching method to be useful in practice depends on their assessment of how far the method will enable them to achieve important goals (*considered desirability*) and their assessment of how far they will be able to implement the method successfully in class (*expected probability*). Considered desirability and expected probability of the teaching method were both scored on a 7-point Likert scale. In addition, the teachers were asked to name a maximum of five most important advantages, disadvantages and difficulties they experienced with the teaching method.

3.4.4 Procedure

First of all, the teaching impact analysis was used to obtain a baseline measurement on current teaching practices for speaking skills in both the experimental and the control group at the start of the professional development trajectory. The intervention then took place. The visual representations in building blocks of the experimental group's regular teaching practice were collected during the professional development process. Just before the teachers carried out their designed *SpeakTeach* lessons, an interim measurement was made using teaching impact analysis on the practicality of the *SpeakTeach* teaching method. The teachers in the experimental group were then asked to carry out *SpeakTeach* lesson series in their teaching. A total of 30 *SpeakTeach* lesson series were carried out on which the teachers completed the questionnaire and produced visual representations.

A further measurement using teaching impact analysis was taken after about four months in both the experimental and the control group on their regular teaching of speaking skills and, in the case of the teachers in the experimental group, the instrument was also administered on the *SpeakTeach* lessons they had given.

3.4.5 Analysis

Analysis of the designing of lesson series and factors taken into consideration (research questions A and B)

The first part of the analysis aimed to answer the research questions about the application of the three design principles of the *SpeakTeach* teaching method in the teachers' lessons and the reasons behind their decisions. First, the teachers' choices as indicated in the questionnaires and the visual presentations in building blocks that they had produced of the lesson series were recorded. Next these data were combined to determine how far the design principles had been applied and whether the essence of the adaptive teaching method had been retained. Their considerations in making these choices were coded. How this was done is described below.

Extent to which the design principles were applied

All three principles were scored on a scale of 0 (not applied) to 3 (fully applied).

To determine how far design principle 1 had been applied, the researchers looked at the place given to the self-evaluations in the visual presentations of the lesson series. They also checked whether the visual presentations of the lesson series corresponded with the answers to the closed questions in the questionnaire about number of speaking activities, which type of speaking activity self-evaluation was used for (guided, free or final speaking activity) and type of development if any (none, from guided to free, or final speaking activity first). The author and an assessor assigned scores as described in Table 3.1, third column (Cohen's $\kappa = 0.85$).

To determine how far design principle 2 had been applied, a score was given to the answers to the three closed questions in the questionnaire about the steering: who had decided on which improvement activities, in what order and using which types of work. There were three possible answers to all three questions: score 1: the teacher decided and all students did the same improvement activities, in the same order and working format; score 2: the student had some measure of choice; score 3: the student decided. The rounded average of the three scores was taken as the score for design principle 2 (Cohen's $\kappa = 1.0$) (see Table 3.2, third column).

The extent to which design principle 3 had been applied was determined by the data from the questionnaire about tailoring of focus, level of the feedback repertoire and combining the organisation of that feedback with what we had learned from the analysis of design principles 1 and 2 about the scope of the adaptive learning pathway (degree of

alignment and degree of steering). The author and the assessor assigned the scores as described in Table 3.3, third column (Cohen's $\kappa = 0.88$).

Departures from the options conceived in advance with respect to the design of the lesson series were noted as adaptations.

0-scores on the application of the design principles means that the essence of the teaching method was not retained.

Coding considerations

The didactic triangle (see e.g. Bertrand & Houssaye, 1999) was used as a model for coding the teachers' considerations when designing the series of lessons. The didactic triangle describes the interaction during teaching between student-course content, course content-teacher, and teacher-student. All these aspects play a role when teachers are weighing up their didactic options. Which of the three points of the triangle the teachers mentioned in their considerations, we took to be the decisive factor for the choices they had made. Their choices were determined by an emphasis on lesson content or learning aim, for example, "I let students speak, because the active use of the language makes it easier to learn the language"; emphasis on adapting the lessons to individual students, for example, "I walk around the classroom to hear all the students, because I want to have a view on each student to tailor my feedback"; or emphasis on practicality for the teacher, for example, "I don't speak much, because I have too large a group and too little time for speaking skills". These categories of considerations were coded as L (lesson content/learning aim), A (adaptive) and P (practical). The considerations were independently scored by two assessors (the author and an assessor) (Cohen's $\kappa = 0.86$). Where the assessors had coded items differently, they consulted and managed to reach agreement in all cases.

Analysis for research question C: practicality

Quantitative analysis

To answer the research question how far teachers perceived the curriculum reform to be practical, a mixed analysis of variance (ANOVA) was performed to examine whether there were any differences between the experimental group and the control group in the practicality of their regular teaching practices (factor between test subjects) and whether

there were any differences between the baseline measurement and the final measurement at the end of the experiment (factor within test subjects) (the second measurement in-between was ignored here). The scores on the 7-point Likert scale for both groups and both measurements were compared for the two components of the concept of *practicality*, i.e. the component *desirability* of the regular teaching and the component *probability* of being able to successfully use their regular teaching methods in class.

Repeated ANOVA measures examined whether there were differences in the experimental group in the scores for practicality of the *SpeakTeach* teaching method between the three measurements (the baseline measurement, the interim measurement just before the implementation and the final measurement after implementation of *SpeakTeach*, see procedure) and these scores were compared with the practicality scores for regular teaching (baseline and final measurements). Just as was done with the mixed ANOVA analysis, separate computations were performed for the components desirability of the teaching method and probability of being able to successfully carry out the *SpeakTeach* or the regular teaching method. Where differences were found, paired t-tests were performed and corrected using Bonferroni to establish between which measurements the differences occurred.

Qualitative analysis

To describe the advantages, disadvantages and difficulties that the teachers mentioned in relation to their regular teaching and to establish whether these were different when they used the *SpeakTeach* method, we used the didactic triangle as the model again (see above). We examined whether the advantages, disadvantages and difficulties that the teachers mentioned were seen as being related to the lesson content/learning aim, the students, or were of a practical nature, and we coded them L (lesson content/learning aim), A (adaptive) and P (practical) respectively. The advantages, disadvantages and difficulties mentioned by the teachers were independently scored by two assessors (the author and an assessor) (Cohen's $\kappa = 0.82$). Where the assessors had coded items differently, they consulted and managed to reach agreement in all cases.

3.5 Results

3.5.1 Results for research questions A and B: essence and design of lesson series and factors considered

The *SpeakTeach* teaching method was used in 30 lesson series comprising two to five speaking activities.

Table 3.1

Extent to which design principle 1 was applied in SpeakTeach lesson series (n=30) with factors taken into consideration in the choices made

SpeakTeach design principle	Design aspects in <i>SpeakTeach</i> lessons		Number of lesson series (n=30)	Perspective of considerations underlying choices		
				L	A	P*
1. Add a self-evaluation by the student to a speaking activity	Analysis of extent to which principle 1 was applied	(score 0) No self-evaluation added.	0	0	0	0
		(score 1) Self-evaluation added to a random speaking activity in the lesson series, followed by improvement activities and a final self-evaluation of the same speaking activity. This ensured some <i>alignment</i> of the speaking activity with input/exercises for improvement.	3	8	5	2
		(score 2) Self-evaluation added to the first speaking activity in the lesson series, followed by activities for improvement and a self-evaluation of the final speaking activity at the end of the lesson series. This created <i>alignment</i> of speaking activities and input/exercises for improvement which formed a unit in the lesson series.	9	7	8	2
		(score 3) Final speaking activity or a similar free speaking activity with self-evaluation used right at the beginning. This created full <i>alignment</i> in the lesson series, as the focus was on the final activity from the very start and all learning activities were building up it. The final speaking activity was repeated at the end of the lesson series with a final self-evaluation.	18	5	12	2
	Adaptations	- Final speaking activity in the lesson series was known from the beginning and students wrote a final dialogue but the self-evaluation was done on the first speaking activity.	1	0	1	0
		- End product and criteria were discussed at the beginning of the lesson. Final speaking activity done at the beginning but not the self-evaluation.	3	3	3	0
		- Self-evaluation coupled with several types of speaking activity in a lesson or lesson series.	6	0	6	0
		- Students chose for themselves on which speaking activity they did the self-evaluation.	2	0	2	0

* The abbreviations L, A, P stand for lesson content-based (L), adaptive (A) and practical considerations (P) respectively.

Choices made with respect to principle 1 (adding self-evaluation)

Table 3.1 presents a summary of the extent to which design principle 1 was applied.

The first finding to be noted is that design principle 1 was implemented in all of the lesson series; no lesson series were found to which self-evaluation had not been added. If we examine how far the design principle was applied in shaping the lessons, what stands out is that in more than half of the lesson series the option to start with the final speaking activity and the self-evaluation right at the beginning of the series was chosen, resulting in full alignment because the lessons were centred around the final speaking activity and all of the learning activities were building up to that. The main reasons given for this maximum application of design principle 1 were adaptive reasons. In particular, both teacher and students gaining insight into the learning process was mentioned, which is entirely in line with the aim of the curriculum reform. In three lesson series an adaptation of this maximum application was found: the final speaking activity with criteria was discussed at the start of the lesson series and based on that discussion the students decided which improvement activities they needed for themselves but the self-evaluation was not done at that point but only at the end of the series of lessons. The reason given for this was that by discussing the final activity, the students knew what was expected of them (insight into final goal and learning process) and could do preparatory exercises first before they did the real speaking activity (attaining the learning goal).

Those teachers who chose to build up from a guided to a free speaking activity often mentioned that this was in order to achieve the learning goals by progressing from an easy to a more difficult level. In one lesson series we found an adaptation of this approach: the final activity was done at the beginning but was done as a writing activity rather than a speaking activity. The self-evaluation was then done in the same lesson with the first speaking activity and the students prepared for the final speaking activity by further elaborating the first speaking activity and supplementing it with written work throughout the series of lessons. This interpretation is an adaptation of the build-up from an easy to a free final speaking activity which allows the material to be adapted to the individual student's level, while at the same time the student gains an understanding of the ultimate aim and insight into his or her learning process from the beginning, thereby facilitating alignment.

The simplest interpretation of design principle 1, adding the self-evaluation to a random speaking activity at some point in the lesson series, was only found in three lesson

series. Reasons given for this were: “wanting to proceed with caution when beginning to use *SpeakTeach*,” teaching a difficult subject with a lot of new vocabulary” and “it was the only speaking activity available”.

In six lesson series, self-evaluations were used with all or several types of speaking activity in class to increase insight into the learning process and, in two lesson series, students were allowed to choose for themselves which speaking activity to do the self-evaluation on to help the teachers to tailor their teaching to meet the students’ needs. These changes made the teaching method even more adaptive.

Table 3.2
Extent to which design principle 2 was applied in SpeakTeach lesson series (n=30) with factors taken into consideration in the choices made

<i>SpeakTeach</i> design principle	Design aspects in <i>SpeakTeach</i> lessons		Number of lesson series (n=30)	Perspective of considerations underlying choices		
				L	A	P
2. Provide input and exercises for improvement and differentiation	Analysis of extent to which principle 2 was applied	(score 0) No input or exercises for improvement.	0	0	0	0
		(score 1) Teacher-led; type of improvement activities, order and types of work decided by the teacher and the same for all students.	3	1	1	1
		(score 2) Shared management: partly chosen by students so improvement activities more tailored.	10	2	6	4
		(score 3) Student-led: input, exercises, speaking activities for improvement fully tailored, all chosen by students.	17	3	19	2
	Adaptations	-	0	0	0	0

Choices made with respect to principle 2 (offering improvement activities and differentiation)
The results on the application of design principle 2 are summarised in Table 3.2. This shows that design principle 2 was implemented in all of the lesson series: no lesson series were found in which there were no improvement activities after the self-evaluation.


Steering of improvement activities refers to who decides what input will be used and which exercises for improvement are to be done, the order of doing things and the types of work to be used. What stands out is that in the *SpeakTeach* lessons, the students mainly decided this and so the majority of the lessons were student-led (17/30), followed by shared steering (10/30), and that relatively few teacher-led lessons were reported (3/30). It is striking in this regard that it was mainly adaptive considerations that were mentioned with all forms

of lesson management, even teacher-led (1/3). The teacher who taught the teacher-led lesson explained that it was the students who had asked for more clarity and guidance. It seems, therefore, that teacher-led lessons can also be adaptive!

A few of the teachers working with shared steering observed that adapting lessons to meet students’ needs can mean making choices which are different from the preferences expressed by the students in the self-evaluations, if the teacher notices that they need more guidance.

When choosing how to manage the lessons, in half of the *SpeakTeach* lessons teachers used the self-evaluations to find out how the students wanted to work on their plans for improvement. In some cases, students were given autonomy over this and they used the self-evaluations themselves to decide how they wanted to work on improving their skills. The aim of this was to make the students more independent and to foster their management of their own learning process.

Table 3.3
Extent to which design principle 3 was applied in *SpeakTeach* lesson series (n=29) with factors taken into consideration in the choices made

SpeakTeach design principle	Design aspects in <i>SpeakTeach</i> lessons		Number of lesson series (n=29)	Perspective of considerations underlying choices		
				L	A	P
3. Provide adaptive feedback	Analysis of extent to which principle 3 was applied Not / Minimal  Maximal	(score 0) No feedback on student’s recordings, self-evaluation, plan for improvement activities and/or requests for help.	1	6	39	16
		(score 1) Some adaptive feedback on student’s recordings, self-evaluation, plan for improvement activities and/or requests for help.	4			
		(score 2) More opportunities for giving adaptive feedback as <i>alignment</i> created between speaking activities and input/exercises for improvement which together formed a single block in the lesson series in response to the self-evaluation and fully adaptive feedback on the part chosen by the student him/herself.	6			
		(score 3) All feedback adaptive, tailored to learning pathway chosen based on student’s self-evaluation.	18			
	Adaptations	Peer feedback	1			

Choices made with respect to principle 3 (providing adaptive feedback)

To determine the degree of adaptive feedback in the lesson series, we looked at the tailoring of focus, the level of the feedback repertoire and the organisation of that feedback, as well as the scope of the adaptive learning pathway that emerged from the analysis of design principles 1 and 2. A summary table was also produced for design principle 3 (Table 3.3).

For one series of lessons, no data on feedback were filled in (so $n=29$ in this table instead of 30). In no fewer than 18 of the 29 lesson series, the feedback could be called fully adaptive (score 3). One of the 29 *SpeakTeach* series of lessons was given a 0-code, meaning that it failed to retain the essence of the *SpeakTeach* method: no adaptive feedback was given. The feedback aiming to achieve the learning goals in this series of lessons was given in the traditional way to the whole class. While the final speaking activity was used at the beginning of the lesson series so that students gained some insight into their own speaking competences and connections with the learning activities were then made clear, after that the lessons were entirely teacher-led. The teacher said that was because of an experience with an earlier *SpeakTeach* lesson that had been student-led and had become chaotic. The teacher wanted to keep order now.

One adaptation of design principle 3 was found: students gave each other feedback based on their speaking performances, self-evaluations and plans for improvement. The teacher had opted for this form of peer feedback to make the students less teacher-dependent, so that they would take more responsibility for their own learning. This was a student-led adaptation of the teaching method.

3.5.2 Results of research question C: Practicality of regular teaching and the *SpeakTeach* method

Table 3.4

Means (and standard deviations) of the desirability and probability of successful execution of the regular teaching practice and the SpeakTeach method

		Desirability			Probability of successful execution		
		Pre-measurement	Intermediate measurement	Post-measurement	Pre-measurement	Intermediate measurement	Post-measurement
Experimental group (n=13)	Regular teaching practice	4.54 (1.05)		4.15 (.99)	5.31 (.95)		4.77 (1.09)
	<i>SpeakTeach</i> method	6.08 (.64)	6.31 (.48)	6.31 (.63)	5.38 (1.04)	5.31 (1.03)	5.00 (1.08)
Control group (n=17)	Regular teaching practice	5.12 (1.73)		5.29 (1.45)	4.94 (.97)		4.65 (1.41)

Practicality

Table 3.4 shows the five measurements of desirability and the five measurements of probability for the experimental group and the two measurements for each in the control group. Differences were found in the experimental group with respect to *desirability* between the five different measurements taken on regular teaching practice and teaching using the *SpeakTeach* method ($F(4, 48) = 28.45, p < .001, \eta_p^2 = .703$) (see Table 3.4). The three measurements on *SpeakTeach* were all significantly higher than the two measurements on regular teaching (p 's $< .003$) for *desirability*. There was no difference between the baseline measurement and the final measurement for *desirability* on the regular method of teaching ($p = 1.00$) or between the three measurements on the *SpeakTeach* method (p 's $= 1.00$). There were no significant differences between the experimental and the control group with respect to their opinions about regular teaching ($F(1, 28) = 3.33, p = .079$), nor was there an effect of time of measurement ($F(1, 28) = .30, p = .587$). The interaction was also not significant ($F(1, 28) = 2.20, p = .149$).

No differences were found in the experimental group with respect to probability of being able to successfully carry out the regular teaching practice or the *SpeakTeach* method ($F(4, 48) = 1.019, p = .407$). No difference was found between the opinions of the teachers in the experimental and the control group about their regular teaching ($F(1, 28) = .436, p = .515$). The groups were therefore comparable in their assessment of the practicability of regular

teaching. However, time of measurement did have an effect on their opinions on this ($F(1, 28) = 4.65, p = .040, \eta^2 = .142$). The interaction was not found to be significant ($F(1, 28) = .400, p = .532$). For both groups, the probability of being able to successfully carry out the regular teaching was rated significantly lower at the final measurement (average = 4.70, SD 1.26) than at the initial baseline measurement (average = 5.10, SD .96). There was no significant decrease for the SpeakTeach method ($F(4, 48) = 1.02, p = .407$).

Results on advantages and disadvantages of regular teaching and teaching with the SpeakTeach method

The researchers looked at whether the most important advantages, disadvantages and difficulties that the teachers reported concerned the lesson materials and learning goals, whether they were adaptive or practical in nature and whether there were differences in this regard between regular teaching and teaching using *SpeakTeach*.

Advantages of regular teaching given by teachers mainly concerned subject matter being taught and the learning goals to be achieved (21 of the 33 advantages reported). The teachers were positive, for example, about students learning to use the language actively.

The disadvantages and difficulties associated with regular teaching that the teachers mentioned were mainly adaptive and practical in nature (10 and 13 of the 29 disadvantages reported respectively). Teachers stated, for example, that they would like to give more feedback, that it was difficult to tailor feedback to individual students, and difficult to gain insight into students' learning processes and progress. The main practical disadvantages mentioned were not enough time to practise speaking skills, difficulty organising feedback, class sizes, lack of resources, and clashes with other aims such as keeping order in class and keeping everyone actively working.

In contrast with their reports on regular teaching, many advantages from an adaptive perspective were mentioned for *SpeakTeach* (26/35). An advantage particularly mentioned was the insight that they gained into their students' learning, and also the insight, autonomy and involvement of the students in their own learning process. Being able to give adapted and targeted feedback was also mentioned as an advantage.

Disadvantages and difficulties associated with the *SpeakTeach* method of teaching were of a practical nature (14/20) and concerned the technology: properly functioning Wi-Fi and mobile phones are needed for the recordings and self-evaluations. Three teachers also

reported that they had a tendency to check all the self-evaluations and recordings. It was striking that, in contrast with regular teaching, practical problems such as class size, type of organisation and clashes with the aims of maintaining order and keeping everyone actively occupied were not mentioned.

3.6 Conclusions and discussion

Tailoring teaching to students' learning needs is highly desirable but seems to be very difficult for teachers to do in their regular classes (Hoffman & Duffy, 2016). This is also true for teaching speaking skills in modern foreign languages. The aim of our research was to develop and test a practical adaptive approach to teaching speaking skills. We developed the *SpeakTeach* approach using the *Bridging Model*, a theory-driven methodology designed to make education reforms practical.

The results allow us to cautiously conclude that the approach proved useful. First, because in line with its aims, an important finding of our study was that the essence of the adaptive teaching method was retained during implementation in almost all cases (28 out of 29 *SpeakTeach* lesson series) and that adaptive considerations played a role in this. Second, teachers found the method to be practical. The statistical analysis show that the teachers found *SpeakTeach* significantly more desirable than their regular teaching practice. Moreover, the adaptive approach is not considered more difficult to implement than regular teaching practice.

These findings are unusual because teachers generally find it difficult to tailor lessons to their students' learning needs in speaking skills (Corda et al., 2012) and, because of perceived practical obstacles, often fail to adopt reforms or alter them so much that their essence is lost (Janssen et al., 2013). The teachers in this study indicated that in their regular teaching practice they found it difficult to gain insight into the students' learning processes and to tailor teaching to suit individual students. They mentioned class size, type of organisation, keeping order and keeping students actively engaged as practical disadvantages. These disadvantages were not mentioned for the *SpeakTeach* method and insight into the learning process and tailoring were actually mentioned as advantages.

By getting the students to do the speaking task and the self-evaluation before existing input and exercises, space was created for coordination with learning needs. In addition, we think that we managed to develop an adaptive approach that teachers found useful in

practice, because it was based on the *Bridging Model* which enables teachers to recombine existing building blocks from their regular teaching practice. Moreover, the design principles of the teaching method allowed the teachers to tailor the method to suit their own teaching style and practices; there was no prescribed *SpeakTeach* method but opportunities to use the core of the approach in a variety of ways. The results show that the teachers made full use of those opportunities for variation in order to tailor their teaching to their students. They used the three design principles to produce many different variants of *SpeakTeach* lessons. It is striking in this regard that many chose to implement the design principles to the maximum mainly with adaptive considerations in mind. This resulted in many series of lessons that were structured with the final speaking activity and the self-evaluation at the beginning (almost two thirds), leading to maximum alignment of speaking and learning activities in order to achieve the final speaking aim. It is also striking that many teachers opted for student-led lessons (almost two thirds) and fully adaptive feedback was given in more than half of the lesson series.

New adaptations of the teaching approach were found which retained the essence of *SpeakTeach* and which were in line with its aims. The self-evaluation, for example, was done with each speaking activity in the lesson series in some cases in order to provide more insight into the learning process; in another series the teacher allowed the students to decide for themselves on which speaking activity they would do the self-evaluation, judging that that they were ready for that degree of self-regulation; and in yet another series peer feedback was used to increase student autonomy.

A new ingredient was added to the *Bridging Model* in this research to facilitate even more adaptation to meet students' needs and adaptation of existing teaching practices: this was the addition of student self-evaluation with a plan for improvement. A self-evaluation is not only valuable for the student's learning process (Lappin-Fortin et al., 2014; Poehner, 2012), it can also be used as a diagnostic tool to help teachers tailor their teaching (cf. contingent teaching, Van de Pol et al, 2011). Teachers do adapt feedback and learning activities in their regular teaching, but they do this based on what they hear and see from the students. A large part of the lesson is not tailored because the teacher cannot be everywhere at once and has to respond on the spot. Self-evaluations can give teachers deeper insight into the learning processes of all of their students as they continue to study and learn, giving teachers the

opportunity to offer adaptive feedback and support. Furthermore, the students are able to work with more focus using the feedback and learning activities they have been given on improving the same final or other speaking activity that will be evaluated again. This approach takes existing learning activities from regular teaching to create a coherent body of learning activities around a speaking goal thereby increasing *alignment* in the lessons. In short, the additional *self-evaluation* component in the *SpeakTeach* approach has three functions: to improve capacity to learn; to facilitate tailored teaching; and a practical, organisational function, which is that the learning process proceeds while more time is created for adaptive teaching.

Limitations of this research were the duration and scale of its implementation. A follow-up study with more participants over a longer period of time is to be recommended to enable the results to be generalised. Moreover, this study was based on self-reporting by teachers. This was because we were specifically interested in teachers' *perception* of the practicality of the approach and what factors they considered when applying the design principles in their lessons. A further study could also observe teachers' *behaviour* to find out how they implemented the adaptive teaching method in their lessons.

This research looked at implementation from the teacher's perspective, the student's perspective was not included. In a follow-up study the emphasis will be on the students: to what extent do they experience this approach as meeting their specific learning needs? (See chapter 4).

Despite the limitations of this study, we feel able to cautiously recommend this teaching approach for other subjects. First of all, its flexibility and the way the teaching method is made practical by means of the steps of the *Bridging Model* could be adopted for other curriculum reforms. In addition, the way it ensures that feedback and learning activities can be tailored to meet students' needs, namely through an iterative learning process of self-evaluations followed by feedback and tailored improvement activities, could also be applied to different subjects as well as to other components of the modern foreign languages curriculum such as listening skills.