

## EMPIRICAL STUDY

# Addressing Linguistic Diversity in the Language Classroom in a Resource-Oriented Way: An Intervention Study With Primary School Children

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Adequately responding to linguistic diversity in the classroom is imperative in European school contexts, not least because of current migratory movements. This article presents the results of an intervention study with primary school English-foreign-language learners in Germany ( $N = 42$ ,  $M_{\text{age}} = 8.70$  years) from linguistically diverse backgrounds, who participated in a learning unit on the human body (five 45-minute lessons). Drawing on multilingual education and second language motivational research, we encouraged children in the intervention group to use their linguistic resources, and they engaged with two affective-experiential activities aimed at stimulating attitudinal aspects of learning. We investigated intervention effects through pre-, post-, and follow-up tests. We measured affect after each lesson. The intervention group displayed higher plurilingual ideal self aspirations after the intervention and higher positive affect throughout the

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We thank the participating school, students, teachers, research assistants—in particular Katharina Lindefeld, the anonymous reviewers, and the editors for their thoughtful comments on earlier drafts of this article. We also thank Dr. Lars Behrmann, Dr. F. Sebastián Bergeret, Prof. Emma Marsden, and Dr. Ingo Roden for discussing statistical aspects of the paper. Co-authors Nina Dalmann and Franziska Rogge are, at the time of publication, school teachers but at the time of the project they were affiliated to the University of Vechta.

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intervention. Importantly, the intervention group made significantly larger vocabulary learning gains than the control group despite spending less time on task.

**Keywords** EFL teaching, linguistic diversity; multilingual education; translanguaging; plurilingual ideal self; affective-experiential learning

## Introduction

Current migratory movements, enhanced mobility across countries, and globalization processes have made schools all over Europe more diverse than ever. Of all school disciplines, foreign language education carries particular responsibility when it comes to addressing this rich cultural and linguistic diversity in a productive way. According to the Council of Europe (2007), foreign language education stimulates attitudinal aspects of learning, contributing to more tolerant and open views among young Europeans in general and appreciation of linguistic diversity in particular: “[s]peakers’ awareness of their plurilingualism may lead them to give equal value to each of the varieties they themselves and other speakers use” (pp. 17–18). However, the characteristics of contemporary foreign language education have bequeathed a rather contradictory legacy.

Several researchers have drawn attention (e.g., Busse, 2017a; Krumm, 2012; Liddicoat & Curnow, 2014) to the striking imbalance between the value that schools and language education place on languages that are associated with a high social prestige and the value placed on migrant or minority languages. Bourdieu (1977) showed that (valued) linguistic capital plays a crucial role for power and dominance structures in society and all educational institutions. At school, migrant students and speakers of minority languages frequently experience that learning mainstream foreign languages, in particular English as a foreign language (EFL), is encouraged, but developing skills in their family languages is viewed as having little worth; family language use may even be prohibited. As language is part of identity (e.g., Norton, 2000), such practices devalue not only the languages but also the learners themselves.

Research on multilingual education has suggested that an approach that normalizes the existence of linguistic (and cultural) diversity in the classroom and includes it in teaching can empower students (Cummins, 2000). Creating an opportunity for students to make use of their linguistic resources in the classroom is also beneficial to their learning and for their developing multilingual competencies (Cenoz & Gorter, 2014; García, Ibarra Johnson, & Seltzer, 2017; García & Wei, 2014). However, in many contexts, foreign language education continues to ignore diversity in the classroom and fails to incorporate students’ linguistic resources (Bailey & Marsden, 2017; Hall & Cook, 2012; for the

situation in German EFL classes, see Göbel & Helmke, 2010; Göbel & Vieluf, 2017), ultimately perpetuating monolingual practices. Failing to make use of these resources is not only detrimental to students with a migrant background but also to students of the majority population who cannot benefit from the linguistic resources of their peers.

Moreover, there is a contradiction between the official rhetoric in European policy and language practices in many countries. Europe's plurilingual language policies stipulate the learning of two languages in addition to the national language (Council of Europe, 2007). In practice, however, there is an increasingly narrow focus in contemporary language education, and efforts to promote language learning in most European (non-UK) educational systems are only directed toward learning English (see also Ushioda & Dörnyei, 2017). The decrease in popularity of foreign languages other than English in many European countries (Eurostats, 2016) and the low interest in foreign language learning in English-speaking countries (Lanvers, 2012; Lanvers, Doughty, & Thompson, 2018; Taylor & Marsden, 2014) further reveal the disconnect between policy and practice.

Similarly, the attitudinal dimensions of learning such as raising students' curiosity, openness, and linguistic awareness as well as teaching them to value diversity as stipulated by the Council of Europe (2008) may not be adequately addressed by education systems. A study with adolescents in four European countries illustrated well that students perceive languages in a highly hierarchical manner, often failing to see the value of plurilingualism or languages other than English (Busse, 2017b). For example, studies have shown that in Germany, migrant languages (e.g., Turkish and Arabic), but also foreign languages like French or Dutch, are seen quite negatively and frequently judged as disagreeable (Eichinger et al., 2009; Plewnia & Rothe, 2011). In other words, it cannot reasonably be assumed that exposure to EFL teaching alone generates positive acceptance of diversity or linguistic tolerance. Foreign language education, it thus seems, is far from reaching its plurilingual aims (Council of Europe, 2007).

The disconnects outlined above have commonly been explored within different research strands but all have related consequences for language education. The problems highlighted call for a teaching approach that actively promotes positive attitudes toward linguistic diversity, assigns high value, status, and visibility to different languages learned and spoken by students, and fosters plurilingual aspirations in students with both monolingual and multilingual backgrounds. In order to respond to these needs, we drew on research in multilingual education and second language (L2) motivational research when conceptualizing and designing our vocabulary teaching intervention.

## **Background Literature**

### **Research on Multilingual Education**

Foreign language teaching has traditionally isolated the target language so as to maximize exposure and avoid interference. However, ideologies of language separation have been criticized, and new proposals have called for translanguaging pedagogies and have suggested that the boundaries between languages should be softer (García & Lin, 2016). A multilingual perspective goes against ideologies of language separation and implies that language learners are emergent multilingual speakers who use resources from their whole linguistic repertoire when communicating and thinking (Cenoz & Gorter, 2014; Cummins, 2017). There are several reasons that justify the relevance of this perspective to the language classroom.

First, a multilingual perspective is inclusive and can better address the linguistic and cultural diversity in the classroom. A multilingual perspective can give immigrant students the opportunity to value their family languages and to use them in language learning (Cenoz & Gorter, 2017). Second, the use of resources from the whole linguistic repertoire can stimulate positive attitudes and enhance language learning through the development of language and metalinguistic awareness. Language awareness has been assumed to have a positive effect both on attitudes and several aspects of language learning (Candelier, 2017). Metalinguistic awareness can be developed by comparing different linguistic levels (e.g., grammar or vocabulary), or language skills (for example, reading or writing) across languages (Cenoz & Gorter, 2017). Third, most students need English to communicate with other speakers who may or may not have English as their first language. In most cases, English is used as a lingua franca by multilingual speakers who can not only communicate in different languages but also have developed linguistic and strategic repertoires when learning a second or even a third or fourth language. Thus, multilingual speakers' repertoires need to be broad. Finally, linguistic repertoires can be useful when learning additional languages (Cenoz, 2019).

Although the arguments that we outlined above are not novel in EFL teaching, there are surprisingly few intervention studies that have systematically explored the effects of translanguaging scaffolding strategies for vocabulary teaching in primary school. Existing studies, such as that conducted by Lyster, Quiroga, and Ballinger (2013), found positive effects. Their translanguaging instructional intervention focused on explicit vocabulary instruction carried out in Grade 2 (7–8 years old) in English and French in Canada. Students in the experimental group obtained significantly higher scores in a language awareness test measuring decomposition and derivation in French vocabulary. When the researchers

controlled for language dominance in the English measure, English-dominant students in the experimental group also outperformed their peers in the control group. Similarly, Arteagoitia and Howard (2015) observed positive effects in a vocabulary teaching intervention in the United States, where both English and Spanish were used to teach Spanish- and English-speaking students in Grades 6–8 (11–14 years old). The intervention was based on the use of cognates across the two languages so as to enhance vocabulary and reading comprehension in English. The data showed that knowledge of Spanish cognates had a significant positive effect both on English vocabulary and on English reading comprehension.

However, the Lyster et al. (2013) and the Arteagoitia and Howard (2015) studies involved only two languages, and their findings may not apply to classrooms where a plethora of languages are present. More research is thus needed to explore the feasibility of translanguaging scaffolding in contexts with high linguistic diversity and time restrictions imposed by curricular pressure (see also Bailey & Marsden, 2017), as we did in the present study. In addition, more attention needs to be paid to affective outcomes of such practices because these dimensions of learning have not yet been addressed.

### **Research on L2 Motivation**

It has long been known that language learning motivation and attitudes are related to aspects of identity. Highly motivated language students usually hold positive attitudes toward the speakers and the culture of the target language and may even identify with it (Gardner, 1985). However, in the case of English as a lingua franca, there may not be a clearly defined sociocultural group with which to identify. EFL students may not wish to integrate into a particular target culture, but they can nevertheless hold positive attitudes toward and have a wish to be part of an imagined global community of (cosmopolitan and technologically advanced) people using English, and they therefore feel motivated to learn English. The concept of an *ideal L2 self* (Dörnyei, 2009) has been used to describe this phenomenon, drawing on research on possible selves (Markus & Nurius, 1986)—individuals' idea of who they might become—that can function as an incentive for future behavior. Research in social psychology has shown that stimulating academically relevant possible selves in disadvantaged and minority groups can increase self-regulatory behavior and reduce school attrition rates (Oyserman, Bybee, & Terry, 2006; Oyserman, Terry, & Bybee, 2002). Stimulating academically relevant possible selves has important implications for education given the difficulty in fostering self-regulatory effort over time in disadvantaged learners and gains particular relevance for language education

in light of the long and drawn-out process of language learning, which indeed requires sustained effort over time.

Although much research has been conducted on the motivational force of the ideal L2 self for English in recent years, little is known about whether and how the concept can be made applicable to the understanding of the motivation to learn languages other than English (Dörnyei & Al-Hoorie, 2017). Traditionally, motivational research has focused on monolingual learners who engaged only with one other language (either an L2 or a foreign language), which does not adequately reflect the situation in many learning contexts (Henry, 2010) and has induced a problematic monolingual bias in traditional motivational research in language education (see also Henry, 2017). In addition, motivational studies have focused primarily on learning English, and other languages have been less investigated (Boo, Dörnyei, & Ryan, 2015). There is some evidence to suggest that well-developed ideal English selves may negatively relate to ideal selves for other foreign languages learned (Csizér & Lukács, 2010). However, learners with ideal selves of a cosmopolitan nature may be particularly interested in learning a number of foreign languages and gaining intercultural experiences (Busse, 2013, 2017b; Lanvers, 2012). These plurilingual aspirations have been described as a plurilingual ideal *Bildungs-Selbst* (Busse, 2017b), that is, an educational self, because learners can perceive being fluent in different foreign languages as a way of becoming educated and of broadening their horizons. As such, it may also relate to what has been termed an *international posture* (Yashima, 2002). Though this concept has been applied to describe EFL learners in Japan, the underlying tenets—an openness to and interest in relating oneself to the world beyond national borders and a willingness to interact with different cultural groups—may well play a role in young Europeans' plurilingual ideal *Bildungs-Selbst*.

The term *plurilingual* is used to distinguish the ideal *Bildungs-Selbst* conceptually from a bilingual or multilingual self (e.g., Pavlenko, 2006), which usually refers to speakers who already use two or more languages in their daily lives as, for instance, in the case of students with a migration background or speakers of minority languages. In contrast, a plurilingual ideal *Bildungs-Selbst* refers to a wish to learn new languages beside or in addition to the national language(s) and/or family language(s). It is thus applicable to all students, irrespective of language background, and is here seen as indicating an openness and appreciation of other languages and cultures that are not already part of students' daily lives.

However, the concept of the plurilingual ideal *Bildungs-Selbst* was introduced to describe mature students' educational aspirations beyond English,

which are already quite concrete and encompass students' ability to envision themselves as speakers of various languages. The concept may not, therefore, be entirely suitable for younger children, whose sense of self is still developing (Harter, 1999). However, given that younger learners tend to be particularly open to language learning (Cenoz, 2001; Muñoz, 2008), it seems plausible that multilingual practices spark children's interest and even inspire a wish to speak different languages in the future. To differentiate these wishes from the plurilingual ideal *Bildungs-Selbst* that more mature students may exhibit, we use the term plurilingual ideal self aspirations. Aspirations may range from more concrete to vague and are here understood as indicators of ideal self formation that may contribute to a *Bildungs-Selbst* in the future.

### **Stimulating Plurilingual Aspirations**

Stimulating plurilingual aspirations and favorable attitudes through classroom interventions is challenging. In general, attitudes are shaped by various macro-, meso-, and micro-contextual variables, for example, language hierarchies—established by history and economic power—and the value placed on plurilingualism within a given society, educational policies, and the school ethos of a particular school as well as the familial backgrounds of students (e.g., Busse, 2017b; Ushioda, 2017). Family backgrounds may dampen positive attitudes conveyed to students through classroom practices. In addition, attitudinal interventions have often focused on older learners and followed a more meta-cognitive approach involving explicit explanations and reflections, which may not be suitable for younger learners. For instance, Taylor and Marsden (2014) reported more positive attitudes among 13–14-year-old students in England who had engaged with external speakers talking about their language learning experiences in a panel discussion than among students who had not participated in the panel discussions. (Note, however, that positive attitudes did not result in an increased desire to choose to study a language.) Lanvers, Hultgren, and Gayton (2016) similarly found positive effects on attitudes toward foreign language learning among some 12–13-year-old students by pointing out potential benefits of plurilingualism for brain development. Although such meta-cognitive approaches have shown potential for motivating students, they may be too abstract for younger learners. Age-appropriate alternatives could include affective-experiential learning activities because they are less abstract. Affective-experiential learning draws on students' emotions and involves learning through reflection on one's own experience, which has been shown to be beneficial for student motivation and for addressing the attitudinal dimensions of learning (e.g., Busse & Krause, 2016; Busse, Riedesel, & Krause, 2017).

Research on possible selves may further be helpful when educators aim to stimulate positive attitudes and plurilingual aspirations. Although children may not yet have the ability to fully envision different possible selves (Harter, 1999), they can benefit from activities that explore future selves if these are age-appropriate and involve elements that stimulate positive affect and contain experiential elements. For instance, Day, Borkowski, Punzo, and Howsepien (1994) conducted a possible selves intervention with Mexican-American Grade 3–5 students. The students explored hopes and fears of the future and the value of education in bringing about future occupational goals through visualization methods and experiential activities like role-play. The intervention group gained a better understanding of the value of education and reported more interest in academic jobs than the control group. In a more recent positive psychology intervention, Owens and Patterson (2013) stimulated positive affect and possible selves in 5–11-year-old primary school children through drawing pictures of a future possible version of themselves as happy and engaged. The possible selves group showed higher self-esteem than both the control group and the gratitude group who had painted pictures of something for which they were grateful. Authors of L2 motivational literature (Dörnyei, 2009) have also recommended similar methods for stimulating possible selves. Pedagogical tasks for visualizing an ideal L2 self, including affective-experiential activities like dream journeys, which may appeal to younger children, have already been developed (Hadfield & Dörnyei, 2013), but their potential still needs to be explored empirically.

### **The Present Study**

The literature that we have outlined suggested that an approach that combined insights from multilingual education and L2 motivational research would be beneficial for addressing linguistic diversity in a resource-oriented way, that is, both by drawing on students' strengths and linguistic resources and by stimulating positive affect and plurilingual aspirations. However, there have as yet been few intervention studies that have systematically explored the effectiveness of such an approach, both in terms of benefits to target language competence and in terms of motivational and attitudinal aspects of learning. Our study addressed this research lacuna in an intervention study where we measured plurilingual aspirations, positive and negative affect, and productive and receptive vocabulary in the target language based on a learning unit "Body." Following a multilingual perspective on language teaching, we encouraged students in our intervention to draw on their linguistic resources. In addition, we conducted two affective-experiential activities; the first visualized languages as a treasure and

the second aimed at fostering plurilingual aspirations through a dream journey. It was assumed that students perceive such activities as motivating and that these activities foster positive affect for three reasons.

First, affective-experiential activities generate emotional engagement, and therefore students often perceive them as motivating (see also Busse & Krause, 2016; Busse et al., 2017). Second, visualization is beneficial for stimulating possible selves in younger learners (Owens & Patterson, 2013; though see Hiver & Al-Hoorie, 2019). Visualizing languages as a treasure creates space for students to reflect upon the value of speaking different languages, thus incentivizing monolingual and multilingual students alike to broaden their language repertoire. At the same time, the potential negative social positioning of migrant students is addressed, which may enhance positive affect among these students. Third, dream journeys can help students conjure up the image of an ideal self speaking another language, which can be a powerful motivator (see Dörnyei, 2009). It can be assumed that the same holds true with regard to imagining speaking various languages (e.g., Henry, 2017).

### **Aims and Hypotheses**

The overall aim of the project was to address linguistic diversity in the classroom in a resource-oriented way. By combining insights from multilingual research and L2 motivational research, we designed an intervention that followed a multilingual approach to diversity and aimed at fostering positive attitudes toward language diversity and plurilingual ideal self aspirations in primary school students with both migration or non-migration backgrounds.

Based on the literature reviewed, we asked the following research questions and formed subsequent hypotheses.

Research Question 1: What is the effect of the intervention on plurilingual and English ideal self aspirations?

We expected students in the intervention group to show more gains between pretest (Time 1) and posttest (Time 2) in plurilingual ideal self aspirations than any gains made by the control group. In addition, we assumed that students in the intervention group would become more interested in learning different languages through the intervention input (Hypothesis 1). We expected gains in plurilingual aspirations in the intervention group to decrease after the retention interval (Time 3), when students returned to the regular teaching method where plurilingual ideal self aspirations were not fostered.

Because the intervention supported plurilingual ideal self aspirations including English, one could assume that students in the intervention group would also show higher English ideal self aspirations than students in the control group at Time 2 (Hypothesis 2). However, students with plurilingual ideal self aspirations might show less pronounced English specific ideal self aspirations (see Background Literature). It was therefore also possible that the intervention would have a detrimental effect on English ideal self aspirations and that students in the intervention group would show lower English ideal self aspirations than students in the control group at Time 2 (Hypothesis 3). In both cases, we expected no significant difference in English ideal self aspirations once students had returned to the regular teaching method.

Research Question 2: To what extent does the intervention influence positive and negative affect?

We expected students in the intervention group to report more positive affect and less negative affect during the intervention than students in the control group (Hypothesis 4) due to the affective-experiential activities and the inclusion of family languages.

Research Question 3: What is the effect of the intervention on learning outcomes (productive and receptive vocabulary gains in English) in the target language?

Although affective-experiential activities have been hypothesized to be motivating, they are also time-consuming, which is particularly problematic because the multilingual approach and the inclusion of family languages also subtracts time from target-language use. Following the time-on-task hypothesis (Carroll, 1963) that asserts that learning is a function of time allocated to a learning task, our approach might also decelerate learning of the target language.<sup>1</sup> Because students in the intervention group had less exposure to target words and spent less time with the textbook, we expected students in the intervention group to perform less well than students in the control group on post-intervention vocabulary tests (Time 2 and Time 3). We further assumed that the difference between the intervention group and the control group would be particularly pronounced when correct spelling was required because students in the intervention group spent less time reading and writing target words in the textbook. We therefore expected students in the control group to outperform students in the intervention group, particularly on productive vocabulary tests, when correct spelling was required (Hypothesis 5).

## Method

### Participants

The sample consisted of two intact groups of primary school learners in third grade who attended a publicly funded state school in an urban area of Lower Saxony in Northern Germany with many disadvantaged learners from a low socioeconomic background.

In total, the sample comprised 42 learners (18 girls, 24 boys) whose ages ranged from 8 to 10 years ( $M = 8.70$ ;  $SD = .60$ ).<sup>2</sup> A power analysis using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007) showed that the sample size was sufficient to ascertain small to medium effects ( $f = 0.25$ ) in a mixed between-within-subjects design:  $\alpha = .05$ , power ( $1 - \beta$ ) = .80, correlations between repeated measures = .50.

In third grade, students are expected to command basic reading and writing skills in German; they can read age-appropriate texts and extract meaning. They are also able to write fluently and spell unknown words phonetically and to write familiar words according to German spelling rules (Kultusministerkonferenz, 2004). However, because English lessons start in third grade, the students in the sample had very little prior knowledge of English. Lessons focused on speaking and listening skills; reading and writing in English played a minor role (see also Niedersächsisches Kultusministerium, 2018). In other words, although students could be expected to be able to read and write in German at an age-appropriate level, their literacy level in English was still basic.

We randomly assigned the two intact groups to the two conditions, the multilingual approach with affective-experiential activities (intervention group) or the regular teaching group (control group). Gender distribution was the same in the intervention group ( $n = 21$ ; 9 girls, 12 boys) and in the control group ( $n = 21$ ; 9 girls, 12 boys). About half of the learners had a migration background (10 in the intervention group, nine in the control group), and there were in total 10 children in each group who reported regularly using other languages than German at home. Three learners in each group were born in another country and had only recently migrated to Germany. In addition, there was also one child with diagnosed special needs in learning in each group. The class composition was therefore comparable on these characteristics.

The only difference that emerged was in the reported usage of languages at home; in the intervention group, there were more children who said that they rarely spoke German at home (seven) than in the control group (two).<sup>3</sup> We considered this difference unproblematic because it favored the control group; children who speak both German and another language at home usually perform better in English than children who speak only a language other than

German at home (Hesse, Göbel, & Hartig, 2008). The migrant languages spoken by children in the intervention group were Bulgarian, Kurdish, Russian, and Vietnamese; in addition, there was one child who reported speaking Platt German,<sup>4</sup> that is, a non-migrant language. The migrant languages spoken by children in the control group were Albanian, Arabic, Bulgarian, Portuguese, Russian, and Turkish.

### **Design and Intervention**

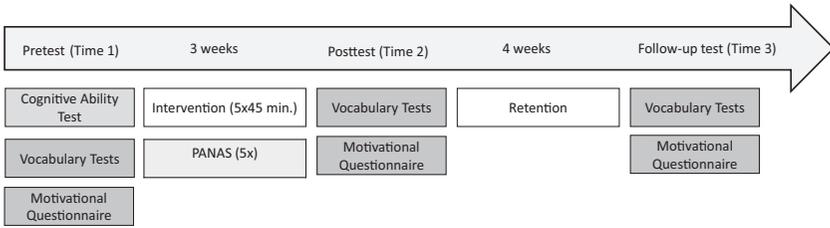
We conducted a quasi-experimental intervention study with a pretest-posttest and follow-up (delayed posttest) design to answer the research questions. To ensure high ecological validity, the intervention took place in the school during regular school lessons.

Parents of the participating students received information about the project and gave written informed consent in accordance with the Declaration of Helsinki. In addition, we informed all participants orally about the study and explained the procedures. We took great care to ensure that participants did not perceive the tests as threatening, and teachers presented the tests in an age-appropriate way.

At Time 1, research assistants helped the students complete a short socio-demographic questionnaire in German in order to gain information about age, sex, migration background, and languages spoken at home. In addition, we administered the Culture Fair Intelligence Test (Cattell, 1961; see section Independent Variables) and intervention-based vocabulary tests that assessed productive and receptive vocabulary knowledge in the target language English (see section Dependent Variables). Trained test administrators carried out the assessments according to the instructions of a detailed manual and script. (The test and manual are proprietary and so cannot be made openly available.)

Data collection at Time 1 took place on two different days. First, the students completed the Culture Fair Intelligence Test; two days later, the students completed the vocabulary tests. We administered the tests in order of decreasing difficulty. The students could only start a new test page after they had handed in the previous test page to avoid their revising answers. In addition, we administered a short motivational questionnaire to assess ideal self aspirations. We had all items read aloud to the students in German to ensure that they understood the items. In the questionnaire, we also asked the students which languages they would like to learn (open-ended question) to gain additional insights into plurilingual aspirations.

The intervention itself comprised five lessons each lasting 45 minutes (with two lessons per week) on the topic “Body.” Three teachers implemented the



**Figure 1** Overview of study design. PANAS = the Positive and Negative Affect Schedule (Watson et al., 1988).

learning unit according to a detailed script based on the textbooks. Two of the teachers were pre-service teachers with a master’s degree in English-language education and had been specifically trained for the project and the third was an experienced English-language teacher.

At the end of each lesson, we administered the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). After the intervention (Time 2), we again administered the vocabulary tests and the motivational questionnaire. Four weeks later in the follow-up session (Time 3), we administered the language tests and the motivational questionnaire a third time (follow-up). We did not ask the open-ended question again at Time 3 so as not to overburden the students. We designed the retention interval to be longer than the intervention itself in order to help reduce the influence of test repetition on test scores. Figure 1 provides a graphic representation of the administration of the test measures and of the intervention.

**Procedure and Materials**

Trained graduate students conducted the intervention. All students worked with their regular textbooks (Becker, Gerngross, & Puchta, 2013a, 2013b) and completed relevant pages (*Playway 3: Pupil’s Book*, pp. 34–36, 39; *Playway 3: Activity Book*, pp. 28–29, 31). Over the course of the study, the control group completed eight additional exercises in the textbook because the intervention group engaged in one additional task per lesson (five tasks in total).

*Intervention Group Activities*

- Lesson 1: The teachers implementing the unit presented a closed treasure chest to the students and asked them to speculate about its content. The students then opened the treasure chest that revealed flags and word cards showing their own families’ languages. The teacher asked in English why

languages could be considered a treasure. Students then shared moments when speaking different languages may have felt particularly enriching for them. The students were allowed to reflect in any language. Peers served as interpreters when languages other than German were spoken.

- Lessons 2, 3, and 4: In these lessons, students engaged in different translation activities. In Lesson 2, a life-sized poster of a child was brought to class, and target words were introduced in English. The students first repeated the body words in English together; then they had to individually repeat words. Last, they were encouraged to share translations into other languages with their peers. Examples of body word translations were written down on the poster that was visible throughout the lesson. During all translation activities, pronunciation, phonological, and spelling similarities between English words and family languages were compared; German and Platt German were also included so as to show that all languages are equally valued. In Lesson 3, the students played a game that combined physical and verbal activity. One student first named body parts in English and then translated them into any other language while throwing a soft ball to the next student. The control group also played this game but without translations into languages other than English. In Lesson 4, the students played a memory game. Matching pairs consisted of one word card in English (e.g., *tooth*) and one picture card that not only showed the picture but also had the name of the particular body word in English and one of the family languages used by one or more of the students.
- Lesson 5: The students engaged again in an affective-experiential activity, a dream journey during which different languages could be heard. It was modeled on didactic material developed for promoting an English ideal self (Hadfield & Dörnyei, 2013) and adapted to the plurilingual focus of our study. The students additionally listened to relaxing music and were told to imagine themselves to be flying to distant countries. Lights were dimmed and aromatic oils were used to intensify the experience. The students heard all the target words in English during the activity; in addition, they heard some words in the family languages.

### *Control Group Activities*

We took care to ensure that the exercises in the control group were also motivating. The control group had time to play the game Simon Says with body-related phrases introduced in the book (*Pupil's Book*, p. 35, No. 4). They also sang the body rock song in the textbook and completed exercises on this song (*Pupil's Book*, p. 37, No. 7). Simon Says supports vocabulary learning through gestures

(Huang, Kim, & Christianson, 2019), a technique that has been recommended as being effective (in moderation) for this age group. Singing is likewise assumed to be beneficial for language learning (Busse, Jungclaus, Roden, Russo, & Kreutz, 2018; Good, Russo, & Sullivan, 2015). In addition, the students listened to a body poem and practiced it (*Pupil's Book*, p. 39, No. 12), and they mimed an action story that reinforced vocabulary (*Pupil's Book*, p. 29, Nos. 3 & 4). They also acted out the book dialogue about going to the doctor's where target words were practiced in an authentic context, for example, *my head hurts* (*Pupil's Book*, p. 38, No. 9, *Activity Book*, p. 30, Nos. 5 & 6).

### *Treatment Fidelity*

We monitored treatment fidelity in several ways. The teacher received a detailed teaching script for the five lessons based on the textbook that only differed for the intervention group regarding the activities described above. In both groups, one member of the research team observed all lessons. The researcher monitored implementation, took pictures of the teaching material employed, and made detailed notes. The notes showed that the teaching script was closely followed and both groups completed the required exercises in the textbook. The teachers thoroughly prepared the implementation, particularly the affective-experiential activities, and practiced several times beforehand with an experienced teacher.

### *Dependent Variables*

We assessed the development of plurilingual ideal self aspirations, English ideal self aspirations, and vocabulary learning in the target language English. In addition, we investigated differences between the two groups for positive and negative affect that we measured at the end of each lesson. We adapted questionnaire items for measuring the students' ideal self aspirations from Henry and Thorsen (2018) and asked whether the students could imagine speaking either English in the future (English ideal self aspirations) or additional languages besides English and their own family languages (plurilingual ideal self aspirations). We wrote the questions in simple sentences and used smiley faces to facilitate comprehension. The scales showed satisfactory Cronbach's alpha values above .70 with the exception of a slightly lower Cronbach's alpha value for English ideal self aspirations at Time 3 (see Appendix S1 in Supporting Information online and see <https://www.iris-database.org>). In addition, there was an open-ended question asking the students which languages they would like to learn.

We measured positive and negative affective outcomes of each lesson by the PANAS (Watson et al., 1988), which Krohne, Egloff, Kohlmann, and Tausch (1996) adapted for German speakers, and which Roden, Zepf, Kreutz, Grube, and Bongard (2016) adapted for primary school children. To strengthen the comprehensibility for primary school children, the adapted version used only 10 out of 20 original adjectives. The adapted rating scale was based on 3 points instead of 5 points. The adjectives that we selected to represent positive affect were *alert*, *proud*, *happy*, *attentive*, and *excited*. The adjectives that we used for negative affect ratings were *angry*, *afraid*, *nervous*, *sad*, and *guilty*. The rating scale for the intensity of each emotional experience ranged from 1 (*not at all/very little*) to 3 (*a lot*). Three images of different sized balloons accompanied the scale values to support students' understanding of them (see Appendix 2). The coefficient Cronbach's alpha for positive affect was .89 and .85 for negative affect.

Based on the teaching content, we developed four written tests with varying levels of difficulty to assess participants' English vocabulary knowledge. Tests 1 and 2 assessed productive vocabulary knowledge; Tests 3 and 4 assessed receptive vocabulary knowledge (see also Appendix 3 in Supporting Information online, and <https://www.iris-database.org>).

- In Test 1, the students had to write 20 body parts in English based on a picture (recall based on visual stimuli; maximum possible score = 20).
- In Test 2, we provided the students with the 20 written German words for body parts, and they had to write the translation in English (translation; maximum possible score = 20).
- In Test 3, we provided 20 written English words, and the students had to match them to the corresponding body part on the picture by drawing lines (word comprehension; maximum possible score = 20).
- In Test 4, the students had to match eight written instructions relating to body movements (e.g., “shake your head,” “bend your knee”) to corresponding pictures taken from the book (comprehension of instructions: maximum possible score = 8).

In total, the students could achieve a maximum score of 68 points. For one set of scores, we awarded one point in Tests 1 and 2 when a student wrote the word in a phonetically acceptable way according to German phonetics (e.g., “ni” for “knee” or “ei” for eye). This was because primary school level students are not required to spell English words correctly and the focus of primary school English instruction and of our own intervention and control group activities was on oral comprehension and production (Niedersächsisches Kultusministerium,

2018, p. 12). We additionally coded Tests 1 and 2 for spelling accuracy, that is, we counted a word as memorized only if it was spelled correctly. This new set of scores was created because we had hypothesized that the students in the control group would be better able to recall correct spelling because they had spent more time with the textbook directly engaging with reading and writing the words.

### *Independent Variables*

We administered a short sociodemographic questionnaire in order to gain information about students' age, sex, migration background, and languages spoken at home. We also administered the German adaptation of Cattell's Culture Free Intelligence Test (Cattell, 1961) by Weiß (2006) to measure fluid intelligence using its four subtests: series, classifications, matrices, and typologies. According to Weiß (2006), these subtests correlate highly with the *g* factor of intelligence ( $r = .78$  to  $.83$ ). We used raw means for each of the four subtests and standardized IQ scores adapted for age ( $M = 100$ ,  $SD = 15$ ) in our analyses. The test manual reports that the reliability of all four subtests of section I is  $r = .92$ .

## **Results**

The students in the two groups were comparable in their cognitive and motivational prerequisites and their performance on the vocabulary pretest. Independent samples *t* tests comparing the two groups at Time 1 revealed no differences regarding either cognitive abilities,  $t(39) = 0.77$ ,  $p = .447$ ,  $d = 0.24$ , 95% CI  $[-6.12, 13.63]$  or language test results,  $t(36) = 0.42$ ,  $p = .676$ ,  $d = 0.14$ , 95% CI  $[-4.81, 7.33]$ . Groups were also comparable for plurilingual ideal self aspirations,  $t(37) = 0.53$ ,  $p = .597$ ,  $d = 0.17$ , 95% CI  $[-.44, .75]$ , and English ideal self aspirations,  $t(37) = 0.75$ ,  $p = .457$ ,  $d = -0.24$ , 95% CI  $[-.70, .32]$ .

In order to explore the effect of the intervention on ideal self aspirations and language test results, we conducted two-way mixed (between-within-subjects) ANOVAs. We tested the preconditions for conducting ANOVAs (normality, Box's M test of equality of covariance matrices, Mauchly's test of sphericity), and our data did not meet them in all instances, which meant that we have reported the relevant statistical adjustments in these cases. We conducted all analyses with SPSS Version 25.

For calculating effect sizes for paired contrasts, we used the online calculator by Lenhard and Lenhard (2016; calculation of *d* and *r* from the test statistics of dependent and independent *t* tests). Confidence intervals were calculated

according to Morris (2008). For interpreting effect sizes for paired contrasts, we adopted the field-specific benchmarks proposed by Plonsky and Oswald (2014) for within-group contrasts (tests at Times 1, 2, and 3), with  $0.60 \leq d < 1.00$  suggesting a small effect,  $1.00 \leq d < 1.40$  a medium effect, and  $d \geq 1.40$  a large effect. We used these ranges because they are more useful with regard to practical significance of L2 research than Cohen’s (1988) cutoff points of small ( $d \geq .20$ ), medium ( $d \geq .50$ ), and large ( $d \geq .80$ ). For interpreting  $\eta^2_{\text{part}}$  in ANOVA, we drew on Ellis (2010) cutoff-points of small ( $.01 \leq \eta_p^2 < .06$ ), medium ( $.06 \leq \eta_p^2 < .14$ ), and large ( $\eta_p^2 \geq .14$ ).

Research Question 1: What is the effect of the intervention on plurilingual and English ideal self aspirations?

**Table 1** Plurilingual and English ideal self aspirations (min. 1/max. 4): Means (standard deviations) for both groups at Time 1, Time 2, and Time 3

	Plurilingual ideal		English ideal	
	Intervention group	Control group	Intervention group	Control group
Self aspirations	<i>M</i> ( <i>SD</i> )			
Time 1	2.79 (0.79)	2.57 (1.02)	2.89 (0.81)	3.04 (0.77)
Time 2	3.54 (0.49)	2.80 (1.06)	3.42 (0.73)	3.37 (0.68)
Time 3	3.16 (0.80)	2.67 (1.19)	3.09 (0.79)	2.94 (0.84)

Table 1 provides the descriptive statistics for the measures of plurilingual and English ideal self aspirations. Both groups showed descriptively higher plurilingual ideal self aspirations at Time 2 than at Time 1, although gains were larger in the intervention group. At Time 3, plurilingual ideal self aspirations decreased in both groups. A mixed ANOVA that compared the two groups for plurilingual ideal self aspirations across the three times revealed a significant, large main effect for time,  $F(2, 34) = 7.21, p = .002, \eta_p^2 = .30$ , but the main effect for group was not significant,  $F(1,35) = 3.45, p = .072, \eta_p^2 = .09$  and there was no significant interaction effect,  $F(2,34) = 2.11, p = .137, \eta_p^2 = .11$ .

Subsequent pairwise comparisons of means for within-subject effects with adjusted alpha level ( $p = .05/2 = .025$ ) revealed a medium effect size for gains from Time 1 to Time 2 in the intervention group,  $t(18) = 4.88, p < .001, d = 1.09, 95\% \text{ CI } [0.54, 1.64]$ , but the gains in the control group were not significant,  $t(18) = 1.07, p = .297, d = 0.20, 95\% \text{ CI } [-0.17, 0.57]$ . In other words, only

the intervention group showed significantly higher scores at Time 2. Although our ANOVA did not warrant splitting our dataset into intervention and control groups—as there was no main effect of or interaction with Group—the main effect for group was arguably of borderline statistical significance ( $p = .072$ ). The effect sizes of the subsequent paired tests and their confidence intervals clearly suggest different patterns of results in the two groups, with confidence intervals around  $d$  that have some but little overlap across the two groups. The confidence intervals of the effect size of the control group pass through zero, further suggesting an unreliable effect in this group.

As we had predicted, scores decreased from Time 2 to Time 3. Given the adjusted alpha level, the decrease approached significance in the intervention group,  $t(20) = -2.34, p = .03, d = -0.57, 95\% \text{ CI} [-1.08, -0.06]$ ; we observed no change in the control group,  $t(18) = -0.75, p = .463, d = -0.11, 95\% \text{ CI} [-0.40, 0.17]$ . In other words, there was a significant increase in plurilingual ideal self aspirations in the intervention group from Time 1 to Time 2, but these aspirations were not sustained over the retention interval. We observed no changes in the control group, thus Hypothesis 1, students in the intervention group would become more interested in learning different languages, at least in the short term, was supported.

To gain some qualitative insights into the effect of the intervention on the students' plurilingual ideal self aspirations, we also asked them to share which languages they would like to learn in addition to their family language(s) in the motivation questionnaire. The qualitative data suggested growing curiosity and openness in the students. At Time 1, the students in both groups showed very similar aspirations. The students in the intervention group referred to seven languages (23 references in total); the students in the control group named six languages (24 references in total). The languages named were restricted to European languages commonly taught in primary or secondary school (English, French, Spanish, Italian) and languages of neighboring countries (Danish and, in the intervention group additionally Dutch).

At Time 2, the students in the control group named the same six languages as before (23 reference in total), but the students in the intervention group named 15 different languages (41 references in total) with three students stating that they would like to learn all languages present in the classroom. The students affirmed that they would like to learn Bulgarian (four references), Kurdish (two references), Russian (five references), and Vietnamese (three references). In addition, they mentioned other languages including migrant languages such as Turkish (two references) and Polish (three references). Although only illustrative, these additional data suggested that the students in the intervention

group became interested in the linguistic diversity surrounding them because they mentioned languages spoken by their peers in the classroom.

English ideal self aspirations were very similar in both groups across the times. In both groups, scores increased at Time 2 and decreased at Time 3 (see Table 1). A mixed ANOVA that compared the two groups for English ideal self aspirations at Time 1, Time 2, and Time 3 revealed a large main effect for time,  $F(2, 34) = 10.55, p < .001, \eta_p^2 = .38$ , but there was neither a significant main effect for group,  $F(1,35) = .006, p = .938, \eta_p^2 < .001$  nor a significant interaction effect,  $F(2,34) = 1.00, p = .378, \eta_p^2 = .06$ . Hypothesis 2, students in the intervention group would show higher English ideal self aspirations than students in the control group, and Hypothesis 3, students in the intervention group would show lower English ideal self aspirations than students in the control group at Time 2, were not supported because there was no significant difference between the two groups regarding English ideal self aspirations.

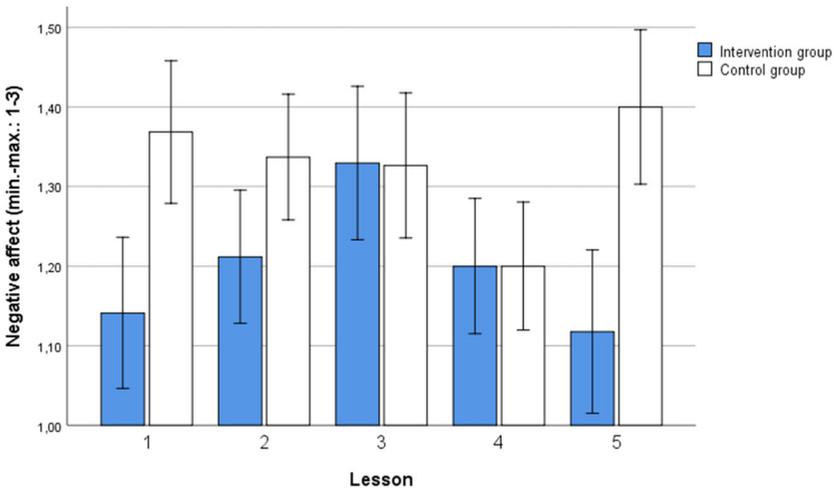
Research Question 2: To what extent does the intervention influence positive and negative affect?

**Table 2** Positive and negative affect during the intervention (min. 1/max. 3): Means (standard deviations) for both groups after each of the five lessons

	Positive affect		Negative affect	
	Intervention group	Control group	Intervention group	Control group
PANAS <sup>a</sup>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Lesson 1	2.39 (0.43)	2.11 (0.41)	1.14 (0.22)	1.37 (0.50)
Lesson 2	2.31 (0.35)	2.09 (0.38)	1.21 (0.39)	1.34 (0.30)
Lesson 3	2.41 (0.38)	2.07 (0.47)	1.33 (0.49)	1.33 (0.28)
Lesson 4	2.27 (0.52)	2.12 (0.40)	1.20 (0.45)	1.20 (0.23)
Lesson 5	2.56 (0.38)	2.36 (0.47)	1.12 (0.49)	1.40 (0.36)

<sup>a</sup>German version of the Positive and Negative Affect Schedule.

After each of the five lessons, we measured positive and negative affect via the PANAS. The intervention group showed higher positive affect than the control group after all five lessons, and positive affect was particularly high in the last session. Table 2 provides the descriptive statistics for this measure. A mixed ANOVA that compared the two groups for positive affect across the five lessons revealed that the main effect for lesson was not significant,



**Figure 2** Negative affect during the intervention: Mean scores and standard errors for both groups after each of the five lessons. [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

$F(4, 31) = 2.40, p = .071, \eta_p^2 = .24$ , but there was a significant, large main effect for group,  $F(1,34) = 7.63, p = .009, \eta_p^2 = .18$ . The interaction effect was not significant,  $F(4,31) = 0.87, p = .873, \eta_p^2 = .04$ .

Both groups showed low negative affect. In the intervention group, negative affect was even lower than in the control group after Lessons 1, 2, and 5; after Lessons 3 and 4, negative affect was rated the same in both groups. A mixed ANOVA that compared the two groups regarding negative affect across the lessons revealed neither a significant main effect for lesson,  $F(4, 31) = 1.27, p = .302, \eta_p^2 = .14$ , nor for group,  $F(1,34) = 1.61, p = .213, \eta_p^2 = .05$ . However, there was a large and significant interaction effect,  $F(4,31) = 2.92, p = .037, \eta_p^2 = .27$ . Figure 2 illustrates that, in the intervention group, negative affect was particularly low at Lesson 1 and Lesson 5 when affective-experiential activities were carried out (see section Procedure and Materials), but, in the control group, negative affect was slightly more elevated after Lessons 1 and 5 than after Lessons 2, 3, and 4.

Hypothesis 4, students in the intervention group would report more positive affect and less negative affect during the intervention than students in the control group, was therefore largely supported; negative affect was low in both groups, and the students in the intervention group showed significantly higher positive affect.

Research Question 3: What is the effect of the intervention on learning outcomes (productive and receptive vocabulary gains in English) in the target language?

**Table 3** Performance productive vocabulary tests (max. 40): Means (standard deviations) for both groups at Time 1, Time 2, and Time 3

	Intervention group	Control group	Total
Productive vocabulary	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Time 1	3.89 (3.28)	2.78 (2.46)	3.35 (2.93)
Time 2	20.05 (6.78)	8.83 (7.00)	14.59 (8.86)
Time 3	17.55 (8.06)	9.42 (8.34)	13.59 (9.07)

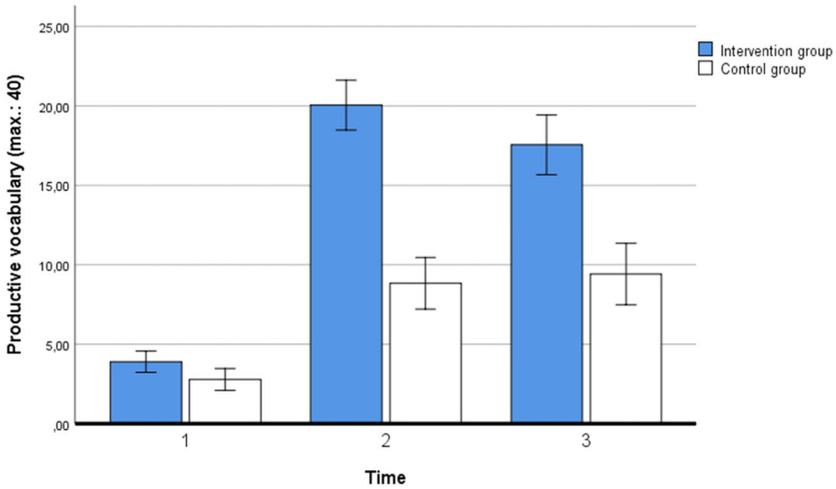
**Table 4** Performance receptive vocabulary tests (max. 28): Means (standard deviations) for both groups at Time 1, Time 2, and Time 3

	Intervention group	Control group	Total
Receptive vocabulary	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Time 1	11.95 (3.57)	10.84 (4.32)	11.39 (3.95)
Time 2	22.16 (3.93)	16.79 (5.38)	19.47 (5.39)
Time 3	21.16 (4.91)	19.00 (5.48)	20.08 (5.25)

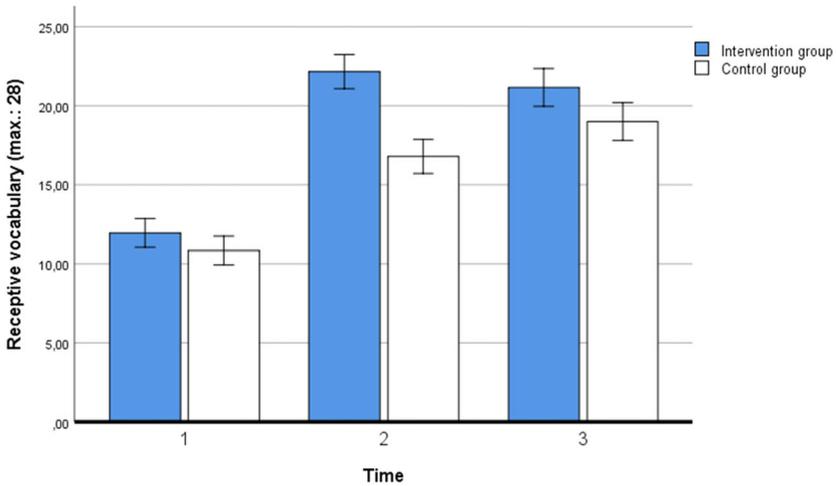
**Table 5** Performance productive vocabulary tests with correct spelling (max. 40): Means (standard deviations) for both groups at Time 1, Time 2, and Time 3

	Intervention group	Control group	Total
Productive vocab./ Correct spelling	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Time 1	2.37 (2.71)	1.74 (1.88)	2.05 (2.32)
Time 2	14.47 (8.13)	7.63 (6.16)	11.05 (7.91)
Time 3	13.58 (8.58)	7.82 (8.33)	10.70 (8.84)

Both groups showed learning gains for productive and receptive vocabulary. However, the intervention group made considerably larger learning gains. Tables 3 and 4 provide the descriptive statistics for the productive and receptive vocabulary tests, respectively. Figures 3 and 4 graphically illustrate the groups' performance on the two vocabulary measures.



**Figure 3** Productive vocabulary at Times 1, 2, and 3 (aggregated mean scores and standard errors from Productive Vocabulary Test 1 and Test 2) [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]



**Figure 4** Receptive vocabulary at Times 1, 2, and 3 (aggregated mean scores and standard errors from Receptive Vocabulary Test 3 and Test 4). [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

A mixed ANOVA with scores aggregated from the two productive vocabulary tests (with scores given for phonetically correct spelling) across the three times revealed a significant large main effect for time,  $F(2,34) = 77.24$ ,  $p < .001$ ,  $\eta_p^2 = .82$ , a large main effect for group,  $F(1,35) = 13.93$ ,  $p = .001$ ,  $\eta_p^2 = .29$ , and a large interaction effect,  $F(2,34) = 17.90$ ,  $p < .001$ ,  $\eta_p^2 = .51$ . Hypothesis 5, students in the intervention group would perform less well than students in the control group on post-intervention vocabulary tests, therefore was not supported for productive vocabulary knowledge.

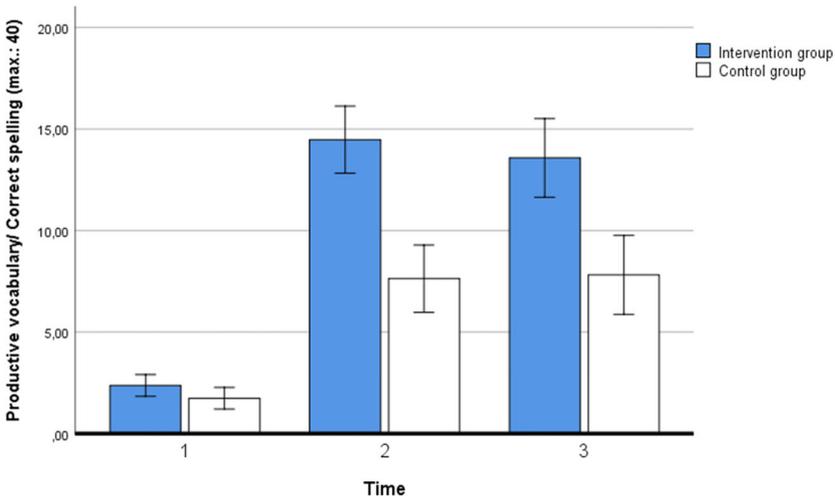
Subsequent pairwise comparisons of means for within-subject effects with adjusted alpha level ( $p = .05/2 = .025$ ) revealed a large effect size for learning progress from Time 1 to Time 2 in the intervention group,  $t(18) = 14.14$ ,  $p < .001$ ,  $d = 2.44$ , 95% CI [1.77, 3.22]. In the control group, we observed a small effect size,  $t(17) = 4.47$ ,  $p < .001$ ,  $d = 0.90$ , 95% CI [0.43, 1.37].

The decrease in productive vocabulary knowledge scores in the intervention group between Time 2 and Time 3 was significant,  $t(20) = -2.47$ ,  $p = .023$ ,  $d = -0.28$ , 95% CI [-0.50, -0.06], but with a negligible effect size and a  $p$  value very close to the adjusted alpha level (0.25). The slight increase in scores between Time 2 and Time 3 in the control group was not significant,  $t(19) = 0.40$ ,  $p = .693$ ,  $d = 0.04$ , 95% CI [-0.18, 0.26].

The data further suggested that the intervention group made more receptive vocabulary gains compared to the control group (see Table 4). A mixed ANOVA, with scores aggregated from the two receptive vocabulary tests, across the three test times and with the Greenhouse-Geisser correction for violation of the assumption of sphericity, similarly revealed a significant large main effect for time,  $F(1.47, 53.04) = 133.17$ ,  $p < .001$ ,  $\eta_p^2 = .79$ , a medium main effect for group,  $F(1,36) = 13.93$ ,  $p = .039$ ,  $\eta_p^2 = .11$ , and a large interaction effect,  $F(1.47, 53.04) = 6.98$ ,  $p < .005$ ,  $\eta_p^2 = .16$ . Hypothesis 5, students in the intervention group would perform less well than students in the control group on post-intervention vocabulary tests, therefore was also not supported for receptive vocabulary knowledge.

Subsequent pairwise comparisons of means for within-subject effects with adjusted alpha level ( $p = .05/2 = .025$ ) revealed a large effect size for vocabulary score gains from Time 1 to Time 2 in the intervention group,  $t(18) = 13.18$ ,  $p < .001$ ,  $d = 2.71$ , 95% CI [1.84, 3.58]. In the control group, we observed a medium effect size,  $t(18) = 9.33$ ,  $p < .001$ ,  $d = 1.14$ , 95% CI [0.83, 1.45].

The decrease in receptive vocabulary scores in the intervention group between Time 2 and Time 3 was not significant,  $t(20) = -1.73$ ,  $p = .100$ ,  $d = -0.20$ , 95% CI [-0.43, 0.03]; the slight increase in scores between Time 2 and



**Figure 5** Productive vocabulary at Times 1, 2, and 3 (aggregated mean scores and standard errors from Productive Vocabulary Test 1 and Test 2, correct spelling required). [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

Time 3 in the control group was significant but with a negligible effect size,  $t(19) = 3.10$ ,  $p = .006$ ,  $d = 0.40$ , 95% CI [0.14, 0.66].

In addition, we explored whether performance for productive vocabulary differed when we counted words as memorized only if they were spelled correctly (see Dependent Variables section). As we had expected, scores were lower in both groups when we required correct spelling (see Table 5). We had also assumed that the students in the intervention group would have an even larger disadvantage if we required correct spelling because the students in the control group spent more time with the textbook and thus with reading and writing the new words. However, despite this disadvantage, the students in the intervention group also outperformed the students in the control group when we counted only correctly spelled words (see Figure 5). A mixed ANOVA, with scores aggregated from the two productive vocabulary tests, across the three test times and with the Greenhouse-Geisser correction for violation of the assumption of sphericity revealed a large main effect for time,  $F(1.46, 52.52) = 59.21$ ,  $p < .001$ ,  $\eta_p^2 = .62$ , a large main effect for group,  $F(1,36) = 5.81$ ,  $p = .021$ ,  $\eta_p^2 = .14$ , and a large interaction effect,  $F(1.46, 52.52) = 6.27$ ,  $p < .008$ ,  $\eta_p^2 = .15$ .

Subsequent pairwise comparisons of means for within-subject effects with adjusted alpha level ( $p = .05/2 = .025$ ) showed a large effect size for learning

progress from Time 1 to Time 2 in the intervention group,  $t(18) = 8.19$ ,  $p < .001$ ,  $d = 1.40$ , 95% CI [0.93, 1.87]. In the control group, we observed a medium effect size,  $t(18) = 4.94$ ,  $p < .001$ ,  $d = 1.00$ , 95% CI [0.52, 1.49].

The slight decrease in scores in the intervention group between Time 2 and Time 3 was not significant,  $t(20) = -0.70$ ,  $p = .491$ ,  $d = -0.06$ , 95% CI [-0.66, 0.54]; in the control group there was almost no change between Time 2 and Time 3,  $t(19) = 0.13$ ,  $p = .898$ ,  $d = 0.01$ , 95% CI [-0.20, 0.22].

In summary, Hypothesis 5, students in the intervention group would perform less well than students in the control group on post-intervention vocabulary tests was not supported for both productive and receptive vocabulary knowledge; the students in the intervention group performed significantly better than those in the control group even when we required correct spelling and this advantage was largely maintained at Time 3.

## Discussion

The study addressed linguistic diversity in a resource-oriented way and combined insights from multilingual research and L2 motivational research. Multilingual research has suggested that drawing on students' existing linguistic resources is beneficial for learning; L2 motivational research has highlighted the importance of stimulating positive attitudes and plurilingual aspirations. Two groups of primary school learners were taught five lessons on the human body based on a textbook. In each group, half of the children reported regularly using languages other than German at home. We encouraged the students in the intervention group to draw on their linguistic resources; in addition, the students engaged with two affective-experiential activities that illustrated appreciation of linguistic diversity in the classroom and aimed at fostering plurilingual ideal self aspirations.

Results indicated that the approach was successful according to the outcomes measures used. Only the students in the intervention group showed gains in plurilingual ideal self aspirations from Time 1 to Time 2, thus supporting Hypothesis 1, students in the intervention group would become more interested in learning different languages. In addition, the students in the intervention group reported more interest in linguistic diversity at Time 2, listing a wider range of languages that they would like to learn, including the languages present in the classroom and other migrant languages.

Plurilingual ideal self aspirations decreased over the retention interval (Time 3) when the students returned to the usual textbook method where plurilingual ideal self aspirations were not fostered. This decrease underlined a need for a more continuous effort to nourish plurilingual ideal self aspirations and

relevant attitudes. Because macro- and meso-contextual variables, including sociopolitical, ideological influences, and institutional structures, are likely to continually exert considerable downward pressure on students' attitudes (Busse, 2017b; Ushioda, 2017), it seems advisable to stress the value of linguistic diversity in the classroom and of speaking different languages from the very beginning and throughout students' language education.

English ideal self aspirations increased in both groups at Time 2 and decreased at Time 3, but there was no significant difference between the two groups, thus Hypothesis 2, students in the intervention group would show higher English ideal self aspirations than students in the control group, and Hypothesis 3, students in the intervention group would show lower English ideal self aspirations than students in the control group at Time 2, were not supported. In other words, fostering plurilingual ideal self aspirations did not appear to have an effect on ideal self aspirations that were specific to English. However, the English ideal self aspiration results should be treated very cautiously because strong English ideal self aspirations in older students can be associated with low aspirations for learning other languages at school (Csizér & Lukács, 2010; Henry, 2011). It is also not yet known whether incentivizing students to learn many languages could come at the expense of students' motivation to learn English. Future studies would have to explore this in more detail with both younger and more mature students.

We also measured positive and negative affect via the PANAS at the end of each of the five lessons. In accordance with Hypothesis 4, students in the intervention group would report more positive affect and less negative affect during the intervention than students in the control group, the students in the intervention group reported more positive affect with the group variable showing a significant and large effect. Negative affect was low in both groups over the five lessons. We observed a large, significant interaction effect because negative affect was particularly low in the experimental group after Lessons 1 and 5, but it was slightly elevated in the control group compared to Lessons 2, 3, and 4. Because the students in intervention group had engaged in the two affective-experiential activities in Lessons 1 and 5, the data seemed to provide further evidence for the usefulness of such activities for promoting positive affect in EFL teaching (see also Busse & Krause, 2016; Busse et al., 2017).

Contrary to Hypothesis 5, which stated that students in the intervention group would perform less well than students in the control group on post-intervention vocabulary tests, particularly when correct spelling was required, the students in the intervention group made much larger learning progress on average and did better on both productive and receptive vocabulary tests than

the control group. This result is worth highlighting, given that the students in the intervention group had less time on task and less time to engage with the textbook exercises due to the two affective-experiential activities and the time provided for inclusion of family languages in the class activities. It was particularly surprising that the advantage of the intervention group over the control group was also present when words were counted as memorized only when spelled correctly, given that the intervention group had spent less time reading and writing the new words. Given these findings, one could argue that higher positive affect led to higher task engagement and thus outweighed the disadvantage posed by reduced time. The role of emotions and positive affect for task engagement and—ultimately learning attainment—in the language classroom has received increased attention in language learning literature (e.g., Philp & Duchesne, 2016) and should be explored further. It could also be argued that the students were better able to remember words when the new elements in the target language were related to their own linguistic repertoire or when translanguaging scaffolding strategies were implemented (see also Lin, 2016). Although future studies would have to explore the underlying psycholinguistic and/or motivational causes in more depth, results would have high practical relevance. Because addressing linguistic diversity in a resource-oriented way is still an exception in the language classroom (see Göbel & Vieluf, 2017), our study may encourage teachers to try to incorporate students' linguistic resources and help persuade those who show reticence about allowing or incorporating home languages in the classroom (see Bailey & Marsden, 2017). In addition, teachers may see the value of implementing affective-experiential activities in linguistically diverse settings so as to foster positive affect and well-being. It should be highlighted that vocabulary learning gains were largely sustained, even though the retention interval (4 weeks) was longer than the intervention itself.

There are, however, limitations to this study that we need to acknowledge. First, in quasi-experimental studies, there are threats to internal validity such as the nesting of students within groups. We partially addressed some of the challenges of quasi-experimental studies by a research procedure that included pretest, posttest, and follow-up tests, external teachers (instead of students' own teachers), randomly assignment of classes to conditions, and a standardized teaching script that was based on the regular textbook. One researcher was always present in all classes to observe the implementation and to avoid any deviations from the teaching script. In addition, we deliberately chose two groups in one school that had the same characteristics in terms of class composition (gender distribution; number of multilingual students). Furthermore, we

gathered relevant learning prerequisites (prior language knowledge, cognitive abilities) as potential control variables, and we compared groups with respect to these variables before the intervention.

Second, it was not possible to disentangle the effects of multilingual practices and affective activities to assess the extent to which each individual activity contributed to learning. The PANAS results showed that negative affect was particularly low after Lessons 1 and 5, where we carried out the two affective-experiential activities. However, positive affect was higher in the intervention group than in the control group across all five lessons, suggesting the students appreciated all the lessons. Future studies may therefore explore the effect of inclusion of students' own family languages and affective-experiential activities separately and the applicability of the approach when working with different age groups.

Third, trained graduate students conducted the intervention. Although using these graduate students was important for safeguarding treatment fidelity and for controlling for teacher bias, it also lowered ecological validity. Because attitudes play an important role in adequately addressing linguistic and cultural diversity in the classroom (Busse & Göbel, 2017), teachers may have to be trained before implementing this teaching approach. Such training might also be needed to address low levels of confidence, as reported by Bailey and Marsden (2017).

Last but not least, language progress was only measured in terms of expansion of vocabulary and focused mainly on concrete nouns. Although vocabulary is a key component of language learning, particularly in the early stages, future studies will have to look at other areas of language development, for example, the impact of multilingual practices on other aspects of lexical development (abstract nouns and other parts of speech) and grammar development.

## **Conclusion**

Despite the limitations of our study design, our innovative approach to an EFL pedagogy that drew on research on multilingual education and L2 motivational research appears promising both from an educational and a linguistic perspective. The data suggested that it can foster positive affect and lead to substantially better vocabulary gains than an EFL pedagogy without such a plurilingual approach. Meeting the emotional and motivational needs of students appears crucial in linguistically diverse settings because young migrants, particularly refugee children, are often very vulnerable (see Joshi & O'Donnell, 2003). Stimulating plurilingual ideal self aspirations in students with and without a migration background (Busse, 2017a) as well as engaging multilingual

students' linguistic repertoires (Cenoz & Gorter, 2014; Cummins, 2017) may result in higher appreciation of linguistic diversity and migrant languages in the classroom. In the long run, a higher appreciation of linguistic diversity and migrant languages may also counteract negative attitudes toward migrant languages of the majority population (Plewnia & Rothe, 2011) and ultimately help tackle the negative social positioning of and attitudes toward migrant or minority groups. Last but not least, given that students often ascribe little value to learning other foreign languages besides English (Busse, 2017b), it may also be beneficial to promote foreign language learning at school beyond EFL learning.

Final revised version accepted 3 August 2019

## Notes

- 1 Although the relationship between time and language learning is far from straightforward and there are other variables that influence attainment, it can be assumed that time on language tasks is a meaningful determinant for EFL beginners. Different motivations relevant for language learning may not yet be developed; students also have no other exposure to the language outside of the classroom and limited engagement with new words in the classroom.
- 2 Regarding the age range, it should be pointed out that children usually start school at the age of 6 years in Germany. Most students are therefore 8 years old in third grade. Students can, however, be older; for example, students may have to repeat a year if they do not reach adequate literacy levels. Migrant students may be grouped with younger children to give them time to reach adequate literacy levels before advancing to secondary school after fourth grade.
- 3 All students were nevertheless exposed to the German language, both at school and among their peers, that is, an equal number of students in each group was multilingual.
- 4 Platt German is a minority Germanic language spoken mainly in Northern Germany and the Northeastern Netherlands. Some students in Lower Saxony may be exposed to Platt German by older people, but it is not usually spoken among peers in urban areas. Platt German is not used at school.

## Open Research Badges



This article has earned an Open Materials badge for making publicly available the components of the research methodology needed to reproduce the reported procedure and analysis. All materials are available at <http://www.iris-database.org>.

## References

- Arteagoitia, I., & Howard, L. (2015). The role of the native language in the literacy development of Latino students in the U.S. In J. Cenoz & D. Gorter (Eds.), *Multilingual education: Between language learning and translanguaging* (pp. 61–83). Cambridge, UK: Cambridge University Press.
- Bailey, E. G., & Marsden, E. J. (2017). Teachers' views on recognising and using home languages in predominantly monolingual primary schools. *Language and Education, 31*, 283–306.
- Becker, C., Gerngross, G., & Puchta, H. (2013a). *Playway 3: Activity Book mit Audio-CD und Übungssoftware* [Playway 3: Activity book with audio CD and training software]. Innsbruck, Austria: Helbling & Klett.
- Becker, C., Gerngross, G., & Puchta, H. (2013b). *Playway 3: Pupil's Book*. Innsbruck, Austria: Helbling & Klett.
- Boo, Z., Dörnyei, Z., & Ryan, S. (2015). L2 motivation research 2005–2014: Understanding a publication surge and changing landscape. *System, 55*, 145–157. <https://doi.org/10.1016/j.system.2015.10.006>
- Bourdieu, P. (1977). The economics of linguistic exchanges. *Information (International Social Science Council), 16*, 645–668. <https://doi.org/10.1177/053901847701600601>
- Busse, V. (2013). An exploration of motivation and self-beliefs of first year students of German. *System, 41*, 379–398. <https://doi.org/10.1016/j.system.2013.03.007>
- Busse, V. (2017a). Zur Förderung positiver Einstellungen gegenüber sprachlicher Diversität als europäisches Bildungsziel: Status quo und Desiderate [Promoting positive attitudes towards linguistic diversity as a European educational objective: Status quo and desiderata]. *Zeitschrift für Fremdsprachenforschung, 28*, 53–75.
- Busse, V. (2017b). Plurilingualism in Europe: Exploring attitudes towards English and other European languages among adolescents in Bulgaria, Germany, the Netherlands, and Spain. *The Modern Language Journal, 101*, 566–582. <https://doi.org/10.1111/modl.12415>
- Busse, V., & Göbel, K. (2017). Interkulturelle Kompetenz in der Lehrerinnen- und Lehrerbildung: Zum Stellenwert interkultureller Einstellungen als Grundlage relevanter Handlungskompetenzen [Intercultural competence in teacher education: On the importance of intercultural attitudes for relevant practical skills]. *Beiträge zur Lehrerinnen- und Lehrerbildung, 35*, 427–439.
- Busse, V., Jungclaus, J., Roden, I., Russo, F. A., & Kreutz, G. (2018). Combining song- and speech-based language teaching: An intervention with recently migrated children. *Frontiers in Psychology, 9*, 2386. <https://doi.org/10.3389/fpsyg.2018.02386>
- Busse, V., & Krause, U.-M. (2016). Instructional methods and languages in class: A comparison of two teaching approaches and two teaching languages in the field of intercultural learning. *Learning and Instruction, 42*, 83–94. <https://doi.org/10.1016/j.learninstruc.2016.01.006>

- Busse, V., Riedesel, L., & Krause, U.-M. (2017). Anregung von Reflexionsprozessen zur Förderung interkultureller Kompetenz: Ergebnisse einer Interventions- und einer Interviewstudie [Stimulating reflection processes to promote intercultural competence: Results from an intervention and an interview study]. *Zeitschrift für Pädagogik*, 63, 362–386. <https://doi.org/10.3262/ZP1703362>
- Candelier, M. (2017). Awakening to languages and educational language policy. In J. Cenoz, D. Gorter, & S. May (Eds.), *Language awareness and multilingualism* (3rd ed., pp. 161–172). Berlin, Germany: Springer.
- Caroll, J. (1963). A model for school learning. *Teachers College Record*, 64, 723–733.
- Cattell, R. B. (1961). *Culture Free Intelligence Test, Scale 3*. Champaign, IL: Institute for Personality and Ability Testing.
- Cenoz, J. (2001). Three languages in contact: Language attitudes in the Basque Country. In D. Lasagabaster & J. M. Sierra (Eds.), *Language awareness in the foreign language classroom* (pp. 37–60). Bilbao, Spain: University of the Basque Country.
- Cenoz, J. (2019). Translanguaging pedagogies and English as a lingua franca. *Language Teaching*, 52, 71–85. <https://doi.org/10.1017/S0261444817000246>
- Cenoz, J., & Gorter, D. (2014). Focus on multilingualism as an approach in educational contexts. In A. Creese & A. Blackledge (Eds.), *Heteroglossia as practice and pedagogy* (pp. 239–254). Berlin, Germany: Springer.
- Cenoz, J., & Gorter, D. (2017). Translanguaging as a pedagogical tool in multilingual education. In J. Cenoz, D. Gorter, & S. May (Eds.), *Language awareness and multilingualism* (3rd ed., pp. 309–321). Berlin, Germany: Springer.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
- Council of Europe. (2007). *From linguistic diversity to plurilingual education: Guide for the development of language education policies in Europe*. Retrieved from <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016802fc1c4>
- Council of Europe. (2008). *White paper on intercultural dialogue: Living together as equals in dignity*. Retrieved from [https://www.coe.int/t/dg4/intercultural/source/white%20paper\\_final\\_revised\\_en.pdf](https://www.coe.int/t/dg4/intercultural/source/white%20paper_final_revised_en.pdf)
- Csizér, K., & Lukács, G. (2010). The comparative analysis of motivation, attitudes and selves: The case of English and German in Hungary. *System*, 38, 1–13. <https://doi.org/10.1016/j.system.2009.12.001>
- Cummins, J. (2000). *Language, power and pedagogy: Bilingual children in the crossfire*. Clevedon, UK: Multilingual Matters.
- Cummins, J. (2017). Teaching for transfer in multilingual school contexts. In O. García, A. Lin, & S. May (Eds.), *Bilingual education: Encyclopedia of language and education* (pp. 103–115). Berlin, Germany: Springer.
- Day, J. D., Borkowski, J. G., Punzo, D., & Howsepian, B. (1994). Enhancing possible selves in Mexican American students. *Motivation and Emotion*, 18(1), 79–103.

- Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 9–42). Bristol, UK: Multilingual Matters.
- Dörnyei, Z., & Al-Hoorie, A. H. (2017). The motivational foundation of learning languages other than global English: Theoretical issues and research directions. *The Modern Language Journal*, *101*, 455–468. <https://doi.org/10.1111/modl.12408>
- Eichinger, L. M., Gärtig, A.-K., Plewnia, A., Roessel, J., Rothe, A., Rudert, S., . . . Stickel, G. (2009). *Aktuelle Spracheinstellungen in Deutschland. Erste Ergebnisse einer bundesweiten Repräsentativumfrage* [Language attitudes in Germany: First results from a representative nation-wide survey]. Mannheim, Germany: Institut für Deutsche Sprache.
- Ellis, P. D. (2010). *The essential guide to effect sizes: Statistical power, meta-analysis, and the interpretation of research results*. Cambridge, NY: Cambridge University Press.
- Eurostats. (2016). *Foreign language learning statistics*. Retrieved from [http://ec.europa.eu/eurostat/statistics-explained/index.php/Foreign\\_language\\_learning\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Foreign_language_learning_statistics)
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175–191. <https://doi.org/10.3758/BF03193146>
- García, O., Ibarra Johnson, S., & Seltzer, K. (2017). *The translanguaging classroom: Leveraging student bilingualism for learning*. Philadelphia, PA: Caslon.
- García, O., & Lin, A. (2016). Translanguaging and bilingual education. In O. García, A. Lin, & S. May (Eds.), *Bilingual and multilingual education* (pp. 117–130). Dordrecht, Netherlands: Springer.
- García, O., & Wei, L. (2014). *Translanguaging: Language, bilingualism and education*. New York, NY: Palgrave Macmillan.
- Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London, UK: Edward Arnold.
- Göbel, K., & Helmke, A. (2010). Intercultural learning in English as a foreign language instruction: The importance of teachers' intercultural experience and the usefulness of precise instructional directives. *Teaching and Teacher Education*, *26*, 1571–1582. <https://doi.org/10.1016/j.tate.2010.05.008>
- Göbel, K., & Vieluf, S. (2017). Specific effects of language transfer promoting teaching and insights into the implementation in EFL-teaching. *Orbis scholae*, *11*, 103–122. <https://doi.org/10.14712/23363177.2018.279>
- Good, A. J., Russo, F. A., & Sullivan, J. (2015). The efficacy of singing in foreign-language learning. *Psychology of Music*, *43*, 627–640. <https://doi.org/10.1177/0305735614528833>
- Hadfield, J., & Dörnyei, Z. (2013). *Motivating learning*. Harlow, UK: Longman.

- Hall, G., & Cook, G. (2012). Own-language use in language teaching and learning. *Language Teaching, 45*, 271–308. <https://doi.org/10.1017/S0261444812000067>
- Harter, S. (1999). *The construction of the self: A developmental perspective*. New York, NY: Guilford Press.
- Henry, A. (2010). Contexts of possibility in simultaneous language learning: Using the L2 motivational self system to assess the impact of global English. *Journal of Multilingual and Multicultural Development, 31*, 149–162. <https://doi.org/10.1080/01434630903471439>
- Henry, A. (2011). Examining the impact of L2 English on L3 selves: A case study. *International Journal of Multilingualism, 8*, 235–255. <https://doi.org/10.1080/14790718.2011.554983>
- Henry, A. (2017). L2 motivation and multilingual identities. *Modern Language Journal, 101*, 548–565. <https://doi.org/10.1111/modl.12412>
- Henry, A., & Thorsen, C. (2018). The ideal multilingual self: Validity, influences of motivation, and role in a multilingual education. *International Journal of Multilingualism, 15*, 349–364. <https://doi.org/10.1080/14790718.2017.1411916>
- Hesse, H. G., Göbel, K., & Hartig, J. (2008). Sprachliche Kompetenzen von mehrsprachigen Jugendlichen und Jugendlichen nicht-deutscher Erstsprache [Linguistic competences of plurilingual adolescents and adolescents with a first language other than German]. In E. Klieme (Ed.), *Unterricht und Kompetenzerwerb in Deutsch und Englisch. Ergebnisse der DESI-Studie* [Education and skills acquisition in German and English. Results of the DESI-survey] (pp. 208–230). Weinheim, Germany: Beltz.
- Hiver, P., & Al-Hoorie, A. H. (2019). Reexamining the role of vision in second language motivation: A preregistered conceptual replication of You, Dörnyei, and Csizér (2016). *Language Learning*. Retrieved from <https://doi.org/10.1111/lang.12371>
- Huang, X., Kim, N., & Christianson, K. (2019). Gesture and vocabulary learning in a second language. *Language Learning, 69*, 177–197. <https://doi.org/10.1111/lang.12326>
- Joshi, P. T., & O'Donnell, D. A. (2003). Consequences of child exposure to war and terrorism. *Clinical Child and Family Psychology Review, 6*, 275–292. <https://doi.org/10.1023/B:CCFP.0000006294.88201.68>
- Kultusministerkonferenz [Standing Conference of Ministers of Education and Cultural Affairs] (2004). *Bildungsstandards im Fach Deutsch für den Primarbereich* [Educational standards for German in primary school]. Retrieved from [https://www.kmk.org/fileadmin/veroeffentlichungen\\_beschluesse/2004/2004\\_10\\_15-Bildungsstandards-Deutsch-Primar.pdf](https://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2004/2004_10_15-Bildungsstandards-Deutsch-Primar.pdf)
- Krohne, H. W., Egloff, B., Kohlmann, C.-W., & Tausch, A. (1996). Untersuchungen mit einer Deutschen Version der “Positive and Negative Affect Schedule” (PANAS) [Investigation with a German version of the Positive and Negative Affect Schedule (PANAS)]. *Diagnostica, 42*, 139–156. <https://doi.org/10.1037/t49650-000>

- Krumm, H.-J. (2012). Multilingualism, heterogeneity and the monolingual policies of the linguistic integration of migrants. In M. Messer, R. Schroeder, & R. Wodak (Eds.), *Migrations: Interdisciplinary perspectives* (pp. 43–54). Vienna, Austria: Springer.
- Lanvers, U. (2012). “The Danish speak so many languages it’s really embarrassing.” The impact of L1 English on adult language students’ motivation. *Innovation in Language Learning and Teaching*, 6, 157–175.  
<https://doi.org/10.1080/17501229.2011.641970>
- Lanvers, U., Doughty, H., & Thompson, A. S. (2018). Brexit as linguistic symptom of Britain retreating into its shell? Brexit-induced politicization of language learning. *The Modern Language Journal*, 102, 775–796. <https://doi.org/10.1111/modl.12515>
- Lanvers, U., Hultgren, K., & Gayton, A. M. (2016). “People can be smarter with two languages”: Changing anglophone students’ attitudes to language learning through teaching linguistics. *The Language Learning Journal*, 47, 88–104.  
<https://doi.org/10.1080/09571736.2016.1196384>
- Lenhard, W., & Lenhard, A. (2016). *Calculation of effect sizes*. Dettelbach: Psychometrica. Retrieved from [https://www.psychometrica.de/effect\\_size.html](https://www.psychometrica.de/effect_size.html)  
<https://doi.org/10.13140/RG.2.2.17823.92329>
- Liddicoat, A. J., & Curnow, T. J. (2014). Students’ home languages and the struggle for space in the curriculum. *International Journal of Multilingualism*, 11, 273–288.  
<https://doi.org/10.1080/14790718.2014.921175>
- Lin, A. M. Y. (2016). *Language across the curriculum & CLIL in English as an additional language (EAL) contexts: Theory and practice*. Singapore: Springer.
- Lyster, R., Quiroga, J., & Ballinger, S. (2013). The effects of biliteracy instruction on morphological awareness. *Journal of Immersion and Content-Based Language Education*, 1, 169–197. <https://doi.org/10.1075/jicb.1.2.02lys>
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41, 954–969.
- Morris, C. B. (2008). Estimating effect sizes from pretest-posttest-control group designs. *Organizational Research Methods*, 11, 364–386.  
<https://doi.org/10.1177/1094428106291059>
- Muñoz, C. (2008). Age-related differences in foreign language learning: Revisiting the empirical evidence. *International Review of Applied Linguistics in Language Teaching*, 46, 197–220. <https://doi.org/10.1515/IRAL.2008.009>
- Owens, R. L., & Patterson, M. M. (2013). Positive psychological interventions for children: A comparison of gratitude and best possible selves approaches. *The Journal of Genetic Psychology*, 174, 403–428.
- Niedersächsisches Kultusministerium [Lower Saxony’s Ministry of Education]. (2018). *Kerncurriculum für die Grundschule. Schuljahrgänge 3–4. Englisch* [Curriculum for primary schools. Year 3–4. English]. Retrieved from [http://db2.nibis.de/1db/cuvo/datei/2018-06-25\\_kc\\_englisch\\_gs\\_druckfassung.pdf](http://db2.nibis.de/1db/cuvo/datei/2018-06-25_kc_englisch_gs_druckfassung.pdf)
- Norton, B. (2000). *Identity and language learning: Gender, ethnicity, and educational change*. Harlow, UK: Longman/Pearson.

- Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology, 91*, 188–204. <https://doi.org/10.1037/0022-3514.91.1.188>
- Oyserman, D., Terry, K., & Bybee, D. (2002). A possible selves intervention to enhance school involvement. *Journal of Adolescence, 25*, 313–326. <https://doi.org/10.1006/jado.2002.0474>
- Pavlenko, A. (2006). Bilingual selves. In A. Pavlenko (Ed.), *Bilingual minds: Emotional experience, expression, and representation* (pp. 1–33). Clevedon, UK: Multilingual Matters.
- Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics, 36*, 50–72. <https://doi.org/10.1017/S0267190515000094>
- Plewnia, A., & Rothe, A. (2011). Spracheinstellungen und Mehrsprachigkeit. Wie Schüler über ihre und andere Sprachen denken [Language attitudes and multilingualism: How students think about their own and other languages]. In L. M. Eichinger, A. Plewnia, & S. Melanie (Eds.), *Sprache und Integration: Über Mehrsprachigkeit und Migration* [Language and integration: About multilingualism and migration] (pp. 215–253). Tübingen, Germany: Narr.
- Plonsky, L., & Oswald, F. (2014). How big is “Big”? Interpreting effect sizes in L2 research. *Language Learning, 64*, 878–912. <https://doi.org/10.1111/lang.12079>
- Roden, I., Zepf, F. D., Kreutz, G., Grube, D., & Bongard, S. (2016). Effects of music and natural science training on aggressive behavior. *Learning and Instruction, 45*, 85–92. <https://doi.org/10.1016/j.learninstruc.2016.07.002>
- Taylor, F., & Marsden, E. J. (2014). Perceptions, attitudes and choosing to study foreign languages in England: An experimental intervention. *The Modern Language Journal, 98*, 902–920. <https://doi.org/10.1111/modl.12146>
- Ushioda, E. (2017). The impact of global English on motivation to learn other languages: Towards an ideal multilingual self. *Modern Language Journal, 101*, 469–482. <https://doi.org/10.1111/modl.12413>
- Ushioda, E., & Dörnyei, Z. (2017). Beyond global English: Motivation to learn languages in a multicultural world: Introduction to the special issue. *The Modern Language Journal, 101*, 451–454. <https://doi.org/10.1111/modl.12407>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS. *Journal of Personality and Social Psychology, 54*, 1063–1070. <https://doi.org/10.1037/0022-3514.54.6.1063>
- Weiß, R. H. (2006). *CFT 20-R Grundintelligenztest Skala 2 – Revision (CFT 20-R)*. Göttingen: Hogrefe.
- Yashima, T. (2002). Willingness to communicate in a second language: The Japanese EFL context. *Modern Language Journal, 86*, 54–66. <https://doi.org/10.1111/1540-4781.00136>

## Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

**Appendix S1.** Questionnaire Scales

**Appendix S2.** Measurement of Affect (PANAS)

**Appendix S3.** Language Tests

**Appendix: Accessible Summary (also publicly available at <https://oasis-database.org>)**

### **Drawing on Young Children's Linguistic Diversity in Class Can Benefit Motivation and Learning**

#### *What This Research Was About and Why It Is Important*

Current migratory movements, enhanced mobility across countries, and globalization processes have made schools all over Europe more diverse than ever. While most scholars agree that foreign language education needs to cater for and promote this rich cultural and linguistic diversity, there are as yet very few intervention studies that provide reliable evidence on how to achieve this goal. This study involved German children learning English as a foreign language. It combined insights from multilingual education and second language (L2) motivation research in order to develop an innovative pedagogical approach. This approach drew on students' linguistic resources and aimed to stimulate positive affect and plurilingual aspirations (i.e., hopes about learning languages beyond their current multilingual repertoires). The data indicated positive effects of the approach on attitudes and vocabulary retention.

#### *What the Researchers Did*

- The sample comprised 42 English as a foreign language learners (18 girls, 24 boys), aged 8 to 10, from two intact classes (each with 21 learners) in a Germany primary school.
- Each class was assigned to either: the experimental approach or regular teaching ( $n = 21$ ).
  - An equal number (10) in each group used languages other than German at home.
- The intervention comprised five lessons each of 45 minutes on the topic of "body."

- Students in the experimental group were encouraged to use their own linguistic resources and they additionally engaged with two affective-experiential activities aimed at stimulating positive attitudes to languages and at fostering plurilingual aspirations.
- To measure the effects of the new approach, the learners completed:
  - written receptive and productive vocabulary tests before, immediately after, and 4 weeks after the teaching
  - a questionnaire on both *English-specific* and *plurilingual ideal self aspirations*
  - PANAS (Positive And Negative Affect Schedule) to measure affect (moods and feelings) after each of the five lessons
- The researchers recorded learners' sex, age, IQ, migration history, and family language use.

#### *What the Researchers Found*

After the intervention, compared to the learners with the regular teaching, students in the experimental group showed:

- gains in plurilingual ideal self aspirations and reported more interest in linguistic diversity, listing a wider range of languages they would like to learn,
- more positive affect (mood and feelings) throughout the intervention,
- more learning of vocabulary, on average, on both productive and receptive vocabulary tests.

#### *Things to Consider*

- Future studies should investigate if the two components within the approach (promoting multilingual practices in class and affective activities) have different effects on learners.
- Future studies should look at the effects on other areas of language development, e.g., grammar.

**Materials:** Materials are publicly available at IRIS <https://iris-database.org>

**How to cite this summary:** Busse, V., Cenoz, J., Dalmann, N., & Rogge, F. (2019). Drawing on young children's linguistic diversity in class can benefit motivation and learning. *OASIS Summary* of Busse et al. in *Language Learning*. <https://oasis-database.org>

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