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The influence of Flemish pupils' attitudes toward German on their language acquisition

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Preface

This paper is the work of a burned out Germanophile with a love-hate relationship with the KU Leuven and studying in general, and an immense fondness for the supervisor of this paper, Dr. Cornelia Wermuth.

My thanks go out to all the pupils who submitted a response to my survey, the teachers who provided the exam results, the Hollywoodschaukel (garden swing) in my neighbors' garden, the great plant-based food that was there for me when I needed to stress-eat, my aunt for helping me reach the minimum number of words, and last but not least, my amazing sister, for her constant reminders that everything will be fine.

P.S. Writing a thesis is hard. Don't do it.

Abstract

Das Ziel dieser Arbeit ist es, zu untersuchen, wie die Einstellung zur deutschen Sprache von flämischen SchülerInnen, die zum ersten Mal Deutschunterricht haben (d.h. meistens im vierten Jahr der Sekundarschule), ihre Leistung im Deutschunterricht beeinflusst. Die Einstellung wurde mittels einer Umfrage vor der ersten Prüfungsperiode der SchülerInnen gemessen und, nachdem die Deutsch-Klausur geschrieben wurde, mit den Klausurnoten verglichen. Inwiefern sich die Schüler-Meinung über die "Schönheit" bzw. Attraktivität der deutschen Sprache auf deren Note auswirkt, kann nicht ohne Weiteres von den Ergebnissen abgeleitet werden. Der Effekt ist auch von dem Faktor abhängig, wie sie den Grad der Schwierigkeit der deutschen Sprache bewerten. Bei SchülerInnen, die die Sprache als leicht einschätzen, ist der Effekt auf die Note positiv. In dem Maße, wie sie die Sprache ebenfalls als schön beurteilen, wird dieser Effekt verstärkt.

The aim of this article is to see how the attitudes of Flemish pupils, who have their first year of German class, toward the German language influence their performance in said class in school. These are mostly pupils in the fourth year of secondary school. The attitude assessment took place by means of a questionnaire before the pupils' first exam period, and was compared to the exam results afterwards. The degree to which the pupils' opinions on the "beauty" and attractiveness of the German language affects their grade, cannot be derived automatically. The effect is also dependent on the factor, how they rate the language in terms of difficulty. With pupils who rate German as easy, the effect is positive. The higher they also rate the language as beautiful, this effect increases.

Keywords: GFL, language acquisition, attitude

Introduction

Language is everywhere, and through language learning it comes about in gradual mastery. Many factors, such as culture and socioeconomic status (Hoff and Tian, 2005), play a great role in the way that any language is acquired, as well as to what extent. Another highly important instrumental factor in achieving a higher language proficiency is attitude (Oroujlou and Vahedi, 2011). To provide a clear definition of 'attitude', this paper uses Oroujlou and Vahedi's definition: "An attitude is a set of beliefs."

A very small-scale survey with a convenience sample (N=22) indicated that Flemish adults between the ages of 30 and 50 can spontaneously and quickly recall ten English songs, or even many more, whereas they struggle to name ten German songs. The majority of the participants were only able to name between one and seven songs. One participant, a singer, was able to promptly mention nine song titles and reached the tenth title when given more time to think. Although the English songs did come to mind faster, merely one participant, a disc jockey, could swiftly sum up ten German songs from different musicians or bands. Two participants listed more than ten songs, but only from one band each. Thus, the English songs were more varied and every participant found at least ten titles. This corresponds with previous research that has shown that media are essential sources for foreign language learning (Lutjeharms and Lochman, 2011; Peters, Noreillie, Heylen, Bulté and Desmet, 2019). When German media are not so readily available or known, pupils might not be able to develop a positive attitude toward the language.

The main goal of this paper is to look at Flemish pupils' attitudes toward the German language, before they learn it at school, and to answer the following research question: **to what degree does this attitude toward German affect their language acquisition?** Because of the restricted scope of this paper, the focus lies on the pupils' performance on their first German examination. It is expected that a positive attitude will lead to a higher grade. The author of this paper also suspects that Flemish pupils are not privy to the importance of Germany in the European history. Hence, it is suspected that there is an overall negative or ignorant attitude toward German.

To fully capture the necessity of this paper, a basic understanding of Belgium and the Flemish secondary education is paramount. Belgium can be divided into four language areas. The northern part, Flanders, is Dutch-speaking. Wallonia, the south, is mostly French-speaking, but a small region near the German border, *Ostbelgien* (East Belgium), is officially German-speaking. Brussels, the fourth area, being the capital city of Belgium and being somewhat near the middle of the country, should be a bilingual Dutch-French region (Flemish Authorities, 2004). Nevertheless, the

language that is most prominent in the streets, households and education in Brussels is French ("BRIO-taalbarometer 4: De talen van Brussel," 2018). This means that Belgium has three official languages: Dutch, French and German.

Secondary education in Flanders, which starts at the age of 12, is split up into three cycles (onderwijs.vlaanderen.be). During the first cycle, years one and two, pupils can choose between A-stream and B-stream. A-stream is the more theoretical option, which then may allow another choice between Latin or Science. B-stream focuses on rather practical education. From the second cycle on, "A" is divided into two main types. These are called ASO (*Algemeen Secundair Onderwijs*) and TSO (*Technisch Secundair Onderwijs*). Aside from those, there is also KSO (*Kunstsecundair Onderwijs*). KSO, Art Secondary Education, like ASO, offers a broader education, but it does so while reserving more time for the Arts. ASO, or General Secondary Education, being broad and general, offers pupils the chance to pursue a degree in college or university. TSO, Technical Secondary Education, prepares pupils for technical or practical jobs, or for higher education, including both college and university. This means that study branches in TSO have a broad and general curriculum, while focusing on technical courses as well. Pupils who chose B-stream in their first cycle then get into the third main type of education: BSO (*Beroepssecundair Onderwijs*), Vocational Secondary Education. This education type is a practical preparation for the job market. In BSO there are also optional seventh and eighth years, which then make the degree (officially) equal to a KSO, TSO or ASO degree. An optional specialization called Se-n-Se (*Secundair-na-Secundair*, secondary-after-secondary), consisting of one to three semesters may be available after finishing the aforementioned six years or second and third cycles in TSO or KSO. Young people with special needs can become pupils in BuSO (*Buitengewoon Secundair Onderwijs*), which means Special Secondary Education. Seeing as there are different kinds of education in the BuSO system, so that all special needs can be met, it would go beyond the scope of this paper to include this branch of education in the research.

In each of the four education types mentioned (excluding BuSO) in Flanders, the pupils are taught French. In Wallonia (i.e. in both the French- and German-speaking education), it is, however, not obligatory to follow a Dutch course (enseignement.be; ostbelgienbildung.be). This in spite of the facts that the majority of the population (which is roughly 11.4 million people), approximately 60% or 6.6 million people, in Belgium lives in Flanders (Belgian Federal Government, n.d.). However, due to a ban on asking which languages are spoken at home (taalwetwijzer.be; personal communication, April 20, 2020), it is a presupposition that the majority of the population speaks Dutch. Of the remaining 40%, 30% or circa 3.6 million Belgians live in Wallonia (with approximately 77,000 native speakers of German in the German-speaking region East Belgium (ostbelgieninfo.be)) and 10% in the Brussels area.

According to the official website for Flemish education objectives (onderwijsdoelen.be), there is no final attainment level for German in any of the secondary study branches or school types. Although the ASO study branch Modern Languages in the third cycle (years 5 and 6) often includes German, it may also be that the school offers another language, such as Spanish or Chinese instead. This means that schools are allowed to choose whether they want to include German in the curriculum or not, and if they do, how to give shape to their lessons. Therefore, there is no certainty on what the pupils will have learned at the end of their German class, and it is not possible to make claims about which type of course, communicative or grammatical (Kuhlemeier, Bergh and Melse, 1996), may result in greater German language proficiency.

This shows that German, although being one of the three official languages in Belgium, albeit the least-spoken one, is not of high importance to the Flemish Community, which deals with Flemish education matters.

As Smith (1971) states, “liking a foreign language is learned.” When the school system takes the attitude into account, pupils with a positive attitude toward foreign languages could have higher grades for foreign language courses. The alternative diminishes those chances (Kuhlemeier, Bergh and Melse, 1996). This study seeks to research the attitudes of Flemish pupils and their influences.

The hypotheses for this paper are:

1. Pupils who have a positive attitude toward the German language will have a higher grade.
2. Flemish pupils are not taught much about the German-speaking territory and its history, which results in having a negative attitude, or rather an attitude of ignorance, toward both the countries where German is spoken (in this case mainly Germany) and its language.

The structure of the paper is the following: the first chapter discusses similar research into the impact of attitude on foreign language learning, studying other languages or other contexts. In the second chapter, the method (i.e. the questionnaire and statistical calculations used) will be described. Chapter 3 will focus on the results of this study. To conclude, this paper will make recommendations for further research.

1. Literature

Previous studies have shown that attitude plays a great role when thinking about factors that may impact both first language (L1) attrition (i.e. the loss of the native or first language) and second language (L2) (Cherciov, 2012) or foreign language acquisition (Oroujlou and Vahedi, 2011; Kuhlemeier, Bergh and Melse, 1996; Smith, 1971).

In Smith (1971), not only the attitudes of the pupils were mentioned, but also the attitudes of the parents, school staff and foreign language teachers were studied. He also stated that although the teacher might try their best to uphold their pupils' positive attitudes throughout the school year, it is unmanageable. In his article, he discussed the formation of attitude in four components: the cognitive, affective, evaluative and behavioral components. Moreover, to him, the presupposition that positive attitudes toward languages and language learning will come from positive perspectives toward those cultures and societies seemed to be logical.

Lochtman and Obst (2012) showed that the students who started studying German Studies (Germanistik) at the Université Libre de Bruxelles (ULB) were a very heterogeneous group, as a result of which there was no one German proficiency level. Some students were native speakers, coming from the German-speaking region or the neighboring Luxembourg. Other students had no or little prior knowledge of the language. A very interesting point for this article is that when given the choice, pupils in secondary education will often prefer another foreign language, such as Spanish, to learn in school. A possible explanation for this phenomenon could be that German is generally perceived as being a language of high difficulty, not only by the pupils, but also by their parents. Spanish, on the other hand, might have a more positive image, because of its association with holidays. Thus, it is only logical that not all first-semester students of German studies have the same proficiency level.

Although French is the first foreign language in Flemish schools, being taught from age 10 onward for multiple hours a week, Flemish pupils generally have a higher proficiency level in English. Lutjeharms and Lochtman (2011) and Peters, Noreillie, Heylen, Bulté and Desmet (2019) ascribed this phenomenon to the special status of the English language, on account of the fact that English is the most common language in (Flemish) media. This could mean that, when exposed to more German media, the Flemish pupils' mastery of the German language is likely to increase.

Hoff and Tian (2005) argued that the cultural and social circumstances in which a child develops language will influence the development. In spite of this fact,

Lennartsson (2008) suggested that the influence of motivation and personal choice to learn a language might outweigh the influence of the language-learning milieu.

In researching the attitudes and learning outcomes of CLIL (Content and Language Integrated Learning, i.e. non-language courses, such as Geography, taught in a foreign language) pupils, Arribas (2016) argues that CLIL pupils convey more positive attitudes toward the foreign language they are learning than non-CLIL pupils. In this case the foreign language was English, so pupils who had non-language courses in English were more positive toward English, than regular EFL (English as a Foreign Language) pupils. However, in both the CLIL and EFL cases, the pupils who were more motivated, were the ones with the highest scores.

Dutch researchers Kuhlemeier, Bergh and Melse (1996) showed that, in a study of first-year German class in secondary education in the Netherlands, the pupils with a more favorable attitude toward the German language at the start of their language instruction comprehended German words better than those with a more negative attitude. In addition, at the end of their first year of German lessons, pupils are more likely to have acquired certain language skills better when having a positive attitude toward the teacher, the learning resources and the German language. They also address the unclear image that German has, due to being taught only starting from the second year of secondary education, despite the fact that French and English are taught earlier. At the same time, they consider that much development of German language skills was hardly possible after only one year of non-intensive language learning. Despite the fact that other relationships between attitude and achievements may have been weak, the attitudes toward German at the beginning of the school year had a strong influence on the attitude toward the German teacher, lessons and language at the end of the school year. In this study, only two external variables showed significance: the course type (i.e. a more communicative or rather a more grammatical approach) and repeating the year.

Schmidt (2014) qualitatively studied the motivation of Australian learners of German in university. Being a native speaker of English in a country where only English is spoken, the decision to learn a foreign language is often a conscious one. This showed there is “a deeper level of motivation”. The students perceived speaking German as an added value to their degrees and qualifications. Motivation extended beyond the motivation to learn German for travel, for career purposes or because of a fondness of the language. The students indicated that there were more personal reasons as well; it was seen as a “personal challenge”, or “something personal” that they wanted to learn, that there is “more to it”. They so too saw that language and culture could not be separated from one another.

2. Method

This chapter describes the participants for the study, the questionnaire that was filled in by the participants and the method used for the analysis.

2.1. Participants

All participants were found thanks to *Onderwijskiezer.be* ('education chooser'), a website by the CLB (*Centrum voor Leerlingenbegeleiding*, Center for Pupils' Counseling) and the Flemish Ministry of Education and Training, containing all schools in Flanders. More than fifty schools offering German were contacted. Of those, eight schools, at least one in each of the five Flemish provinces, participated. The German teachers were asked to share an online survey to be filled out by the pupils, between the end of November and the beginning of December 2019 - before their examination period, which started approximately in the second week of December. It was found important for this study to have the responses be submitted before the German examination to reduce the chance of the examination experience (be it negative or rather positive) influencing the responses, to measure the attitudes independently from the achievements as done in Kuhlemeier, Bergh and Melse (1996). This 1996 study confirmed the author of this paper's suspicion that the achievements would also affect the attitude. The survey for this 2020 bachelor's thesis clearly stated that in case the pupils submit a response, they allow their German winter exam results to be analyzed confidentially, alongside their submitted responses. Therefore this sample is a convenience sample. 226 responses were collected. Four responses were not included, because they indicated that they were not in their first year of German class anymore. Another four typed in data that made them unrecognizable to the teachers, who, as a consequence, could not provide any examination result for the analysis.

Of the 218 collected survey responses that were useful for this study, 215 came from ASO pupils and a mere three were from TSO pupils. Although a higher response grade from ASO pupils was expected, due to the higher number of ASO pupils (approximately 42% versus approximately 31% of pupils enrolled in TSO) (Flemish Authorities, n.d.), this discrepancy presumably has another reason. The contacted schools all have German in their ASO curriculum, be it obligatory or optional, but not all schools require TSO pupils to learn another foreign language, aside from French and English.

Because of the small number of respondents from the TSO study *Ondernemen en communicatie* (Management and communication) and the similarities with the ASO study branch Economics, the TSO pupils were counted as Economics pupils during the statistical calculations. Although there were different sub-study branches or optional choices by the schools (e.g. Latin, Latin with more Mathematics, Latin with

more French), only the main study branch was taken into account because of the restricted scope of this paper. The majority of the respondents, 85 pupils (who accounted for approximately 39%), studied Science. The second largest group of pupils studied Economics (consisting of 64 pupils, approximately 30%). Out of the 218 respondents, 48 14- to 17-year-olds (or 22%) studied Latin, followed by the group of 18 pupils in Human Studies (approximately 8). The three pupils in Management and communication, counting for a mere 1% of all respondents, were added to the Economics group. These percentages are in accordance with the official enrollment numbers (Flemish Authorities, n.d.).

Two out of three participants identified themselves as female. This higher number seems to be in line with the number of female pupils enrolled in ASO in the school year 2018-2019, which is approximately 56% of all ASO pupils (Flemish Authorities, n.d.).

The expected age of the participants was 15, seeing as most schools offer German in the fourth year of secondary school. Only 19 pupils were a year younger, eight pupils said they were 16 years old and one respondent indicated 17 as their age.

All pupils except for six indicated that German was an obligatory course in the curriculum. Of those six, although being in three different study branches, five came from the same school. The remaining one pupil who took German as an optional course, also happened to be the only pupil studying Greek and Latin (counted as Latin pupil), which could have a positive effect on their attitude. Three pupils responded that they had actively chosen German because: they regarded the language as attractive, because they often visit the country, or because they are of German descent.

In all, 206 respondents had not learned German before the start of the school year. Two pupils indicated that they were repeating their years, one pupil had learned German in another school or study before, and nine pupils said to have learned German outside of school.

Of all respondents included in the survey, 176 live in a Dutch-speaking household. The other 43 pupils reported to speak one to three languages other than Dutch at home, which resulted in a total of fifteen languages other than Dutch. Aside from French, English and German, these languages included, but were not limited to: Arabic, Armenian, a Berber language, Greek, Hungarian, Lingala, Persian and Russian.

Due to the inconsistency in learning methods between schools, 41 pupils did not take a traditional exam, but rather only an examination that tested their reading

comprehension. All schools did work with a grading system that is twofold: continuous assessment (i.e. tests and tasks during the semester) and an examination in December, albeit only reading comprehension. This paper used the exam results for the calculations. In the survey, the pupils were asked to indicate the average grade they had received for the tests and tasks in continuous assessment.

Although many of the different factors mentioned above allow for more in-depth analysis of the influence of attitude on school performance in foreign language class and language acquisition, they lie outside the purview of this paper.

2.2. *Survey*

For this study, Google Forms was used to create the survey, as it is highly accessible and the lay-out is straight-forward. An important factor for this decision was also that it is easily shared through a link. Due to a lack of time and resources, it would not have been possible to personally administer this questionnaire in all contacted and participating schools. A short introduction into the survey and the study preceded the questionnaire. The author's name and email were included, so that any questions could be asked, should it have been necessary. The questionnaire that was used in Coleman, Galaczi and Astruc (2007) served as a guideline in composing the questions and drawing up the questionnaire for this study.

The questionnaire consists of 32 questions, which have been categorized into ten themes. The first part is the personal data. To link the responses to the grades for the analysis, first and last name were needed. These, however, were not used for other purposes. Even though the suspected age was clear, perhaps there could be significant outliers, so this question was necessary. Gender was included, so that this data could be analyzed in further research.

The second theme was school. These questions helped categorize the students per school, study branch, class group, and whether they had German as an obligatory versus optional course. The pupils that indicated that they had chosen German, were asked why they chose this course, the others automatically skipped this question. All pupils were asked why they chose their study branch, as this might already indicate their attitude toward school in general, and thus show an indication of their attitude toward learning German.

Thirdly, it was of utmost importance for this study to ask if the pupil had any prior knowledge of the German language, i.e. if the pupil had already learned German before the start of the school year, in September 2019. When the response was that they were not in their first year of German class, the online survey automatically

ended, as the prime interest of this paper is the attitude of first-year German pupils. Nonetheless, those pupils who were repeating their year, had German in another school or study branch, or learned German outside of school were also allowed to continue the survey. This choice was made because, although German would not be totally new to these pupils, they would still be in the first year of German class in their current school or study branch.

Because attitude toward school will usually also impact the attitude toward single courses, this was the fourth theme. Likert scales were used, so that answers that might be difficult to quantify could easily be examined and analyzed numerically on an ordinal scale. Although the most-used scales are the 5- and 7-point scales, the author of this paper opted for scales from 1 to 6, with 1 being 'strongly disagree' and 6 being 'strongly agree', so a 'neutral' response would not be possible. Instead this forces the respondents to stray from the neutral middle, and therefore indicate a clearer positive or negative opinion. Although there is more research needed on the topic of 'neutral' options in Likert scales (Edwards and Smith, 2014), this was thought to be the better scale. In this theme, the pupils were asked if they like going to school, how they rate the importance of good grades, and whether or not they get good grades, overall.

In the next five questions, the attitude toward the German language was measured through Likert scales as well. Is German beautiful, is it easy? Are pupils aware of the German history and its role in the European history? It was thought to be important to ask whether or not the pupils would like more German class, or perhaps more class for other languages, as this could be an extra indicator of their attitudes toward German or languages in general.

The questions that followed focused on previous experiences in the German language territory (i.e. Germany, Austria and the German-speaking part of Switzerland). East Belgium was not included in these questions, as, although the official first language in this region is German, French is also spoken there. Another reason for this choice was that the culture was not expected to differ much from the Flemish culture, due to East Belgium still being a part of Belgium. For question 21, the pupils had to answer the closed question on whether or not they had been in a German-speaking country before. In the case that they indicated 'no', the next two questions were automatically skipped. To answer question 22, they could check all applying answers to the question in which country they had been. For the purposes of this paper, 'Switzerland' was not an option. Instead it was written out that it had to be German-speaking Switzerland. Afterward, the pupils could rate the pleasantness of their experiences. Here a different Likert scale with four options was used: very unpleasant, slightly unpleasant, slightly pleasant, and very pleasant. Once again it was important to leave out the 'neutral middle'. Because of the possibility that the

pupils had not been in all three countries before, there was also an option to indicate that the country did not apply.

The seventh theme, 'home language', was designed to know if the participants grew up multilingual (perhaps with Dutch and German) or not, and thus might have an advantage in language learning.

The antepenultimate set of questions addressed the average grades for past German, English, French and Dutch tests and tasks. It was not expected that the pupils answered with a certain grade. Instead they had to indicate in which of the four quartiles (0-24%, 25-49%, 50-74% or 75-100%) their grades were more or less situated.

Due to the important role of pupils' socioeconomic status in language learning (Hoff and Tian, 2005), the second to last question set asked the pupils about the education and jobs of their parents.

Lastly, the pupils were thanked for their responses and given the option to write down any questions or comments about the questionnaire and study.

2.3. Calculations

Statistical calculations can confirm or contradict personal experiences. They allow for numbers to show what was observed in words. When statistical analyses show significant outcomes, recommendations, such as for further research, have a solid foundation. For this paper the statistical calculations were preeminent. By means of the obtained data, searching for statistical, provable correlations became possible. The method used shows the strength, or rather weakness, of the correlations researched in this paper. What it does not show, however, is the direction of the correlation or causality. Moreover, the restricted scope of this paper, does not allow for all the obtained data and parameters to be analyzed, although these data can certainly be used for further research, such as for a master's thesis.--

The following calculations came about thanks to A. Decruyenaere (personal communication, April 19, 2020).

To analyze the effect of *beautiful_language* (X_1) on *grade* (Y), the following linear regression model was used: $E(Y | X_1) = \alpha + \beta_1 \cdot X_1$

This linear regression model allowed for the explanation of one dependent variable, being the exam grade, through multiple independent variables (Kutner, Neter, Nachtsheim and Li, 2004), such as study branch and school.

Aside from *beautiful_language*, additional predictors for *grade* were found by creating a multivariate model through a forward stepwise regression procedure, which was based upon the partial F-test. This procedure means adding one predictor to the base model at a time, and keeping only the most significant predictor, until there are no further significant predictors. The predictors *grade_prior_tests* (X_2), *easy_language* (X_3), *study_branch* (*Latin*= X_{4a} , *Human_studies*= X_{4b} , *Science*= X_{4c} , with *Economics* as reference category) and school (*West_Flanders_1*= X_{5a} , *Flemish_Brabant_1*= X_{5b} , *West_Flanders_2*= X_{5c} , *Limburg*= X_{5d} , *Flemish_Brabant_2*= X_{5e} , *Antwerp*= X_{5f} , *West_Flanders_3*= X_{5g} , with *East_Flanders* as reference category) showed the main effects. *Economics* and *East_Flanders* were chosen as reference categories because they were the first study branch and school alphabetically. Any other reference category would only change the beta values and intercept value, but would not change the predictions made by the model.

These four main effects allow for six possible pairwise interactions. It might be the case that there is a pairwise interaction between all four main effects. Consequently, the data were centered and the forward stepwise regression procedure was rerun, applying the interactions terms. An interaction term was subsequently added between *beautiful_language* (X_1) and *easy_language* (X_3). This term was added to examine the effect of the first causal variable, *beautiful_language* on the outcome for *grade*, when the variable depends on a second causal variable, being *easy_language*. Linearity and multicollinearity were assessed for in each case, by using the partial residual plots and by confirming that the variance inflation factors were below ten, respectively.

This results in the final linear regression model:

$$E(Y | X_1, X_2, X_3, X_4) = \alpha + \beta_1 \cdot X'_1 + \beta_2 \cdot X'_2 + \beta_3 \cdot X'_3 + \beta_{4a} \cdot X_{4a} + \beta_{4b} \cdot X_{4b} + \beta_{4c} \cdot X_{4c} + \beta_{5a} \cdot X_{5a} + \beta_{5b} \cdot X_{5b} + \beta_{5c} \cdot X_{5c} + \beta_{5d} \cdot X_{5d} + \beta_{5e} \cdot X_{5e} + \beta_{5f} \cdot X_{5f} + \beta_{5g} \cdot X_{5g} + \beta_6 \cdot X'_1 \cdot X'_3$$

with $X'_1 = X_1 - \text{mean}(X_1)$, $X'_2 = X_2 - \text{mean}(X_2)$ and $X'_3 = X_3 - \text{mean}(X_3)$ (i.e., centered values).

The normality (i.e. the likeliness that a random variable is normally distributed) and homoscedasticity (in other words, the circumstance in which the error term is equal over all independent variables) assumptions of the linear regression model were assessed graphically using the residual plots and found appropriate.

3. Results

Variable	Coefficient	Standard Error	P-value
intercept	$\alpha = 68.03$	5.01	-
beautiful_language (X'_1)	$\beta_1 = 0.31$	0.57	0.587
grade_prior_tests (X'_2)	$\beta_2 = 6.09$	0.80	<0.001***
easy_language (X'_3)	$\beta_3 = 2.40$	0.67	<0.001***
study_branch			
Economics		Reference	
Latin (X_{4a})	$\beta_{4a} = 8.90$	2.16	<0.001***
Human_studies (X_{4b})	$\beta_{4b} = 2.62$	2.89	0.366
Science (X_{4c})	$\beta_{4c} = 7.82$	1.84	<0.001***
school			
East_Flanders		Reference	
West_Flanders_1 (X_{5a})	$\beta_{5a} = 12.14$	11.56	0.295
Flemish_Brabant_1 (X_{5b})	$\beta_{5b} = -2.54$	5.24	0.628
West_Flanders_2 (X_{5c})	$\beta_{5c} = -0.67$	11.60	0.954
Limburg (X_{5d})	$\beta_{5d} = -12.63$	5.13	0.015*
Flemish_Brabant_2 (X_{5e})	$\beta_{5e} = -6.09$	5.31	0.253
Antwerp (X_{5f})	$\beta_{5f} = -2.85$	5.15	0.580
West_Flanders_3 (X_{5g})	$\beta_{5g} = -4.95$	5.41	0.361
beautiful_language (X'_1): easy_language (X'_3)	$\beta_6 = 0.85$	0.41	0.041*

* significant, ** strongly significant, *** very strongly significant

Table 1 shows the different variables with their coefficients, standard errors and p-values.

The R-squared for this data is 0.4227. What is represented by the R-squared value is the variance (i.e. how far a random value is from the mean value). Thus, 42.3% of the variability in *grade* can be explained through this model.

This model allows for the following description of the parameter estimates. When taking the average value for *beautiful_language*, *grade_prior_tests* and *easy_language*, and *richting* and *school* equal their reference categories (*Economics* and *East_Flanders* respectively), the value for *grade* is the intercept α , 68.03. Ergo, Economics pupils of the participating school in East Flanders have an average *grade* of 68.0%, when giving an average score to *beautiful_language*, *grade_prior_tests* and *easy_language*.

Grade_prior_tests

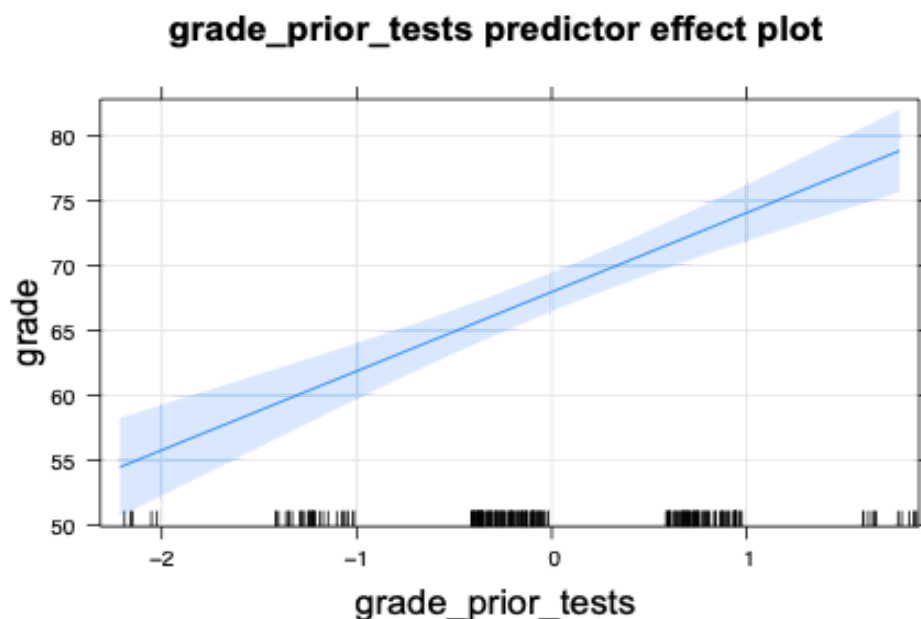


Figure 1 shows the predicted effect of *grade_prior_tests* on *grade*.

For β_2 , *grade_prior_tests*, the prediction is that an increase with one unit in the variable *grade_prior_tests* results in an increase in *grade* with an average of 6.09% (very strongly significant), when the other predictors remain constant.

Study_branch

The reference category for *study_branch* was *Economics* because it was the first, when listing the different study branches in alphabetical order. The following graph visualizes the predicted effect of the study branch on the exam grade.

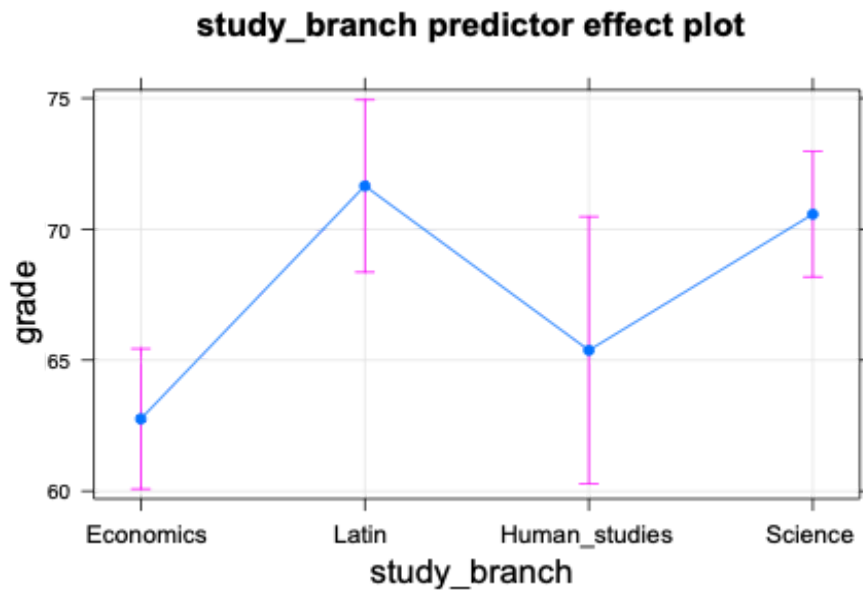


Figure 2 shows the predicted effect of *study_branch* on *grade*.

For β_{4a} , *Latin*, when there is no change in the other predictors and *study_branch* equals *Latin*, the average anticipated increase in *grade* is 8.90%, when compared to the reference category *Economics* (very strongly significant).

For β_{4b} , *Human_studies*, when there is no change in the other predictors and *study_branch* equals *Human_studies*, the average anticipated increase in *grade* is 2.62%, when compared to the reference category *Economics*.

For β_{4c} , *Science*, when there is no change in the other predictors and *study_branch* equals *Science*, the average anticipated increase in *grade* is 7.82%, when compared to the reference category *Economics* (very strongly significant).

School

The reference category for *school* was *East_Flanders* because it was the first, when listing the different school names in alphabetical order, before anonymizing them. The following graph visualizes the predicted effect of the school on the exam grade.

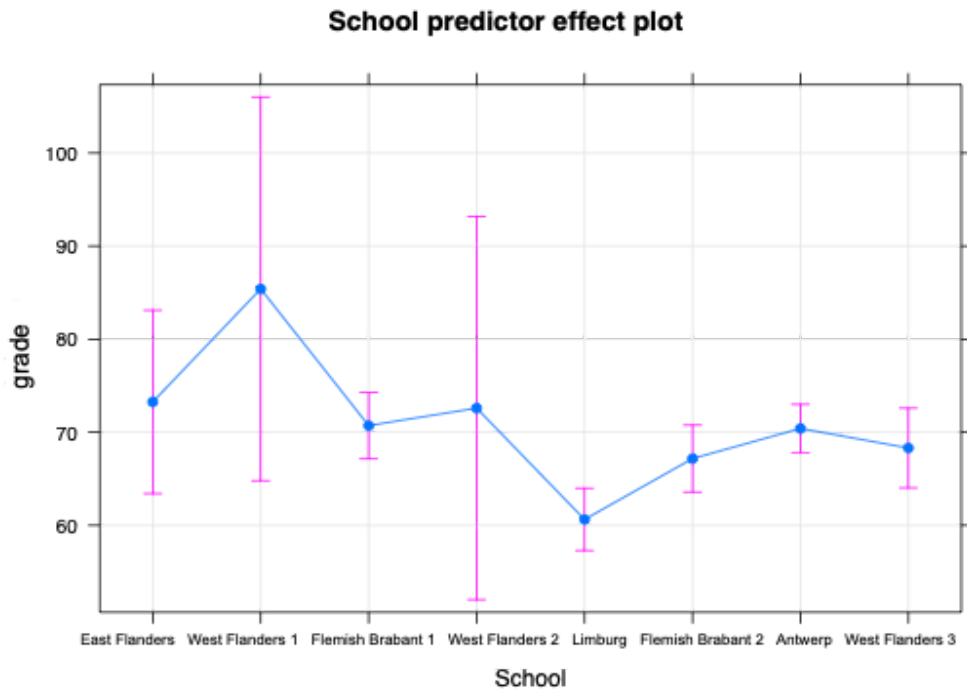


Figure 3 shows the predicted effect of school on grade.

For β_{5d} , when there is no change in the other predictors and *school* equals *Limburg*, the average anticipated decrease in *grade* is -12.63%, when compared to the reference category *East_Flanders* (significant).

When *school* equaled something other than *Limburg*, it did not show any increase or decrease in *grade* compared to the reference category *East_Flanders*. Therefore, the anticipated changes in *grade* for other schools are not mentioned.

Beautiful language and easy language

Due to a significant interaction between *beautiful_language* and *easy_language*, the interpretation of β_1 , β_3 and β_5 is not so straight-forward.

Looking at β_1 , it is expected that *grade* will increase with an average of 0.31%, when there is an increase of one unit in *beautiful_language*, the predictors *grade_prior_tests*, *study_branch* and *school* stay constant and *easy_language* has an average value.

In like manner, β_3 can be interpreted as follows: when *easy_language* increases with one unit, with no change in the predictors *grade_prior_tests*, *study_branch* and *school* and an average value for *beautiful_language*, an increase in *grade* of 2.40% on average (very strongly significant) is expected.

The following is a possible interpretation of β_5 : *grade* will increase on average with 0.85%, in the case that the value of *easy_language* is equal to one more than the average, the predictors *grade_prior_tests*, *study_branch* and *school* do not change, and *beautiful_language* increases with one unit. Combining this with the individual effect of *beautiful_language* (being 0.31%), the overall increase in *grade* is 1.16% (0.85% + 0.31%) per increase of one unit in *beautiful_language*. Correspondingly, the overall increase in *grade* is on average 3.25% (0.85% + 2.40%) per increase of one unit in *easy_language*, when the value of *beautiful_language* equals one more than the average and the predictors *grade_prior_tests*, *study_branch* and *school* remain constant.

When the value of *easy_language* equals one less than the average and the predictors *grade_prior_tests*, *study_branch* and *school* remain constant, then the overall decrease in *grade* is on average -0.54% (0.31% - 0.85%) per one unit in *beautiful_language*. By contrast, when the value of *beautiful_language* equals one less than the average and the predictors *grade_prior_tests*, *study_branch* and *school* remain constant, then there will still be an overall increase in *grade* of 1.55% (2.40% - 0.85%) on average per one unit increase in *easy_language*.

Average difference in <i>grade</i> when	and <i>easy_language</i> equals				
	average - 2	average - 1	average	average + 1	average + 2
<i>beautiful_language</i> increases with one unit	$\beta_1 - 2 * \beta_5$ -1.39%	$\beta_1 - 1 * \beta_5$ -0.54%	$\beta_1 + 0 * \beta_5$ +0.31%	$\beta_1 + 1 * \beta_5$ +1.16%	$\beta_1 + 2 * \beta_5$ +2.01%
(while <i>grade_prior_tests</i> , <i>study_branch</i> and <i>school</i> do not change)					

Table 2 shows the effect of increases in *beautiful_language* and changes in *easy_language* on *grade*.

Average difference in <i>grade</i> when	and <i>beautiful_language</i> equals				
	average - 2	average - 1	average	average + 1	average + 2
<i>easy_language</i> increases with one unit	$\beta_3 - 2 * \beta_5$ +0.70%	$\beta_3 - 1 * \beta_5$ +1.55 %	$\beta_3 + 0 * \beta_5$ +2.40%	$\beta_3 + 1 * \beta_5$ +3.25%	$\beta_3 + 2 * \beta_5$ +4.10%
(while <i>grade_prior_tests</i> , <i>study_branch</i> and <i>school</i> do not change)					

Table 3 shows the effect of increases in *easy_language* and changes in *beautiful_language* on *grade*.

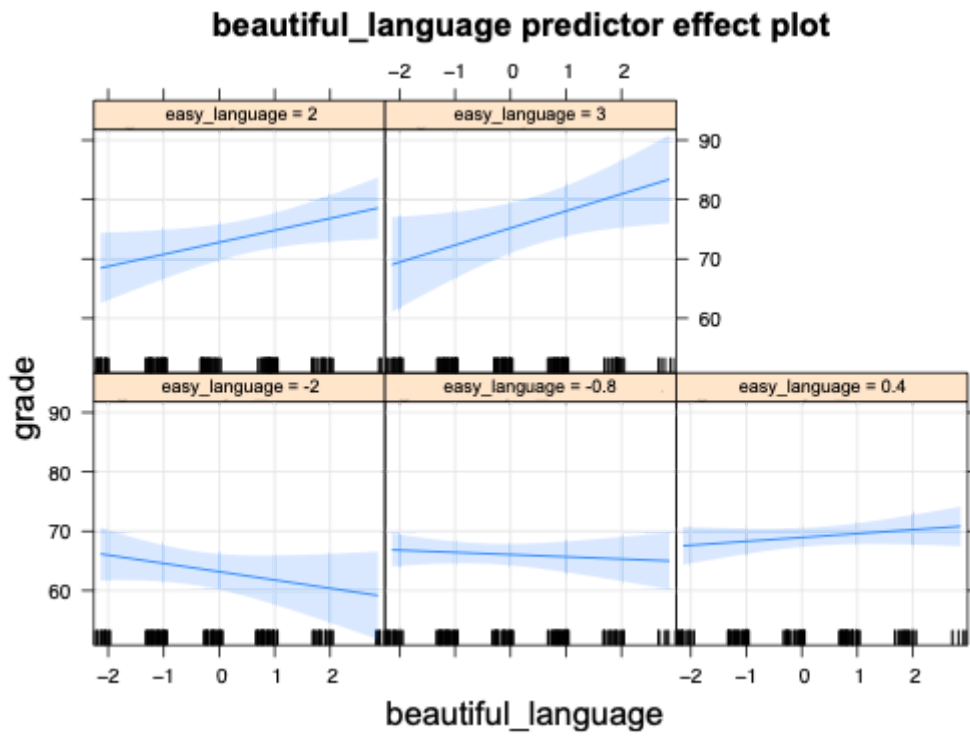


Figure 4 shows the predicted effect of *beautiful_language* on *grade*.

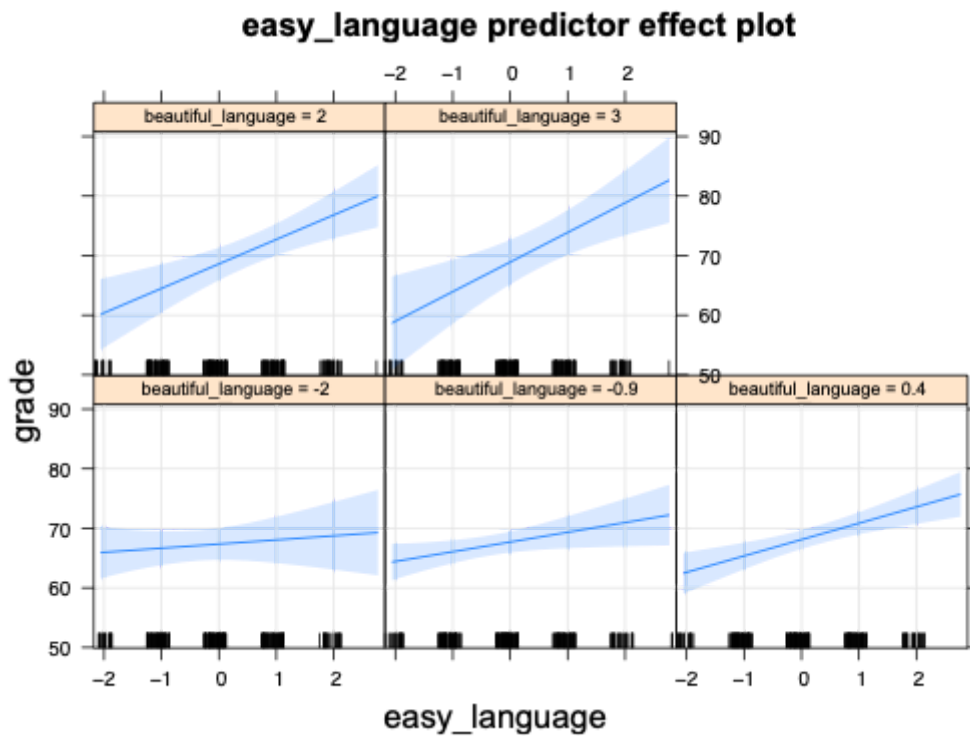


Figure 5 shows the predicted effect of *easy_language* on *grade*.

I know a lot about the German history and its role in the European history.

The average score given to the above statement in the questionnaire was 2.7 out of 6 (approximately 45%). This demonstrates this general knowledge is lacking in Flemish pupils.

Easy and beautiful

On average both the difficulty and beauty received a 3.1 out of 6 (approximately 51%). Although these results are over the 50%-mark, they do not show a really positive attitude toward the German language.

4. Discussion and conclusion

The first hypothesis for this paper (“pupils who have a positive attitude toward the German language will have a higher grade”) cannot be confirmed or denied in a single sentence. This outcome resembles the impossibility to establish a causal relationship between attitudes and achievements in Kuhlemeier, Bergh and Melse (1996). To be able to measure attitude by Oroujlou and Vahedi’s (2011) definition, i.e. “a set of beliefs”, the attitude toward the German language was divided into “I think German is a beautiful language” and “I think German is an easy language” (from here on ‘beauty’ and ‘difficulty’ respectively). This division made it possible to examine the effect of the belief-set, the attitude as a twofold term.

This study demonstrated that the effect of beauty on the final grade was dependent on the pupils’ perceptions of the difficulty. An average response to the difficulty did not cause the beauty to have any effect on the grade. However, when the pupil perceived the German language as easier than average, the effect of the beauty was positive. Thus, when pupils answered “I think German is a beautiful and easy language”, there was a synergic positive effect on the grade. Depending on how much above the average the difficulty (or in this case easiness) was regarded, the positive effect on the grade increased.

Conversely, with pupils who enjoy the language but do not find it easy (i.e. pupils who gave a lower than average score for difficulty (thus, rated the language as more difficult than average) a negative effect on the grade was encountered. Perhaps the pupils experience this synergic negative effect as frustrating and therefore lose whatever motivation they had to study.

A clear answer to this paper’s second hypothesis is not possible either. The outcomes of this study did show that Flemish pupils do not have adequate knowledge of Germany’s history and which role it plays in Europe’s history. Whether or not this actually led to a moderate attitude toward the German language remains unanswered.

The final field in the questionnaire allowed for questions to be asked or comments to be made in regards to the study. Although this field was not used often and the restricted scope of this paper did not allow for the analysis of the given answers, some answers were highly interesting. However, the response that German be 'totally worthless' was unexpected to the author of this paper and must be mentioned. This response might reflect a lack of focus on exactly *why* some schools offer German language instruction. Whether the language is offered because it is an official language in Belgium, because of the proximity of the German-speaking countries or because of Germany's status as Belgium's most important trade partner ("Duitsland blijft belangrijkste handelspartner van België," 2017), it is the personal assumption of the author of this paper that pupils might be more inclined to be motivated to learn when they know why they should. Studies supporting this assumption have not yet been found. The response also supports the author's personal experience that the German-speaking part in Belgium is not well-known. The detailed historical reason for East Belgium being a part of Belgium might be unclear to most if not all Flemish pupils, as well as its geographical and cultural features.

In analogy with Kuhlemeier, Bergh and Melse's (1996) final remark, the conclusions drawn from this study should not be generalized to learners of German in the United States of America, or elsewhere. Although German is not a compulsory course in Flanders, the possibility of familiarizing oneself and interacting with the German culture and language might be greater in Flanders due to the vicinity of the German language territory to Belgium. As stated in Schmidt (2014), though, native speakers of English who do not need to learn a foreign language showed to have a "high level of intrinsic motivation" when learning German.

To conclude, this study has shown that there is a correlation between Flemish pupils' perceptions of German's difficulty and beauty and their exam grade, although this correlation needs explanation and is not a causality. What was found as well, was the lack of knowledge about the German-speaking area. This paper could function as a basis for further research into the influence of Flemish pupils' attitudes toward the German language. In addition, studies into what is taught about the German language, the language territory and its role in history, and how it affects the motivation of Flemish pupils are needed.

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Appendices

Appendix A: Survey

Attitude toward the German language

Dear pupil,

As part of my bachelorpaper in Applied Linguistics, I am researching the attitude of Flemish pupils who first have German as an obligatory/optional course, toward the German language and the way they acquire this language in school. Your answers are very important for this and will be kept confidential. By submitting this survey, you agree that your exam result will also be analyzed.

Aaricia Herygers
Student at KU Leuven, Campus Antwerp
aaricia.herygers@student.kuleuven.be

Personal data

1. Last name: _____
2. First name: _____
3. Age: _____
4. Gender:
 Male Female X

School

5. School: _____
6. Study branch:
 Economics
 Latin
 Human studies
 Science
 Management & Communication
7. Why did you choose this study branch?

8. Class number: _____
9. German teacher: _____
10. Is German an obligatory or optional course for you?
 Obligatory *Go to question 12*
 Optional

Attitude toward German

The following statements will be about your opinion of the German language and the German language area. Indicate the answer that fits best.

1 = strongly disagree

6 = strongly agree

16. I think German is a beautiful language.

	1	2	3	4	5	6	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

17. I think German is an easy language.

	1	2	3	4	5	6	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

18. I know a lot about the German history and its role in the European history.

	1	2	3	4	5	6	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

19. I would like more German class in school.

	1	2	3	4	5	6	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

20. I would like more class for other languages in school.

	1	2	3	4	5	6	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

D-A-CH

Germany, Austria, (German-speaking part of) Switzerland

21. Were you in a German-speaking country before?

Yes

No *Go to question 24*

22. In which country were you? *Check all that apply.*

Germany

Austria

German-speaking Switzerland

23. How was your experience?

	Very unpleasant	Slightly unpleasant	Slightly pleasant	Very pleasant	Not applicable
Germany	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Austria	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
German-speaking Switzerland	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Home language

24. Which language do you speak most at home?

Dutch French English Other: _____

25. Is another language also spoken?

No Yes: _____

School languages

26. Average grade for previous German tests and tasks:

0-24% 25-49% 50-74% 75-100%

27. Average grade for previous English tests and tasks:

0-24% 25-49% 50-74% 75-100%

28. Average grade for previous French tests and tasks:

0-24% 25-49% 50-74% 75-100%

29. Average grade for previous Dutch tests and tasks:

0-24% 25-49% 50-74% 75-100%

Situation parents

30. Parents' education:

	No degree	Lower secondary education	Higher secondary education	Higher non-university education	University education	I don't know
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. Parents' job

	Retailer, industrialist	Blue-collar worker	White-collar worker	Middle management	General management	Liberal profession	Freelance, other self-employment	I don't know
Vader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moeder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you!

32. Questions or comments?

Appendix B: Introductory survey participants

Age group	Sex	# of songs
40s	f	6
40s	m	4
30s	f	5
40s	f	7
30s	f	5
50s	f	6
40s	f	5
40s	f	9 (10)
30s	f	5
30s	f	1
40s	m	10
40s	f	2
40s	f	5
40s	m	7
40s	m	7
30s	f	6
40s	m	1
40s	f	2
40s	f	6
40s	m	10+ 1 Band
40s	f	10+ 1 Band
40s	f	2