Master's thesis

Talking identities

The influence of language of instruction on personal self-esteem and ethnic identity among Ethiopian language minoirty students

Name and initials: Suhlmann-Dawud, M.-C.
Student number: s1696874
Email address: m.c.suhlmann@student.rug.nl
Cohort: 2011-2013
Thesis supervisor(s): Dr. N. Hansen
                       Prof. R. Spears
Programme: Research Master Behavioural
                       and Social Sciences
Specialization: Social & Organizational Psychology
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Acknowledgements

Abstract

The present research aims at systematically investigating the influence of language of instruction in primary education on personal self-esteem and ethnic identity strength and ethnic identity salience among Ethiopian language minority students. In a cross-sectional ($N = 371$) and a longitudinal ($N = 90$) study language minority students following mother tongue education were compared with language minority students following second language education and with language majority students following mother tongue education on quantitative self-concept measures. Findings show that in contrast to what was expected language of instruction did not have any effect on the language minority student's self-concept, though a tendency was found supporting that girls profit more from mother tongue education compared to boys and compared to second language education which is exemplified by an increase in personal self-esteem. Surprisingly, we found that language majority students scored significantly lower on personal self-esteem compared to both language minority groups. Qualitative findings suggest that the ethnic status can help to explain these findings. Future research should look at the wider context to understand the influence of language of instruction on language minority students' self-concept, which is often confounded with ethnic status as this study points out.

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"So if you really want to hurt me, talk badly about my language.
Ethnic identity is twin skin to linguistic identity – I am my language.
Until I take pride in my language, I cannot take pride in myself."

– Gloria Anzaldúa, *Borderlands – La Frontera: The New Mestiza*, 1987, p. 59

The UNESCO advocates the use of mother tongue as language of instruction in primary education since the Universal Declaration of Human Rights of 1948 (UNESCO, 1953). However, a recent study of the World Bank points out that nowadays still half of the world's out-of-school children are educated in a second language that is different to their mother tongue (Bender, Dutcher, Klaus, Shore, & Tesar, 2005). Second language primary education is the prevailing educational policy in most developing countries, which are often characterized by a high rate of linguistic diversity [e.g. Ethiopia with 89 or Nigeria with up to 529 different languages (SIL, 2013a; SIL, 2013b)]. During the last years many initiatives emerged that implement mother tongue education in developing countries based on more than six decades of educational research, which was mostly conducted in developed countries.

To date, empirical research has mainly focused on the effects of language of instruction on educational outcomes. Therefore we know surprisingly little about how language of instruction in primary education impacts the psyche of students as for example the self-concept, which is positively associated with enhanced well being, increased performance and future success (Herzog, Franks, Markus, & Holmberg, 1998; Schunk, 1981; Zimmerman, 2000). Hence the aim of the present research is to systematically investigate the impact of language of instruction in primary education on the language minority students' self-concept development in a developing country. More precisely, the current research focuses on three specific aspects, namely, personal self-esteem, ethnic identity strength and ethnic identity salience.

Language of Instruction and Educational outcomes

Several studies have shown that primary education in a second language can lead to a slowed down or even reversed development of the mother tongue, so-called *subtractive bilingualism* (Lambert & Taylor, 1983; Landry & Allard, 1992; Wright, Taylor, & MacArthur, 2000). Therefore mother tongue primary education is associated with higher and second language education is associated with lower educational outcomes that is evidenced by several meta analyses and longitudinal studies (Cummins, 1983; Krashen & McField, 2005; Thomas & Collier, 2002). Moreover, research suggests that mother tongue education is associated with a lower repetition and dropout rate in developing countries (Bender, 2005; Brock-Utne, 2000; Brock-Utne, 2007; Brock-Utne, 2010).

Language of Instruction and Self-esteem

Language of instruction does not only have an impact on how students learn but might also influence how students perceive themselves. Specifically, it may relate to the evaluative part of the self-concept, namely *personal self-esteem*, which is defined as the feeling of self-worth one obtains from one's personal characteristics (Garcia & Sanchez, 2009). According to Burns (1982), education automatically involves evaluation and there is evidence that students' self-esteem positively correlates with their educational outcomes (Covington, 1989; Harter, 1986; Rosenberg, Schooler, & Schoenbach, 1989). Hence personal self-esteem represents a relevant and indispensable concept in the educational context (Smelser, 1990).

Similar to research in educational sciences, in which mother tongue education is associated with increased educational outcomes and second language education with subtractive effects, language of instruction might also have comparable effects on personal self-esteem. More precisely, mother tongue education might increase and second language education might decrease personal self-esteem. One of the possible reasons why mother tongue education is expected to lead to an increase in personal self-esteem is that language

minority students can immediately understand the educational content and that they are spared from frustrations that come along with a language barrier as it would be the case in second language programs (Wright & Taylor, 1995). Moreover, social comparisons with other language minority in-group students will be more positive compared to social comparisons in a second language classroom, which would be more negative as out-group language majority students convey a higher status (Wright & Taylor, 1995). However, as Alexander and Baker (1992) suggest, these assumptions remained mainly untested.

There exists first anecdotal evidence from developed countries that mother tongue instruction in primary education positively affects immigrant students' self-esteem (Appel, 1988; Cummins, 1989; Hernandez-Chavez; 1984). However, quantitative studies that investigate this link are still scarce. To the best of our knowledge Wright and Taylor (1995) were the first who empirically tested the relationship between language of instruction and personal self-esteem. More precisely, they implicitly investigated personal self-esteem among White children who followed a mother tongue program (English or French), Inuit and mixed heritage Inuit-White children who either followed a mother tongue or a second language preschool program (English or French). Results show that by the end of the first year of kindergarten, children in the mother tongue condition showed a statistically significant increase in personal self-esteem compared to children in the other two second language programs.

Another study by Bougie, Wright and Taylor (2003) complemented these results by testing the *inoculation hypothesis*, which implies that the first years of mother tongue education can serve as an inoculation against self-esteem loss during the shift to a second language program. In their study they compared personal self-esteem at the beginning and the end of the third grade of Inuit and mixed heritage Inuit students who switched from mother tongue to an entire English or French second language program with Inuit students who did not switch. Findings did not support the inoculation hypothesis and indicate that even though

mother tongue can have an enhancing effect on personal self-esteem this effect disappears when an abrupt shift to a second language program takes place.

In sum, previous research in the developed world found an enhancing effect of mother tongue instruction on personal self-esteem (Wright & Taylor, 1995) and a decreasing effect of second language instruction, when followed after a mother tongue program, on personal self-esteem among language minority students (Bougie, Wright, & Taylor, 2003). Therefore these findings suggest that there is a relationship between language of instruction and personal self-esteem. Specifically, mother tongue is positively and second language instruction, after shifting from mother tongue instruction, is negatively associated with personal self-esteem.

Language of Instruction and Ethnic Identity

Next to its primary function of being a communication tool a second function of language is being a marker of ethnic group membership, symbolizing inclusion and distinctiveness to particular ethnic groups (Jaspal, 2009). The *ethnolinguistic identity theory* states that language is a salient marker of one's ethnic identity, which can be defined as a dynamic, multidimensional construct that is characterized by common ancestry and similar culture, race, religion, kinship, place of origin or language (Giles & Johnson, 1981; Giles & Johnson, 1987; Phinney, 2003). The ethnolinguistic identity theory is conceptually derived from *social identity theory*, which states that relevant group memberships can influence cognitions, emotions as well as behavior (Tajfel & Turner, 1979). According to the ethnolinguistic identity theory three main variables determine a person's ethnic identity strength, also called *ethnic belongingness*, which is directly related to how strongly a person identifies with an ethnic group and its particular linguistic practices (Giles & Johnson, 1987). Firstly, *perceived ethnic vitality* is positively related to ethnic identity strength and describes the perception of a person's in-group status, relative group size called demography and institutional support for the language group (Jackson & Hogg, 2010). Secondly, *perceived*

permeability of ethnic group boundaries is negatively related to ethnic identity strength with the perception of more impermeable group boundaries raising the salience of the ethnic group membership. Finally, having *multiple ethnic group memberships* is negatively associated with ethnic identity strength, with those who identify with fewer social categories possess a stronger sense of ethnic identity. There exists empirical evidence that on the one hand supports the general positive relationship between language and ethnic identity strength (Rakic, Steffens, & Mummendey, 2011) and on the other hand supports the specific predictions made by the ethnolinguistic identity theory (Hildebrandt & Giles, 1980; Harwood & Vincze, 2011).

Applying ethnolinguistic identity theory to the present context would predict that mother tongue education is associated with a stronger and more salient ethnic identity among language minority students compared to second language education. This is expected because mother tongue programs convert a higher ethnic vitality, by increasing the status of the language minority group and increased institutional support. Additionally, in contrast to second language education in which language minority students are forced to cross linguistic boundaries, which facilitate multiple ethnic group memberships, mother tongue education is associated with more impermeable group boundaries resulting in a smaller number of possible group memberships.

This boosting effect of mother tongue education on ethnic identity strength and salience among language minority students that is evident in qualitative studies in developing countries (Asmah, 1991; Okonkwo, 1983; Tsung & Clarke, 2010) strongly contrasts quantitative research among immigrant language minority students in developed countries. Specifically, studies in developed countries found an increase in ethnic identity strength and salience among language minority students who followed a second language program compared to language majority students who followed a mother tongue program (McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988). These contrasting findings

might be due to two main differences. Firstly, in developed countries immigrant language minority students who follow second language program are oftentimes not directly compared to language minority students who follow a mother tongue program on ethnic identity but to language majority students who follow a mother tongue program. Therefore, even though existing research in developed countries indicates that language minority students who follow a second language program show a higher ethnic identity compared to language majority students who follow a mother tongue program (McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988) it is still possible that language minority students who follow a mother tongue program show higher ethnic identity compared to both groups. Secondly, the contrasting result might also stem from the situation that language of instruction and relative ethnic status are often confounded in developed countries. Specifically, immigrant language minority students who follow a second language program do not only represent a language minority but at the same time also represent an ethnic minority compared to the language majority and ethnic majority group that is educated in their mother tongue.

Language of Instruction and Ethnic Status

According to Peirce (1995) relations of power are not adequately addressed in the context of language minorities. One way to define minority and majority membership is by status (e.g. Tajfel, 1981). In addition to the status that is conveyed by being a member of a language minority (lower status) or a language majority (higher status) there is also an ethnic status that is often related to relative group size with a numerically larger ethnic group representing the higher status ethnic majority group and the numerically smaller ethnic group representing the lower status ethnic minority group. To the best of our knowledge there is no empirical study that systematically investigated the influence of language of instruction on ethnic identity among indigenous language minority students while controlling for ethnic status. Therefore, a developing country such as Ethiopia in which language minority students

represent an ethnic majority group presents an ideal context to shed some light on the influence of language of instruction and ethnic status on ethnic identity.

Present Hypotheses

Based on previous research, we expect that language minority students who follow a mother tongue program will score higher on *personal self-esteem* compared to language minority students who follow a second language program (*hypothesis 1a*; Wright & Taylor, 1995; Bougie, Wright, & Taylor, 2003). Moreover, language majority students who are educated in their mother tongue are expected to score highest on *personal self-esteem* compared to both language minority groups (*hypothesis 1b*). In addition, based on earlier research we expect that that the increase in *personal self-esteem* after the first half year of primary education will be higher in the mother tongue conditions compared to the second language condition (*hypothesis 1c*; Bougie, Wright, & Taylor, 2003). Finally, in developing countries girls are often needed at home to help their mothers in the household. Thus, contrary to boys girls do not have the same opportunity to hear other languages spoken outside the home (Dutcher, 2004). Therefore we expect that girls profit more from mother tongue programs. Specifically, girls who follow a mother tongue program are expected to show a higher increase in *personal self-esteem* compared to boys, with no sex differences expected for the second language program (*hypothesis 1d*; Donald, 1965; Benson, 2005). Lastly, we expect that after the first half year of primary education girls in the mother tongue conditions will show a greater increase in *personal self-esteem* compared to boys and compared to girls in second language program (*hypothesis 1e*).

According to earlier theory and research we expect that language minority students who are educated in their mother tongue show higher *ethnic identity strength* compared to language minority students educated in a second language (*hypothesis 2a;* Asmah, 1991; Giles & Johnson, 1987; Okonkwo, 1983; Tsung & Clarke, 2010). Moreover, language

majority students who are educated in their mother tongue and who represent an ethnic minority are expected to show a lower *ethnic identity strength* compared to both language minority groups independent of the language of instruction (*hypothesis 2b;* McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988). Moreover, we expected that the abovementioned differences in *ethnic identity strength* between the conditions would be more pronounced after the first half year of primary education compared to the beginning of the school year (*hypothesis 2c*).

In the same line we expect that language minority students who are educated in their mother tongue show higher *ethnic identity salience* compared to language minority students who are educated in a second language (*hypothesis 3a;* Asmah, 1991; Giles & Johnson, 1987; Okonkwo, 1983; Tsung & Clarke, 2010). Moreover, language majority students who are educated in their mother tongue and who represent an ethnic minority are expected to show a lower *ethnic identity salience* compared to both language minority groups independent of the language of instruction (*hypothesis 3b*; McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988). Finally, we expected that the abovementioned differences in *ethnic identity salience* between the conditions would be more pronounced after the first half year of primary education compared to the beginning of the school year (*hypothesis 3c*). See also Figure 1 and 2 for a visualization of the hypotheses of the present research.
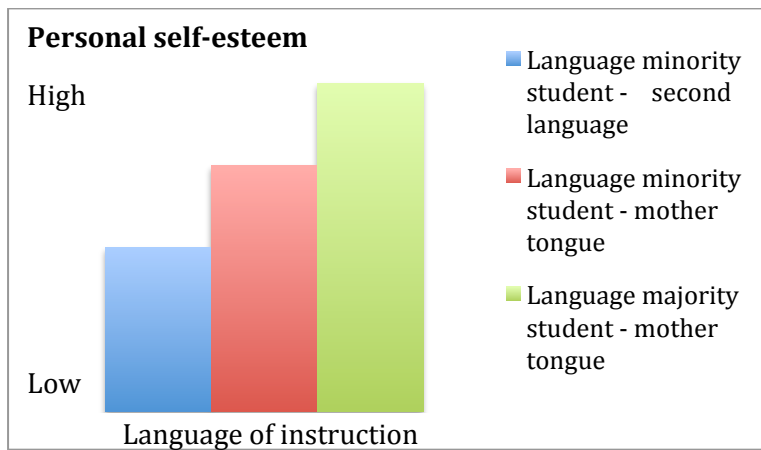
Figure 1. Visualization of *hypotheses 1a*, *1b*. These depicted differences are expected to be more pronounced for girls compared to boys (*hypothesis 1d*) and after the first half of the first study year compared to school enrollment (*hypothesis 1c*) for girls compared to boys (*hypothesis 1e*).
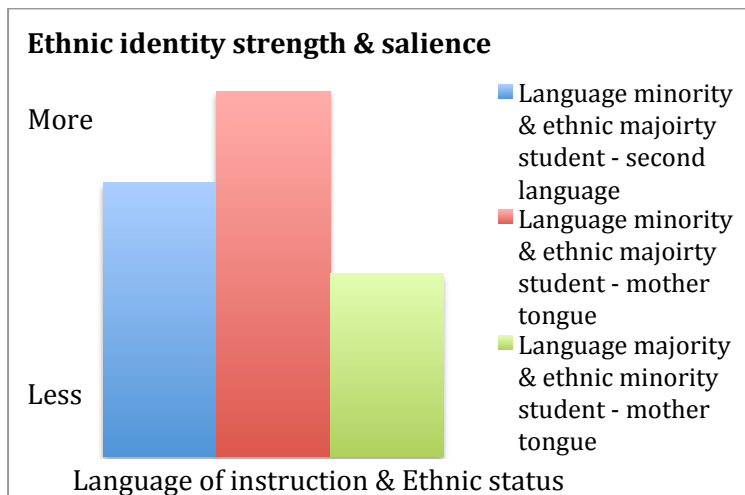
Figure 2. Visualization of *hypotheses 2a, 2b* and *3a, 3b*. These depicted differences are expected to be more pronounced after the first half of the first study year compared to school enrollment (*hypotheses 2c and 3c*).

Present Research

By combining qualitative and quantitative research methods this research aims to systematically investigate the impact of language of instruction in primary education on the self-concept development, conceptualized as personal self-esteem, ethnic identity strength and ethnic identity salience, among indigenous language minority students from a developing country, namely Ethiopia.

The current research extents previous research in two different ways by firstly making use of two comparison groups in which language minority students who follow mother tongue

education are not only compared to language minority students who follow a second language program (*comparison group 1*) but also to language majority students who follow a mother tongue program (*comparison group 2*). Secondly, we extend previous research by using a combination of a cross-sectional and longitudinal research design to be able to investigate self-concept development not only across different age groups but alsoby looking at changes over time for the first half year of primary education.

The present research is part of the longitudinal research project of the MFS II (*Medefinancieringsstelsel*) external and independent evaluation of developmental aid projects funded by the Dutch government. We had access to the mother tongue schools of the multilingual education project of SIL (*Summer Institute of Linguistics*) International in Ethiopia, which aims at providing formal mother tongue education to language minority students. The specific project of SIL International in the Benshangul Gumuz region, in which language minority students represent a numerical ethnic majority group, as well as the country Ethiopia were randomly selected by the Dutch government to be evaluated.

General Method

Community & Project Description

The Benshangul-Gumuz region is located in the West of Ethiopia at the Sudanese border and represents one of the nine regional states of Ethiopia, which consists of three zones. The focus of the present study was the Asosa zone with a population of 310,822 people of which an estimated 87 % lives in the rural area, with only 9 % having access to electricity and only 15 % of the population working in non-farming jobs (Zekaria, 2007; Milas & El Aynaoui, 2004). According to a census of the Central Statistical Agency of Ethiopia in 2007 the main ethnic groups in Asosa were Bertha (59.95%) and Amhara (23.86%). Therefore in

the sampled region the language minority group Bertha represents a numerically ethnic majority group and the language majority group Amhara represents an ethnic minority (Adegehe, 2009). Similarly, the main languages spoken in that region are Bertha (59.31%) and Amharic (24.73%), the official language of Ethiopia (Zekaria, 2007). It has to be noted that even though the statistics indicate that the Bertha language is more widespread in the Asosa zone it still represents a minority language and Amharic being the official national language of Ethiopia. Moreover, the Asosa zone is mainly populated by Muslims (74.08%), which mostly constitute Bertha, in contrast to 16.51 % of orthodox Christians who are amongst others Amharic (Zekaria, 2007). Around 95.20 % of all school-aged children from the first to the fourth grade in the Benshangul Gumuz region were enrolled in primary education in the school year 2011/2012 (Ethiopian Ministry of Education, 2012). No specific repetition or dropout rates for primary education in the Benshangul Gumuz region are known. Most of Ethiopian's schools teach in the official language Amharic which is not the mother tongue for the majority of the children in the Benshangul Gumuz region and which they often firstly encounter in the first grade. From grade 5 on all subjects are taught in English.

The socioeconomic status of the population as well as the educational policy of mainly second language education with separate mother tongue programs emerging makes the population of the present sample representative for indigenous language minorities living in developing countries.

As described earlier the multilingual project of SIL International is one of the initiatives that introduces mother tongue education for language minority groups. They achieve this by conducting linguistic research to develop the written letters and grammar of minority languages, by producing dictionaries as well as school materials and by teaching teachers to provide mother tongue education in the minority language. As the written form of the Bertha language has only existed for about nine years, it was only four years ago that the first cohort

in the Asosa zone got the possibility to follow primary education in their mother tongue the Bertha language.

Design

The present research has a quasi-experimental design in which language of instruction and ethnic group status differs per condition, which is represented by a separate school and has three levels. More precisely, the *experimental group* represents language minority but *ethnic majority* (*Bertha*) students whose language of instruction is their *mother tongue* and two comparison groups. The *first comparison* group is composed of language minority but *ethnic majority* (*Bertha*) students whose language of instruction is a *second language*, namely *Amharic,* with the *second comparison* group representing language majority but *ethnic minority* (*Amharic)* students whose language of instruction is their *mother tongue* (see also Table 1 for an overview of the conditions of the present research). As all sampled schools are geographically closely located, they are comparable in their relatively low socioeconomic status, with most parents working in agriculture or traditional gold mining.

Moreover, the present research consists of two studies. Study 1 has a cross-sectional design investigating first up to fourth grade students after the first half of the school year. With Study 2 having a longitudinal design measuring first grade students at the beginning and after half year of school enrollment. The longitudinal study has a 3 x 2 mixed design with condition as between subjects factor (experimental group, comparison group 1 and comparison group 2) and measurement time as within subjects factor (beginning and after half a year of enrollment).

Table 1

Conditions of the present research presented with respective levels of language status, language of instruction, name of the language group and ethnic status inferred from the numerical superiority of the specific group in the sampled region.

	Experimental group	**Comparison group 1**	**Comparison group 2**
Language status	Language minority	Language minority	Language majority
Language of instruction	Mother tongue	Second-Language	Mother tongue
Name of language group	Bertha	Bertha	Amharic
Ethnic status	Ethnic majority	Ethnic majority	Ethnic minority

Prior Qualitative Measures

A combined emic-etic approach, which is characterized by combining inductive and deductive research methods, was chosen to develop additional self-concept measures for Study 1 and adjust them to the cultural context. For this mixed method approach qualitative measures were collected prior to the main data collection to adapt the quantitative measures to the cultural context and for interpretation purposes of the quantitative findings.

The qualitative part of the present research consisted of an in-depth interview, a focus group discussion and nineteen short one-to-one interviews, which are briefly summarized in the following (see also Appendix I, II and III for a complete overview of all qualitative measures and findings).

The in-depth interview which took about 28 minutes was conducted with an applied linguist from SIL International who was directly involved in the development of the written form of the Bertha language. He lived in a Bertha village for several years and knows the culture very well. He characterizes the Bertha people as a relatively proud and confident group, not a typical language minority as they are numerically the ethnic majority group in that area. Furthermore, he thinks that Bertha children are very conscious about being Bertha and that religion is a great part of their identity. He also assumes that Bertha children became

more self-confident since the mother tongue program was introduced (see also Appendix I for more information).

The aim of the focus group discussion that consisted of ten first grade students in Addis Abeba was to find out which social identities are most relevant and salient for Ethiopian students. We found that *being Ethiopian*, as well as being an *ethnic group member* and *gende*r represented relevant social categories for the students. In addition, during the in-depth interview as well as during our visit of the research site *religion* emerged to be a fourth relevant social identity. Thus, the identities *nationality*, *ethnicity, gender and religion* were used in the present research to assess relative importance of ethnic identity operationalized as ethnic identity salience (see also Appendix II for more information).

The individual interviews aimed at forming an impression about Bertha students' explicit self-concept. During short interviews a native speaker asked 19 Bertha students to introduce themselves to a foreign researcher who was also present during the interview. Findings show that all students mentioned their name, age and village they life in as well as the grade and school they are in. Moreover, children often mentioned that '*learning is important for them and for their future'* and that they are '*happy to learn in their mother tongue'*. Additionally, '*being Bertha'* also emerged as an important part of their identity. These results illustrate how important education and learning as well as their mother tongue and ethnic identity is for the Bertha students in our present sample (see also Appendix III for more information).

Method

Study 1 (Cross-sectional)

Sample

A total of 371 Ethiopian 1st – 4th grade primary school students[1] from three different schools ($n_{experimental}$ = 136; $n_{comparison1}$ = 120; $n_{comparison2}$ =115) in the Asosa zone of the Benshangul-Gumuz region in West Ethiopia that differed in the combination of the language of instruction and ethnic group status participated in Study 1. The data was collected half a year after the school started. The average age of the sample was 9.65^{2} (SD = 2.18) years and 49.3 % of the sample was female (two students did not indicate their gender). For a detailed overview of the descriptive statistics per school, grade and class see Table 2 in Appendix VI. As class and grade did not significantly impact the study variables, we did not include these variables in further analyses.

Procedure

Primary school students of the three different schools, grades, and classes were asked to voluntarily participate in the present study on students' life to learn more on how initiatives could improve education. Five trained native speakers read the questionnaire out loud in the child's mother tongue during one-to-one interviews. In total the interview took about 15-20 minutes assessing demographic variables, cognitive skills, locus of control, ethnic identity salience, personal self-esteem and ethnic identity strength, motivation to go to school, future aspirations, learning questions and socioeconomic background (see also Appendix V for the whole questionnaire).

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[1] Eighteen students were excluded from further analyses because they did not belong to the ethnic groups that were the focus of the present study.
[2] Sixty-two cases did not specify their age and were thus coded as missing. This might be due to the fact that Ethiopian children who live in the countryside often do not know their exact age.

Pre-test and Quantitative Measures

The quantitative measures were pretested among twelve 4th grade students of a primary school in Addis Abeba[3] (see also Appendix IV for pre-test results). Individual items and scales that revealed an unacceptable low internal validity were excluded from the final questionnaire.

Personal self-esteem was measured by three items adopted from Rosenberg (1965) and adapted to the Ethiopian context. The exact items were: *'Do you have good opinions about yourself?'*, '*Are you respected by other children*?' and '*Are you able to do most things as well as your friends?*'. We adopted the 4-point Likert smiley response scale, which was used in previous research in Ethiopia (Hansen, Koudenburg, Hiersemann, Tellegen, Kocsev, & Postmes, 2012; Hansen, Postmes, van der Vinne, & van Thiel, 2012), to the rural and younger sample by applying a two-step process. More precisely, we firstly asked whether the student would answer the question with yes or no and depending on his/her answer the response option was further refined in either *not at all* (1) or *not* (2) or *a little bit* (3) or *very much* (4). Even though the scale in the pre-test was highly reliable ($\alpha = .88$), the internal consistency was not that high in the main data collection of Study 1 ($\alpha = .37$; see also Table 3 in Appendix VI). This difference might be due to the younger and more rural sample of the main data collection, which consists of all students from grade 1 to grade 4 who probably had difficulties with understanding the self-reflective questions in contrast to the pre-test sample, which only tested 4th grade students in the capital city. The alpha statistics per age of Study 1 confirm this presumption (e.g. $\alpha_{age\ six} = .31$, $\alpha_{age\ fifteen} = .86$).

Ethnic identity strength is the degree to which one positively identifies with one's ethnic group and was measured by two items that were adapted from Barrett's Strength of Identification Scale, namely '*How important is it to you that you are Bertha/Amharic?'* and '*Do you feel positive about being Bertha/Amharic?*' (Barrett, 2005). The response scale was

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[3] The pre-test sample had a mean age of 11.75 (*SD* = 2.30) and 33 % of the sample were girls.

the same as for the personal self-esteem questions. Similar to the self-esteem scale the correlations between the two ethnic strength items was higher in the pre-test ($r = .58$) compared to the main study ($r = .36$; see also Table 4 in Appendix VI). Additionally, native speakers and students were matched according to their ethnicity to control for experimenter effects as there are visible differences between both ethnicities with Amhara having a lighter skin compared to the Bertha.

Ethnic identity salience was assessed by a show card task in which different social identities were ranked according to their relative importance (Rutland, Cameron, Jugert, Nigbur, Brown, Watters, Hossain, Landau, & Le Touze, 2012). Each of the four show cards depicts a symbol of a social identity (ethnicity, gender, religion and nationality) that was matched to the student's social identity and spread out in front of the student[4]. The student was instructed to indicate the most important social identity, which in turn got a rank number of one and is removed. This procedure was repeated for the second up to the fourth, least important social identity. The relative rank of the students' ethnic identity (1 = most important and salient up to rank 4 = least important and salient) was the measure of ethnic identity salience. Per group the mean rank of ethnicity was used as an indicator of the ethnic identity salience. As the assessment of ethnic identity salience was part of a general social identity salience measure ethnic identity salience was measured without the direct awareness of the students. Therefore, it is not very likely that the measure of ethnic identity salience influenced the personal self-esteem or ethnic identity strength questions.

Language of instruction and ethnic status. For the case that condition had a significant effect on the outcome variable we tried to disentangle the relative influence of language of instruction and ethnic group status by assembling both mother tongue conditions against the

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[4] E.g. pictogram of a girl for a female student; see also Appendix V; the order in which the show cards were presented was held constant.

second language program and by analysing both ethnic majority (at the same time language minority) groups against the ethnic minority group (language majority group)[5].

Results

Study 1 (Cross-sectional)

Preliminary Analyses

Six percent of the original data (25 cases) represented invalid cases either indicating another ethnic group different to Bertha or Amhara, having another mother tongue different to Bertha or Amharic or indicating any of this question with missing. Therefore, these cases were excluded from the final analyses to ensure that all analyzed cases represented valid cases.

Missing data was not a problem in the present study because it was either not present at all (self-esteem scale) or consisted of only 0.3 % of the data. The amount of outliers on the self-esteem and the ethnic identity strength scale was higher than what would be expected by chance calculated by standardized z-scores. This is due to a ceiling effect of these items in which most subjects indicated higher levels (4) than lower ones (1) and therefore the few who chose lower levels are labeled as extreme values. In the following, significant findings were also analyzed without outliers to investigate whether the effect was reliable and still present when the extreme cases were controlled for.

Main Analyses

The data of Study 1 was analyzed by an Analysis of Variance (ANOVA) with additional Kruskal-Wallis tests when the assumption of homogeneity of variances did not

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[5] Even though the groups were unbalanced as in practice no fourth condition exists in which language majority students are educated in a second language and therefore both variables were confounded it was still insightful to separate these two variables (Syntax: RECODE IQ01 (1=1) (2=2) (3=1) INTO LOI. EXECUTE. And RECODE IQ01 (1=1) (2=1) (3=2) INTO EM. EXECUTE.)

hold[6]. Moreover, for the self-esteem and ethnic identity strength scale there was a violation of the assumption of normality present due to a high ceiling effect (see also Figure 3 and Figure 4 in the Appendix VI)[7]. However, these violations of normality did not pose a major threat to the study as ANOVA is a robust method allowing for valid inferences even in the case of extreme non-normality (Wilcox, 2005). Grade did not have any impact on the dependent variables. Therefore, it was not further included in the analyses.

Personal Self-esteem

It was hypothesized that language minority students who follow a mother tongue program will score higher on personal self-esteem compared to language minority students who follow a second language program (*hypothesis 1a*). Moreover, language majority students who are educated in their mother tongue were expected to score highest on personal self-esteem compared to both language minority groups (*hypothesis 1b*). The one-way ANOVA revealed a significant main effect for condition, F (2,368) = 6.40, p < .00, $\eta2$ = .03. However, the differences in personal self-esteem were in a different direction than what was expected. Findings indicate no difference between the language minority groups with the mother tongue condition scoring exactly the same (*M* = 3.74; *SD* = .38) as the second

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[6] As the present data has a nested design collected on the level of the school, grade and class it violates the independence assumption of ANOVA, which makes multi level analyses a more appropriate analysis method. However, we chose to analyze the present data with ANOVA for four main reasons. Firstly, the number of classes was too few for multi level analyses (we had 9 classes and 15-20 classes are recommended for multi level analyses). Secondly, despite the relatively large sample, no significant correlations were found between the relevant dependent variables and the levels (school, grade and class). Thirdly, as the variances between the different groups were significantly different for some analyses (e.g. condition on personal self-esteem) and transformations did not help to overcome this violation, multi level analyses seemed inappropriate as this analysis method is not that robust against a violation of homogeneity of variances assumption and no non-parametric variants of multi level analyses are known. Therefore we decided to use ANOVAs, as these are relatively robust against this method. Fourthly, this decision was confirmed by non-significant independence statistics (Interclass correlation and Durbin Watson statistic), which state that the dependence of observations is not significantly different from what can be expected by chance.
[7] Unfortunately, a reflected Lg10 transformation did not help to make the data more normal.

language condition (M = 3.74; SD = .38). Interestingly, the group of language majority students who followed mother tongue education scored significantly lower (M = 3.57; SD = .50) compared to both language minority groups (see Figure 5 and Table 5 in Appendix VI). Additional non-parametric tests confirmed the reliability of the effect[8] H (2) = 11.49, p < .05. Moreover, the significant effect of condition on personal self-esteem was still present (p < .05) when outliers were controlled for.
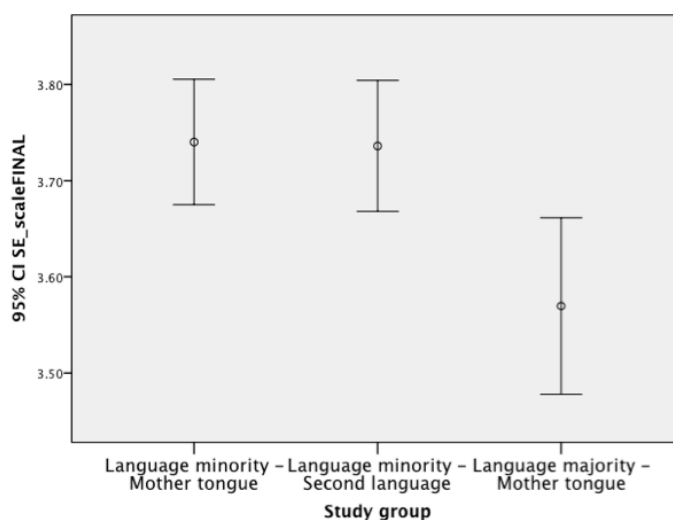
Figure 5. The effect of language of instruction on personal self-esteem.

Finally, we expected that girls who follow a mother tongue program will score higher on personal self-esteem compared to boys and with no sex differences expected for second language programs (*hypothesis 1d*). In contrast to this expectation no significant interaction effect of condition and sex was found in the present data, F (2,363) = 1.21, p > .05. However, findings partly point in the expected direction, with girls in the language minority mother tongue condition showing a higher self-esteem mean (M = 3.79; SD = .35) compared to boys (M = 3.70; SD = .42). While girls in the language minority second language condition

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[8] The Kruskal Wallis test was conducted as the assumption of homogeneity of variances was violated (Levene's test: p < .05).

indicating a lower self-esteem (M = 3.69; SD = .42) compared to boys (M = 3.77; SD = .35). Finally, both sexes in the language majority mother tongue condition indicating exactly the same self-esteem mean (M = 3.58; SD = .49).

In sum, a significant main effect of condition on personal self-esteem was found revealing that the language majority group who followed mother tongue education scored significantly lower compared to both language minority groups for which no significant differences in language of instruction were found. Additionally, no significant interaction effect of condition and sex on personal self-esteem was found. However, findings point in the expected direction in that girls in mother tongue programs profit more than boys on personal self-esteem compared to second language programs. Therefore, the present data does not support the first two *hypotheses 1a* and 1b. However, a tendency is visible that supports *hypothesis 1d* which assumes that girls in the mother tongue program profit more than boys on personal self-esteem and compared to second language programs, though this difference is not statistically significant.

Additional Analyses

As the effect of condition on personal self-esteem was relatively strong and reliable, further analyses were conducted to disentangle the effect of language of instruction and ethnic status on personal self-esteem. This was relevant as in the present context the language majority group was perceived to have a lower ethnic status as they represented a numerically smaller group in the sampled area with the language minority group possessing a higher

ethnic status. Therefore, the general condition variable was disassembled into two separate independent variables: language of instruction, with the two levels mother tongue and second language, and ethnic status, with the two levels of ethnic minority and majority status. A two-way ANOVA with both variables on personal self-esteem revealed a significant main effect for ethnic status, $F (1,368) = 10.28, p < .00, \eta2 = .03$ and no significant effect for language of instruction $F (1,368) = 0.01, p > .05$. Findings reveal that ethnic minority students score significantly lower on personal self-esteem ($M = 3.57; SD = .50$) compared to ethnic majority students ($M = 3.74; SD = .38$). These results show that in the present study the influence of the ethnic status on personal self-esteem was greater compared to the influence of the language of instruction on personal self-esteem.

Ethnic Identity Strength

We expected that language minority students who are educated in their mother tongue show higher ethnic identity strength compared to language minority students educated in a second language (*hypothesis 2a*). Moreover, language majority students who are educated in their mother tongue and who represent an ethnic minority are expected to show a lower ethnic identity strength compared to both language minority groups independent of the language of instruction *(hypothesis 2b)*. As Table 6 in Appendix VI shows, the one-way ANOVA found no significant differences between the conditions on ethnic identity strength, $F (2, 367) = .56$, $p > .05$. Even though no significant differences were found, findings point partly in the expected direction with the language minority group in the mother tongue condition scoring

highest on ethnic identity strength (M = 3.85; SD = .37) and the language minority group in the second language condition scoring lower on ethnic identity strength (M = 3.80; SD = .47). However, the language majority group in the mother tongue condition scores in-between (M = 3.83; SD = .36) both language minority conditions. Therefore, *hypothesis 2a* and *hypothesis 2b* cannot be supported according to the present data.

Ethnic Identity Salience

Similar to ethnic identity strength we expected that language minority students who are educated in their mother tongue will show higher ethnic identity salience compared to language minority students who are educated in a second language (*hypothesis 3a*). Moreover, language majority students who are educated in their mother tongue and who represent an ethnic minority were expected to show a lower ethnic identity salience compared to both language minority groups independent of language of instruction (*hypothesis 3b*). Interestingly, results indicate that over all conditions most of the students perceived their ethnic identity (M = 2.69; SD = .97) after religion (M = 1.75; SD = 1.02) as relatively important and therefore more salient compared to other social identities as nationality (M = 2.71; SD = 1.05) or gender (M = 2.82; SD = 1.10). However, the results of the one-way ANOVA of condition on ethnic identity salience do not support our hypotheses, F (2, 367) = .035, p > .05. Surprisingly, there was no difference in how salient ethnic identity was ranked between both language minority groups, with the mother tongue condition (M = 2.70; SD = .94) and the second language condition (M = 2.70; SD = .98) scoring exactly the same. The

language majority students in the mother tongue condition indicating a slightly increased ethnic identity salience ($M = 2.67$; $SD = .97$) however this difference was not significant (see also Figure 6 in Appendix VI for the distribution of the mean rank of ethnic identity). In sum, the present data does not support *hypotheses 3a* and *3b* that ethnic identity salience differs for language of instruction and ethnic status.

Method

Study 2 (Longitudinal)

Sample

The present sample consisted of first grade students who participated at both measurement points. Therefore a total of 90 Ethiopian 1st grade primary school students from three different schools ($n_{experimental} = 28$; $n_{comparison1} = 23$; $n_{comparison2} = 39$) in the Asosa zone of the Benshangul-Gumuz region in West Ethiopia that differed in the combination of the ethnic group status and language of instruction participated in Study 2. The first measurement took place in the beginning of the study year at the time of school enrollment (November 2012) with the follow up measure half a year later in May 2013. The average age of the sample was 7.92 ($SD = 1.38$) years and 38.9 % were female. For a detailed overview of the descriptive statistics per school and class see Table 7 in Appendix VII.

Procedure and Measures

The procedure was the same as in Study 1 with similar measures. However, the present sample of Study 2 focuses only on 1st grade students of the three schools.

Personal self-esteem was measured by the same three items with the same response scale as in Study 1. Internal consistency of the items was satisfying with $\alpha = .73$ for the baseline

measurement and α = .50 for the second measurement (see also Table 8-10 in Appendix VII for bivariate correlations).

Ethnic identity strength was measured with one item, namely '*How important is it to you that you are Bertha/Amharic?*' adapted from Barrett's Strength of Identification Scale (Barrett, 2005). The same response scale as in Study 1 was used.

Ethnic identity salience was assessed in the same way as in Study 1.

Results

Study 2 (Longitudinal)

Preliminary Analyses

One participant (.3 %) of the original ninety-one cases had to be deleted because in both measurement times she did not indicate her mother tongue. Therefore the total sample size of this longitudinal study was *N* = 90 (see also Table 7 in Appendix VII for the descriptive statistics per school).

Missing values were not a problem for the longitudinal analyses as of all relevant variables only the ethnic identity strength item of the second measurement "*How important is it to you that you are Bertha/Amharic*" had one missing value (1.11%). Neither were outliers a problem in the present analyses as no extreme values were present which were not expected by chance.

Main Analyses

The data of the longitudinal study was analyzed by a 2 x 3 mixed design ANOVA, with the condition representing language of instruction and ethnic status as subject factor and the pre and post measure of the respective dependent variable as within factor[9].

Personal Self-Esteem

We expected that the increase in personal self-esteem after the first half year of primary education would be higher in the mother tongue conditions compared to the second language condition (*hypothesis 1c*). The findings show no significant interaction effect of condition and measurement time on personal self-esteem, $F (2,87) = .52$, $p > .05$ (see also Table 11 in Appendix VII for inspection of the different means per condition and measurement time). Therefore, according to the present data *hypothesis 1c* cannot be supported. Interestingly, the present data found a significant main effect of measurement time expressing itself with a significant increase of personal self-esteem after half a year among all conditions, $F (1,87) = 12.96$, $p < .00$, $\eta2 = .13$, which points to a developmental effect.

Additionally, we expected that after the first half year of primary education girls in the mother tongue conditions would show a greater increase in personal self-esteem compared to boys and compared to girls in second language programs (*hypothesis 1e*). The present data does not confirm this three-way interaction of condition, sex and measurement time, $F (1,84)$

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[9] Similar as in Study 1 the personal self-esteem and ethnic identity strength measures were not normally distributed as can be seen in Figures 7-10. As the repeated measures ANOVA is relatively robust against the violation of normality this did not represent a major issue in the present study.

= 1.88, $p > .05$. However, a marginally significant interaction effect of measurement time and sex on personal self-esteem was found $F (1,84) = 3.50$, $p = .07$, $\eta2 = .04$, indicating that for girls the increase in personal self-esteem ($M_{difference} = .35$; $SD_{differencee} = .73$) is larger compared to boys ($M_{difference} = .19$; $SD_{differencee} = .64$).

To sum up, the present data does not support *hypothesis 1c* and *1e*. However, we found a significant main effect for measurement time on personal self-esteem that is exemplified by an increase in personal self-esteem after half a year and a marginally significant interaction effect of measurement time and sex indicating a significant higher increase in personal self-esteem for girls compared to boys after the first half of the school year across all conditions.

Ethnic Identity Strength

We expected that the predicted differences in ethnic identity strength with the language minority mother tongue students scoring highest followed by the language minority second language students scoring in-between and with the language majority mother tongue students scoring lowest, would be more pronounced after the first half year of primary education compared to the beginning of the school year (*hypothesis 2c*). The data does not support this interaction effect, $F (2,86) = 1.74$, $p > .05$. However, we found a significant main effect of measurement time on ethnic identity strength, $F (1,86) = 43.25$, $p < .00$, $\eta2 = .34$, indicating a significant increase of ethnic identity strength across time over all conditions, pointing to a developmental effect (see also Table 12 in the Appendix VII).

In sum, even though *hypothesis 2c* cannot be supported by the present data, a significant main effect of measurement time on ethnic identity strength was found indicating an increase above all conditions.

Ethnic Identity Salience

Similar to ethnic identity strength it was expected that the predicted differences in ethnic identity salience with the language minority mother tongue students scoring highest followed by the language minority second language students scoring in-between and with the language majority mother tongue students scoring lowest, would be more pronounced after the first half year of primary education compared to the beginning of the school year (*hypothesis 3c*). Even though no significant effect for condition and measurement time on ethnic identity salience was found, $F (2,87) = .72, p > .05$, mean differences indicate that after half a year students in the language minority mother tongue condition are more salient about their ethnic identity compared to the other two conditions with language minority second language students showing a decrease in ethnic identity salience and with the language majority mother tongue condition indicating the largest drop in ethnic identity salience (see also Figure 11 and Table 12 in the Appendix VII). Therefore, even though the results point in the expected direction no significant differences between the conditions on ethnic identity salience were found and *hypothesis 3c* cannot be supported by the present data.

Discussion

The aim of the present research was to systematically investigate the influence of language of instruction on personal self-esteem, ethnic identity strength and ethnic identity salience among language minority students from Ethiopia. We expected that personal self-esteem in the language minority groups would be higher for the mother tongue compared to the second language condition (*hypothesis 1a*), with the language majority mother tongue group scoring highest on personal self-esteem (*hypothesis 1b*). In addition, we expected that the differences in personal self-esteem in the hypothesized directions would be more pronounced after the first half of the first school year compared to the beginning of the first school year (*hypothesis 1c*). Finally, we expected that girls would profit more than boys from the mother tongue education compared to second language education expressing itself in a gain in personal self-esteem (*hypothesis 1d*) and that this effect was more pronounced after the first half of the first school year compared to the beginning of the first school year (*hypothesis 1e*).

Concerning ethnic identity we predicted that ethnic identity strength (*hypothesis 2a*) and ethnic identity salience (*hypothesis 3a*) would be higher among the mother tongue condition compared to the second language condition for the language minority groups. Language majority students who were educated in their mother tongue and who represented at the same time an ethnic minority were expected to show a lower ethnic identity strength (*hypothesis 2b*) and ethnic identity salience (*hypothesis 3b*) compared to both language minority groups. Finally, we expected that the above mentioned differences in ethnic identity strength

(*hypothesis 2c*) and ethnic identity salience (*hypothesis 3c*) would be more pronounced after the first half of the first school year compared to the beginning of the first school year. Even though our data does not support any of the present hypotheses there were some tendencies in the expected direction visible showing that gender is relevant in the context of personal self-esteem. Moreover, we found a surprising significant difference in personal self-esteem in the direction that language majority students who are educated in their mother tongue scored significantly lower compared to both language minority groups, contrasting our expectation. Additional analyses suggest that the ethnic minority status of the language majority group might also be relevant for personal self-esteem and not only for ethnic identity as previous research suggests (McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988). In the following the findings will be discussed in light of a wider theoretical and methodological framework.

Personal Self-esteem

Surprisingly, the present study found no differences between both language minority groups differing in language of instruction, which contrasts earlier research (Wright & Taylor, 1995). One possible explanation why the present data did not find higher personal self-esteem among the language minority students who are educated in their mother tongue compared to language minority students who are educated in a second language is that the present language minority group in our study was not a 'typical' language minority. More precisely, the qualitative findings reveal that the members of the Bertha language minority group are

relatively proud and confident assigning themselves a higher status than the language majority group Amhara. An additional reason why the results are not in line with previous research might be that the language minority in the present study is at the same time an ethnic majority because of their numerical superiority and the predominant use of the minority language in the research area conveying a higher status. This would also explain the surprising finding that the language majority group who got educated in their mother tongue and who simultaneously represent an ethnic minority scored significantly lower on personal self-esteem compared to both language minority ethnic majority groups. The explanatory superiority of ethnic status to language of instruction is also exemplified in the additional analyses that indicate that only ethnic status but not language of instruction significantly explained the lower personal self-esteem of the language majority mother tongue group compared to both language minority groups.

Additionally, in contrast to Wright and Taylor (1995) we only measured personal self-esteem explicitly. Therefore it might be possible that implicit differences in personal self-esteem between both language minority conditions were present. Future research should use both implicit and explicit personal self-concept measures to investigate if the results converge or differ.

Moreover, it might also be the case that language minority students in the second language program use different strategies to buffer the negative influences of second language instruction on personal self-esteem similar to what is proposed by Crocker and Major (1989). More precisely, they state that stigmatized groups do not necessarily show a decrease in

personal self-esteem by making use one of three strategies. Firstly, they might attribute the negative feedback to prejudice against their group or secondly compare themselves with in-group instead of out-group members or finally they selectively devalue characteristics on which the in-group performs poorly and value characteristics on which they excel. Future research has to focus more on the underlying strategies and psychological processes that lead to an increase or decrease in personal self-esteem in the context of language of instruction of language minorities.

Sex Differences in Personal Self-esteem

No significant interaction effect of condition and sex on personal self-esteem was found. However, the data show a general tendency that supports the prediction that girls in the mother tongue program profit more than boys on personal self-esteem and compared to second language programs. Additionally, the longitudinal analyses show a marginally significant effect of sex and measurement time on personal self-esteem indicating that girls across all conditions showed a higher increase in personal self-esteem compared to boys over time. This effect suggests that girls profit more than boys from access to education in relation to personal self-esteem. Future research has to follow up these findings to investigate whether this difference is reliable.

Ethnic Identity Strength & Ethnic Identity Salience

The present study found no significant differences between the conditions of language of instruction on ethnic identity strength or ethnic identity salience and therefore all six hypotheses are not supported by the present data. However, a tendency was visible supporting the hypothesis that mother tongue education among language minority students leads to an increase in ethnic identity salience compared to second language education with the language majority and ethnic minority group showing a decrease in ethnic identity salience after half a year of school enrollment. All in all the results of the present research contrasts earlier research that found a boosting effect of mother tongue education on ethnic identity strength and salience among language minority students compared to second language education among language minority students (Asmah, 1991; Okonkwo, 1983; Tsung & Clarke, 2010). In addition, it also contrast research stating that language minority students that are educated in a second language indicate a higher ethnic identity strength and ethnic identity salience compared to language majority but ethnic minority students who are educated in their mother tongue (McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988). The contrasting findings of the present study in a developing country with earlier research might be mainly due to a relative homogenous school and class composition, which differs, compared to heterogeneous compositions in developed countries creating many possibilities for intergroup contact. Distinctiveness of relevant self-aspects of one's social environment is thought to increase ethnic identity strength and salience (Harwood & Vincze, 2011; McGuire, McGuire, Child, & Fujioka, 1978; McGuire & McGuire, 1988; Masson & Verkuyten, 1993).

Intergroup contact might be a necessary precondition for the hypothesized differences in ethnic identity strength and ethnic identity salience due to language of instruction. This is also in line with ethnolinguistic identity theory (Giles & Johnson, 1981; Giles & Johnson, 1987) in which intergroup contact is needed to determine permeability of group boundaries and multiple group memberships that in turn determine ethnic identity strength and salience. Therefore, future research has to systematically investigate intergroup contact of language minority students that follow a second language program with language majority students.

Moreover, indirect evidence from experimental social psychology suggests that status differences, in the present study conceptualized with the mother tongue condition as higher status and second language condition as lower status, only influence collective identification when it concerns a numerical minority compared to a majority group in which no status differences are found (Lücken & Simon, 2005). More precisely, high status minority group members identified stronger with their group compared to low status minority group members, with no status differences found for the majority group which scored relatively low on collective identification (Lücken & Simon, 2005). Applying the results to our present research it can be argued that results were not in the expected direction because our language minority group was an ethnic majority group which according to Lücken and Simon (2005) should not differ depending on their language of instruction condition in ethnic identification. Moreover, the ethnic minority group on which language of instruction should have an influence was only represented by one condition, namely the language majority group that was educated in the mother tongue with no comparison condition of language majority

students being educated in a second language. Therefore, future research should investigate language minority groups that simultaneously represent an ethnic minority group to find out whether the status that is transferred over the language of instruction affects ethnic identity strength and salience.

Limitations & Future Research

A main limitation of the present study was the relatively low internal consistency of the personal self-esteem scale and the low correlation between the two ethnic identity strength items as well as the limited variability that was present on these measures. Despite earlier studies conducted in Ethiopia with the same items and a pretest with 1st grade students from Addis Abeba yielding an acceptable internal consistency, the Cronbach's alpha statistic of the personal self-esteem and correlation of the ethnic identity items were too low, indicating that the separate items do not statistically converge to a related concept and are not related. This might be due to several reasons. Firstly, the explicit personal self-esteem and ethnic identity strength questions request a certain level of self-reflection which might not be present among the young sample from the Ethiopian countryside resulting in inconsistent answers of the children. This presumption is also confirmed by the age differences in Cronbach's alpha for the personal self-esteem questions indicating a higher internal consistency for older students compared to younger students. Additionally, as the participants of the present study were children we only used a small number of items and as Cronbach's alpha naturally increases with more items it was already lower than it would have been with a larger number of items.

Finally, it is possible that the measured concepts of personal self-esteem and ethnic identity strength are differently conceptualized in this specific Ethiopian subculture. Some items might relate to how these concepts are operationalized in the Western world, while others might not. Future research using implicit quantitative measures of personal self-esteem and ethnic identity strength in combination with additional qualitative measures has to determine the validity and reliability of the relevant concepts.

Even though the present quasi-experimental designs allows not only to investigate the influence of language of instruction on self-concept development over time but also incorporates a relatively high external validity as real groups are used, it also limits the statements that can be made about causality. While we tried to control for third variables, by including several qualitative measures and additional analyses dividing the condition variable in two separate predictor variables of language of instruction and ethnic status, it is still possible that a third variable is responsible for the effects found and therefore we cannot make any direct statements about causality, but only about the relationship between language of instruction and the relevant variables.

Moreover, in contrast to empirical educational research in which larger time intervals are used, the length of the present longitudinal study of half a year might be too short to find visible differences in psychological variables as a function of language of instruction. Additionally, the specific context in which mother tongue primary education had only been recently introduced, namely since four years and in which the written form of the Berta minority language only existing for nine years, might also be responsible for the different

findings contrary to what would be expected based on earlier theory and research. Therefore, future research has to investigate the influence of language of instruction not only over a longer time interval (e.g. one or two years) but it should also incorporate samples in which the minority language is already longer established in the form of mother tongue education.

Future research should also investigate the processes and strategies that might explain why language minority students who are educated in a second language might not always indicate a lower personal self-esteem compared to the mother tongue condition, as our study suggests. Additional outcome variables that are more related to educational outcomes as academic self-concept and academic self-efficacy might also help to get more insight into the link between educational and psychological outcomes and how language of instruction influences them.

Implications

The findings of the present study suggest that under certain circumstances, when a language minority group is already highly self-confident, characterized by a strong ethnic identity, and represents an ethnic majority, language of instruction might not influence personal self-esteem and ethnic identity strength and salience. Therefore the present research introduced ethnic status as a relevant variable that should be incorporated in theory development of psychological effects of language of instruction in primary education among language minority students.

Before any practical implications can be made future research has to confirm the reliability of the finding that ethnic status is a relevant moderator between language of instruction and personal self-esteem and ethnic identity. Only then educational policy makers can think about prioritizing mother tongue education among language minority groups that simultaneously represent an ethnic minority, compared to language minority students who form an ethnic majority. This might not only lead to increased educational outcomes but also to increased psychological outcomes as enhanced personal self-esteem and ethnic identity strength and salience. However, on the basis of the present research we only can speculate about this and further empirical evidence is needed.

Conclusion

In contrast to the empirically already well-established relationship between language of instruction and educational outcomes, the present study suggests that the influence of language of instruction on self-concept development is not as straight forward. The current research is the first one that systematically investigates the effect of language of instruction on personal self-esteem and ethnic identity cross-sectionally as well as longitudinally while controlling for differences in ethnic status among language minority students in a developing country, namely Ethiopia.

As the quotation in the beginning suggests, language and the self, conceptualized as personal self-esteem and ethnic identity, are inherently connected with each other. Under which circumstances language of instruction influences these relevant variables of the self is

not yet clear. However, the present research contributes to existing research in directing attention to the wider social context by focussing on ethnic status in helping to understand the complex relationship between language of instruction and self-concept development among language minority students.

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Appendix I)

In-depth interview Bertha culture & identity

Demographic information:

Name: Andreas Neudorf
Sex: Male
Age: 45
Occupation: Project Manager SIL[10] for the Gumuz-Benshangul department
Educational background: BA Applied Linguistics, MA Literacy programs development
Relation to Bertha: Andreas is living with his family in Ethiopia for more than 14 years. For 7 years he lived in Asosa, Benshangul-Gumuz region of which he stayed 4 years in a Bertha village in which he and his wife developed the written language Bertha. Moreover, he feels very close to the Bertha people who welcomed and accepted him like a member of their own.

Interview information:

Date: 21-05-2013
Time: 11:03 – 11:31
Place: SIL office, Addis Abeba, Ethiopia

I) Bertha language and education:

1) The Bertha language was mainly used orally. You and your wife did a great job in developing the written form of the Bertha language. Since how long does the written form of the Bertha language exists?
Andreas: The written form of the Bertha language exists since approximately nine years.

2) What effect do you think/see this has on:

    a) the Bertha people in general?
    Andreas: In the beginning the Bertha people were very skeptic about the need of a written form of the Bertha language. They preferred to learn to write in Arabic because this is of primary relevance for their religion, Islam. However, nowadays they see the usefulness and are very happy about it.

    b) education for Bertha children?
    Andreas: Bertha people see the value of a written form of Bertha in education. It makes learning for Bertha children much easier because they can directly understand what the teacher says as well as express themselves and ask questions.

---

[10] SIL stands for Summer Institute of Languages

3) What do you think are the advantages/disadvantages of mother tongue education for Bertha children?

a) Andreas about advantages: The children can express themselves and they can communicate about simple things. The advantages are also mirrored in the better educational outcomes. The child does not only repeat what the teacher has said but also asks questions him/herself. This is in contrast to second language education, which is often frustrating for Bertha children and manifests itself in a high dropout during the first four years with a peak in grade 4 and 5.

b) Andreas about disadvantages: There are also disadvantages of the mother tongue education especially related to the curriculum and how the Ethiopian educational bureau handles it. For example Bertha children in mother tongue schools only get taught the official language of Ethiopia, Amharic from grade 3 on. This is too late the Bertha children need to listen to it orally earlier to understand it better and get higher educational outcomes.

II) Living conditions in one Bertha village 'Abramo':

To be able to understand how Bertha people think about themselves it might be very helpful to know more about the living conditions and their every day life. Can you tell us more about Abramo, the village in which you and your family lived for four years?

4) How does a normal day for boys/girls look like?

Andreas: At six o'clock in the morning there is breakfast time. Boys, which are older than 8-10 years, join the men of the village to have food together. In Bertha culture families do not eat together but men and women separately eat together with their neighbors. Women and girls prepare the food for the men and the women. In contrast to boys who play after school and only sometimes take care of the cattle, girls have to do much more work. They have to help in the household, with caring for younger siblings. Their mobility is very limited compared to boys, they stay at home and do not have time to play. I hardly never saw a Bertha girl playing and I am not aware of any typical cultural game girls play in contrast to Bertha boys who have several games.

5) How do Bertha people get water and food? What is the process?

Andreas: When we lived in the Abramo village it took around 20 minutes to get the water from a nearby source but nowadays it is maximum 10 minutes. There are some traditional food Bertha people cook and eat. They either plant it on their own land and let the Amhara people harvest it or they buy the ingredients on the market. They make porridge or injera the traditional Ethiopian food both out of sorghum and they eat it with souse made with okra. Around the houses they plant corn.

6) Can you describe the family-life of Bertha people (from a children's perspective)?

Andreas: The Bertha people are polygamy with one man having several wives, which makes the family very big. Children have many brothers and sisters. Preferred marriage (especially the firth one) is between cousins. Men marry usually at about 24 years of age, girls between 15-16.

7) As what are Bertha people working/what are their ambitions:

Andreas: As Bertha people are Muslim and very religious a lot of Bertha people want to become traders like the prophet Mohammed. A lot of Bertha people also go to Sudan for their trading. They also dig for gold (there are no real mines but areas where gold is found). Since the economic crisis the price of gold has risen greatly, additionally people have started to use metal detectors, combination of this make digging very profitable.

8) Since when do you have electrical power in Abramo?

Andreas: In the past 2 years there has been resettlement happening all over Ethiopia called 'villagization'. As everywhere else people in Abramo, who were scattered over a big area were moved closer together. About six month ago electrical power was supplied to the resettled areas of the village. Further wiring of the rest of Abramo is going on.

9) Is there gender equality in Abramo?/ How is the relation between boys and girls?

Andreas: Even though Bertha people are sincere Moslems, they are not conservative. For example the women do not need to cover too much of their hair with the headscarf. Even though according to Sharia in general women are as half as much worth as a men when it comes to a dispute, you do not get a strong impression that there is a serious gender inequality.

10) What is the relation between Bertha and other ethnic groups (e.g. Amhara)?

Andreas: Bertha people look down on Amhara people even if these are in high power positions. For Bertha these people are not as clean as they are and their customs are also not accepted. The in 1970th resettled Amhara people often work for the Bertha on their field because at the time of resettlement they were given a certain amount of land and the population is risen since then, but the Bertha people refuse to let them have additional land for cultivating. Instead they agreed with the Amhara that they do all the work on the fields of Bertha people and share the harvest 50/50.

II) Bertha identity:

11) Are Bertha children conscious that they are Bertha or do they identify more with the broader ethnic identity Benshangul-Gumuz?

Andreas: Children are very conscious that they are Bertha I would say they strongly identify with their group.

12) What does it mean to be Bertha?

Andreas: First of all it means being a Muslim. It also means that they often face a language barrier because not a lot of people can speak Bertha. Moreover it incorporates that one looks different from the rest (normally darker than Amhara people).

13) What do Bertha people see as important?/What are their values/norms?

Andreas: Religion and purity are of main importance for Bertha people. Moreover, their traditional music, the so-called '*Wasa' and their way of dancing is very important for them too*.

14) Are Bertha proud to be Bertha?

Andreas: Yes, definitely!

15) Do you think Bertha people have a lower self-esteem compared to the majority group of Amhara?

Andreas: No I don't think that. Nowadays that Bertha children got their language developed and get educated in their mother tongue they understand more and dare to ask questions this makes them more self-confident.

16) Do Bertha perceive themselves as low status group with less power because they are a language minority?

Andreas: I would say that it does not affect the Bertha people much that they are a language minority. They are the biggest people group in Benshangul-Gumuz region, which entitles them to have a good share in the government positions, they like that. This area is not of main importance for them religion and purity are more relevant for them and in their view they are the superiors in this.

Appendix II)

Focus Group Discussion: Identity development among Ethiopian 1ˢᵗ grade students in Addis Abeba

By Marloes Huis & Michèle Suhlmann

School in Megenanga, Addis Abeba
1a class
Begin time: 10.30
End time: 11.30

Preparation (General information for the moderator (Tekalign)):
- Create a comfortable environment and an informal friendly style
- Encourage contribution from all participants
- Seek a variety of views and experiences from the participants
- Use probing to seek depth and detail in responses
- Keep the discussion focused on the particular questions
- Monitor the time so that all questions will be answered

Introduction:
- Welcome and thank you for helping with this research. I am very happy to hear your opinion!
- I am Tekalign (introduce yourself) and I am leading this discussion. These are Michèle and Marloes, students from Europe (some words about having ferenji's in class).
- We want to learn more about Ethiopian children as a group; what you like and what you are good at. I will ask you some questions and hope we can start a fruitful discussion. The discussion will take about 1 hour and I will make some notes/recording. Do you have any objections or questions?
- All your opinions are very important to us because it helps us to learn more about Ethiopian culture and you. There are no right or wrong answers so you can tell me whatever you think or feel about the questions. Please be honest and share what you like to share.

	Name	Sex	Age	Ethnicity
1)	**Fikadu Yosef**	**Boy**	**7**	**-**
2)	**Biruk Zenhun**	**Boy**	**8**	**-**
3)	**Klondiye Andarge**	**Boy**	**8**	**Tigray**
4)	**Gashawu Worku**	**Boy**	**7**	**Amara**
5)	**Fisika Tekeste**	**Girl**	**8**	**Amhara**
6)	**Emawayish Antenek**	**Girl**	**7**	**Oromo**
7)	**Alem Niguse**	**Girl**	**-**	**Amhara**
8)	**Showatiem Tefera**	**Girl**	**6**	**Oromo**
9)	**Addis Tigistu**	**Girl**	**7**	**-**
10)	**Meron Tanku**	**Girl**	**7**	**Guraghe**

Identity

1) Some people feel that there sex is more important than their ethnicity while others feel that their ethnicity is more important than their sex. What is more important for you? Being a boy/girl or being Ethiopian?

1) □ Boy/Girl   □ Ethiopian
2) □ Boy/Girl   □ Ethiopian
3) □ Boy/Girl   ✗ Ethiopian →Being an Ethiopian is more important because you can interact with Ethiopian friends and it is easy to interact with others in school. But it is difficult to communicate with ferenji.
4) □ Boy/Girl   ✗ Ethiopian → Being an Ethiopian is more important because I like to be Ethiopian, therefore I like it.
5) □ Boy/Girl   □ Ethiopian
6) □ Boy/Girl   ✗ Ethiopian
7) □ Boy/Girl   ✗ Ethiopian
8) □ Boy/Girl   ✗ Ethiopian → Being an Ethiopian is more important because I want become the leader of Ethiopia.
9) □ Boy/Girl   □ Ethiopian
10) □ Boy/Girl   □ Ethiopian

2) Some people feel that there ethnicity is more important than being a member of their ethnic group while others feel that being a member of their ethnic group is more important than their ethnicity. What is more important for you? Being Ethiopian or being a member of your ethnic group (Amhara, Oromo, Harari etc.)?

1) ✗ Ethiopian   □ Ethnic group →I want to rule Ethiopia
2) ✗ Ethiopian   □ Ethnic group →Ethiopia is my country & I want to rule Ethiopia

3) ✗ Ethiopian   □ Ethnic group → Nationalistic feeling. Together with friends I am proud of being an Ethiopian.
4) ✗ Ethiopian   □ Ethnic group → Because I have access to facilities such as schools, blackboard, playground.
5) □ Ethiopian   □ Ethnic group
6) □ Ethiopian   □ Ethnic group
7) □ Ethiopian   □ Ethnic group
8) ✗ Ethiopian   □ Ethnic group → I want to change Ethiopia as a whole
9) ✗ Ethiopian   □ Ethnic group
10) ✗ Ethiopian   □ Ethnic group → Ethiopia is nurturing and helping her to get an education.

3) Imagine that a new child joins your class, what would you tell the child about yourself?

1) My name and information about the school.
2) My name, and I would ask to play together. I would also borrow him my pencil or pen if he doesn't have one. And I would help him with the amharic and English letters.
3) My name, the name of the teachers and tell him to use different exercise books for each subject. I would ask him about him behavior (good and bad) to make friends with him and I would advice him to become a top-student, like I am (first in ranking in class). I would tell him the name of my father, mother, brothers and sisters. I would advice him to improve his behavior if he doesn't get an A on his conduct. I would tell him where I live and also ask where he lives.
4) My name and I would colour the flag of Ethiopia on his notebook so the book won't get lost. I would ask his name. I would advice him to be a good student and get good grades. Advice him to great the teachers, how to behave and advice him to prepare the exercises before he comes to class.
5) _____ _____
6) My name and I would introduce my mother, father and brother.
7) My name and what kind of subject I like. Introduce my sister, brother, mother and father.
8) My name and introduce my section. Tell the name of my father, mother, brothers, sisters, uncle and grandparents.
9) _____ _____
10) Introduce the child to my friends.

Self-esteem

4) Are people from your ethnic group (Amhara, Oromo, Harari etc.) sometimes better than people from other ethnic groups?

1) ☐ yes ☐ no ☐ I don't know
2) ✕ yes ☐ no ☐ I don't know
3) ✕ yes ☐ no ☐ I don't know → Nationalistic feeling, but (being Amharic) feels better than
4) ✕ yes ☐ no ☐ I don't know
5) ☐ yes ☐ no ✕ I don't know
6) ✕ yes ☐ no ☐ I don't know
7) ☐ yes ☐ no ☐ I don't know
8) ✕ yes ☐ no ☐ I don't know
9) ☐ yes ☐ no ☐ I don't know
10) ☐ yes ☐ no ☐ I don't know

5) How do you feel about being Ethiopian, why *(How proud are you to be an Ethiopian)*?

1) _____55
   _____

2) _____
   _____

3) Because he lives in Ethiopia he is proud of it.

4) Because all ethnic groups live together equally in Ethiopia. For example in Addis they all live together.

5) _____
   _____

6) _____
   _____

7) _____
   _____

8) I am proud of Ethiopia because Ethiopia will nurture me and one day I will become an important person.

9) _____
   _____

10) _____
   _____

This is the end of the discussion.
Thank you for helping us!

Appendix III)

Individual interviews investigating Bertha identity among grade 4 students

5th of July 2013

Interview instructions:

This is Michèle, she is from Germany and she is visiting your town. She would like to get to know you. Who you are and where you come from.
I) Describe yourself
II) What is important to you?
III) What do you like?

Mother tongue education school: Garabiche-Sonka primary school

N = 10 (5 boys and 5 girls), mentioned in total 5 things related to their Bertha ethnicity (marked in green).

1) ID 69 (boy)

I) My name is Mahammed Almahajub Amed. I am 10 years old and I am in grade 4. I live in Sonka village.
II) My important is work/learning. I want to become a policeman.
III)   I like to learn more languages.

2) ID 74 (boy)

I) My name is Saleman Alaka. I am from a village called Shobora. I am in grade 4. I am 18 years. I am Bertha.
II) My important is to learn to be educated man.
III)   I like also to learn my 1st mother tongue language.

3) ID 80 (boy)

I) My name is Yasin Abdu. I am 10 years old. I live in Sonka village. My school is Garabiche Sonka and I am also in grade 4. I am very happy of being Bertha.
II) My importance is to learn more to be a teacher to teach children of this village.
III) I like playing football.

4) <u>ID 85 (girl)</u>

    I)   My name is Alemiya Hussen. I am 12 years old. I live in a beautiful village named Sonka. My school is Garabiche Sonka primary school. I am in grade 4. My ethnics is also Bertha.

    II)   My most important thing is that to learn to avoid the problem of girls in my environment.

    III)   I like to learn because if I learn I get the knowledge and the knowledge is better than anything like money etc. and it makes us equal with boys.

    IV)   Question: What are you eating in your country. For example I eat porrage with Okra wot.

5) <u>ID 91 (girl)</u>

    I)   My name is Zuugu Husen. I am 15 years old. I live in Sonka village. My school is Garabiche Sonka primary school. I am in grade 4 in the class all subjects are my favorite subject.

    II)   My importance is also to learn because learning is the key of anything without learning is very difficult to live especially for girls.

    III)   I like to learn to be a teacher for the future.

    IV)   Question: What kind of house do you have in Germany? Is it like ours made from Bamboo grass?

6) <u>ID 92 (boy)</u>

    I)   My name is Jemal Abdella. I am 12 years old. I am in grade 4. I learn in first language (Bertha). I live in Sonka village. Morning while I go to I eat injera with wott and sometimes porrage.

    II)   My important is learning.

    III)   I like to learn because learning is change a person.

    IV)   Question: What is the climate condition in Germany?

7) <u>ID 103 (girl)</u>

    I)   My name is Afaf Muhadin. I am 18 years old. I am in grade 4 in Garabiche Sonka school. I am from Shobora village/kebele.

    II)   My important is learning.

    III)   I like to stay more in my village.

    IV)   Question: Is German a beautiful country?

8) <u>ID 108 (boy)</u>

    I)   My name is Musa Jemal. I am 11 years old. I am in grade 4. I live in Sonka village.

    II)   Learning is my importance

    III)   I like a work and for the future I need to be a teacher.

9) <u>ID 125 (girl)</u>

    I)   My name is Azisa Imran. My village name is Ghobora. My school is Garabiche Sonka primary school. I am 13 years old.

    II)   My important thing is to learn more to be an educated girl.

    III)   I like studying at home.

    IV)   Question: From where do you come from? What is your name?

10) <u>ID 128 (girl)</u>

    I)   My name is Jahida Siralhatim Mohammed. I am 11 years old. I am from Sonka kebele. I am from grade 4 in Garabiche Sonka primary school.

    II)   My important is no thing (nothing is important to me).

    III)   I like myself of being Bertha

    IV)   Question: What is your country air condition now? Is it hot or cold?

Second language education school: Homosha primary school

N = 9 (3 boys and 6 girls), mentioned in total 2 things related to their Bertha ethnicity (marked in green).

11) ID 237 (boy)

    I)   My name is Atqarik Hamad. I am from Homosha algalaqa kebele.

    II)   The important to me is education and plantation.

    III)   I like the fresh corn and learning.

    IV)   Question: What do you like?

12) ID 241 (boy)

    I)   My name is Abduraham Mohamed, I am from Homosha algalaqa kebele. I am grade 4 student. I am Berta.

    II)   ... nothing mentioned... *(different enumerator did not ask through)*

    III)   I like people which do not insult other and I like looking at the environment and see different animals. I like to learn and dislike to draw back/give up from school. After I go back from school I like to help my family in farming.

13) ID 242 (boy)

    I)   My name is Ahmed Adam. I am in grade 4. I am 12 years old. I lived in a village named Algala.

    II)   My important thing is learning because it gets more benefit and to get more knowledge.

    III)   I like Bertha children.

    IV)   Question: By what kind of transportation you come to Homosha from your country? For how many days?

14) ID 246 (girl)

       I)   My name is Kaltum Halid. I am 13 years old. I am in grade 4. I am from Algala kebele/village

       II)   All important things are my important things e.g. learning etc.

       III)   I like learning because if you learn you can know more things that help you for the future life.

       IV)   I am very happy for your interview with me. Thanks

15) ID 248 (girl)

       I)   My name is Hawwa. I live in Tumat Kebele

       II)   ... nothing mentioned... *(different enumerator did not ask through)*

       III)   I like to learn to be a farmer/ farming after school. After I finished schooling I like to be a teacher.

16) ID 250 (girl)

       I)   My name is Neqima Adam. I live in Tumet kebele. I am in grade 4. I am 10 years old.

       II)   My important thing is learning because I would like to be an educated girl.

       III)   I like to farm e.g. sorgom, teff, and fruits because I like to eat fruits.

       IV)   Question: What is your countries name? Can you tell me again I forgot it. What is your cultural food in Germany?

17) ID 253 (girl)

       I)   My name is Halima. I live in Tumat kebele here.

       II)   The important thing to me is my father and mother and schooling.

       III)   I like to be an expert of one thing and also to be investor.

18) ID 260 (girl)

       I)   My name is Asaida Yusuf. I am 15 years old. I am from a village named Tumet kebele. I am in grade 4.

       II)   No response

       III)   I like to learn

       IV)   Are people praying in your country?

19) ID 261 (girl)

       I)   My name is Asiya Hemed. My kebele is Homosha. I am grade 4 student. My roll number in class is 40.

       II)   My important thing is education.

       III)   I like our kebele climate.

       IV)   Our problem in school we have not enough text books. Can you help to solve this?

Appendix IV)

Pre-test summary: Measuring identity among Ethiopian 4th grade students

30th April 2013

Items that are written in Italics are not used in the baseline but are newly added to the questionnaire.

- Demographic information:

* *N* total: 12
* *N* Gender: boys (8) & girls (4)
* *M*age (*SD*) = 11.75 (2.3)
* Ethnicity:

        - Amhara = 41.7 %
        - Oromo = 16.7 %
        - Gurage = 16.7 %
        - Tigray = 8.3 %
        - Half Amhara & half Oromo = 8.3 %
        - Hamer = 8.3 %

Ethnic identity strength[11] α = .60

		Very [*name their ethnic group*]?	Quite [*name their ethnic group*]?	A little bit [*name their ethnic group*]?	Not at all [*name their ethnic group*]?	888
6	*Which one of these do you think best describes you?* **α (If item deleted) = .860**					
7	How important is it to you that you are [*name their ethnic group*]? **α (If item deleted) = .450**	☹	☹	☺	☺	888
8	Do you feel positively about being [*name their ethnic group*]? **α (If item deleted) = .309**	☹	☹	☺	☺	888
9	How proud are you of being [*name their ethnic group*]? **α (If item deleted) = .359**	☹	☹	☺	☺	888
10	Do you feel negatively about being [*name their ethnic group*]? (recoded 1 = 4, 2 = 3) **α (If item deleted) = .303**	☹	☹	☺	☺	888
The final 3-item scale (including item 7, 8 and 9) yielded an Cronbach's alpha of α = .80						

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[11] Adapted from the Strength of identification scale (Barrett & Oppenheimer, 2011).

Personal self-esteem α = .878

11	Do you have good opinions about yourself? **α (If item deleted) = .859**	☹	☹	☺	☺	888
12	Are you respected by other children? **α (If item deleted) = .829**	☹	☹	☺	☺	888
13	Are you able to do most things as well as your friends? **α (If item deleted) = .844**	☹	☹	☺	☺	888
14	*Are you respected by your family?* **α (If item deleted) = .841**	☹	☹	☺	☺	888

Appendix V)

Questionnaire Study 1

Ethiopia C8 SIL

ENUMERATOR INFORMATION

We would like to learn more about you and your background.

X1	What is your name?	

You only have to fill in questions X2 – X7 once!		
X2	What is your sex?	1 Male 2 Female
X3	What is your age?	_ | _ Years
X4	What is the language you grew up speaking?	1 Amharic 7 Berta 10 Other, specify: _____ 11 Arabic
X5	What ethnic group do you belong to?	1 Amhara 7 Berta 10 Other, specify: _____
X6	What is the highest level of schooling that you have completed?	1 First cycle primary school (1-4) 2 Second cycle primary school (5-8) 3 Secondary school (9-10) 4 BA or BSc 5 Master's Degree 6 Phd
X7	Did you have previous interviewing experience?	1 Yes 2 No

X8	Date of interview	(DD/MM/2013)			2013
X9	Interview start time	(HH/MM)			
X10	Interview end time	(HH/MM)			

IDENTIFICATION OF QUESTIONNAIRE

IQ04	School	1 Sherkolle 2 Garabiche 3 Bambasi No 2 4 Shewobergush 5 Homosha

LANGUAGE, SELF-ESTEEM AND ETHNIC IDENTITY

IQ05	Class	_____ *(please write for example "Class 1.b")*
IQ06	Student's full name	_____ _____ _____ *Child's first name* *Name of the father* *Name of the grand-father*
Q07	Class number		

COMMENTS

All answers option should be read aloud to the interviewee; otherwise it is stated in the instruction for the interviewer (in bold and italic). Please code all missing answers with 999, refused answers with 888 or write down the interviewee's answers if it is different than the given options. Please write down all answers clearly.

INTRODUCTION

Please read the following information to the interviewee to receive an informed consent.

My name is XXXX. I am working for SIL and a Dutch university, who are working on an initiative to improve children's education. Today, we are interested to hear your perspective. Your answers will be used for research purposes only and will not be shared with anyone else. This is NOT A TEST and you will NOT receive a GRADE. I am interested in learning more about your life.

It is important that you answer all questions honestly. There are no right or wrong answers. I will spend around 45 minutes with you. Can I start asking you some questions?

Yes	1
No	2 → If No, STOP interview

SECTION 1: INTERVIEWEE

IN01	Student's sex	1 Boy 2 Girl
IN02	How old are you?	_____ years
IN03	Which language do you speak at home? What is your mother tongue? *Please check two languages if students speak Berta and Arabic.*	1 Amharic 4 Berta 10 Other, specify:_____ 11 Arabic
IN04	To which ethnic group do you belong?	1 Amhara 7 Berta 10 Other, specify:_____ 11 Arabic
IN05	What is your religion?	1 Orthodox Christian 2 Muslim 3 Protestant 4 Other, specify: _____

LANGUAGE, SELF-ESTEEM AND ETHNIC IDENTITY

SECTION 2: SKILLS

CSH01	*Say: "I will read out a list of thing. After I read, please recall the things I mentioned?"* The list includes the following things: House, Sun, Book, Arm, Fire, Animal, Stone, and Friend (*Tick all correctly recalled and not recorded items*)	Items	Recalled	Not recalled
		House	1	2
		Sun	1	2
		Book	1	2
		Arm	1	2
		Fire	1	2
		Animal	1	2
		Stone	1	2
		Friend	1	2

Which statements fit best to you? Please choose one of the two alternatives:
Read each item with both option (CSH03-CSH05) and let the child choose one option (1 or 2).

CSH03	When you lose a game, is it:	
	1	because the other player is good at the game, or
	2	because you don't play well.
CSH04	When you learn something quickly, is it:	
	1	because you listened very good, or
	2	because someone who is older explained it carefully.
CSH04_1	When you get a good grade in class, is it.	
	1	because the test was very easy, or
	2	because you know a lot.
CSH05	What is more important to you:	
	1	go to school.
	2	work.

SECTION 4: IDENTITY

I01	**SHOWCARDS 1:** *Pick the specific cards for the child (gender, ethnicity, religion, nationality) and put all four cards on the table and say* "These are all words that can describe you (name the specific words for this child): e.g., you are a boy, Berta, Muslim, and Ethiopian." *Say:* "Which of these words is the most important one to you, point to this one?" ***Remove this word and say:*** "Which of the remaining words is most important to you, point to this?" ***Repeat this process until all the cards are***		*Write down the rank order (from 1 to 4)*
		Gender	
		Ethnicity	
		Religion	
		Nationality	

	selected. Give each card a rank score between 1 and 4; a score of 1 is given to the card which is most important to the child, and a score of 4 is given to the least important card.	

	Say: "We want to know what is important for you, some things are not important for children! Please answer what you think.": *All questions should be answered in the following two steps:*				
First ask whether it applies "No" or "Yes"!		No		Yes	
Next ask, "how much"!		*Not at all*	*Not*	*A little bit*	*Very much*
I06	Do you have good opinions about yourself?				
I07	Are you respected by other children?				
I07_1	Are you respected by your family?				
I08	Are you able to do most things as well as your friends?				
I09	Is it important for you what others think of you?				
I09_1	Is it important for you what your family thinks of you?				
I10	Is it important for you that you are a unique person, you are different from others?				
I02	How important is it to you that you are Berta?				
I03	How positive do you feel about being Berta?				
I03_1	How proud are you of being Berta?				

SECTION 5: MOTIVATION & FUTURE

	Say: "These questions are about school. Some children are good at some things and less good at others! Please be honest, this is not a test!": *All questions should be answered in the following two steps:*				
	First ask whether it applies "no" or "Yes"!	No		Yes	
	Next ask, "how much"!	*Not at all*	*Not*	*A little bit*	*Very much*
MF01	How easy is it for you to learn reading and writing?				
MF02	How easily can you remember new things?				
MF03	How important do you think is it to learn reading and writing?				
MF04	How useful do you think is it to learn a lot?				
MF04_1	Do you like what you learn in class?				
MF05	Do you like to go to school?				

MF06	Are you motivated to go to school?					
MF07	Have you ever thought about quitting school?					
MF08	Do you sometimes intend to stop going to school?					
MF08_1	Do you help students who have difficulties in class?					
MF08_2	Do other children listen to you when you explain the homework?					
MF08_3	Do you understand what the teacher says?					
MF08_4	Do you think you can get the best student in class?					
MF08_5	Do you talk about things you learn in class outside school?					
MF08_6	To whom?	1 2 3 4 5 6	Mother Father Sisters Brothers Friends Other, namely: _____			
MF08_7	What about? *If students name a subject, ask further whether they talk about homework or new learned things etc.*	1 2 3 4 5	Homework Translation of words Spelling New things I did not know before Other, namely: _____			

MF09	*SHOWCARD 3:* *Put all cards on the table and say* "These are all words that can describe why you go to school." *Say* "Which of these words is the most important one to you why you go to school, point to this one?" *Remove this word and say* "Which of the remaining words is most important to you, point to this?" *Repeat this process until all the cards are selected. Give each card a rank score between 1 and 4; a score of 1 is given to the card which is most important reason to go to school for the child, and a score of 4*		*Write down the rank order (from 1 to 4)*
		to learn	
		for when I am grown up /my future	
		my parents want me	
		all children go to school	

	is given to the least important card.		
MF10	What would you like to be when you are grown up? I would like to be a: …….. *(Don't read options aloud. Tick the option they name first)*	1	teacher
		2	doctor
		3	farmer
		4	pilot
		5	sporter (football player, athlete etc.)
		6	artist (painter, musician, actor etc.)
		7	a job related to computers
		8	researcher/scientist/professor
		9	president/politician
		10	priest/ work for church
		11	police officer
		12	a military job
		13	driver
		14	in the field of tourism
		15	help people/country/family
		16	shop owner
		17	astronaut
		18	journalist
		19	judge/lawyer
		20	cleaner/housemaid
		21	house wife
		22	good will choose for me
		23	Other, specify: _____
MF11	Do you want to go to secondary school when you are older?	1	yes
		2	maybe
		3	no
MF12	Do you want to leave your village when you are grown up?	1	yes
		2	maybe
		3	no
MF13	Which new language do you want to learn? **Do NOT read option aloud! Cross the spontaneous answer.**	1	No language
		2	Amharic
		3	Oromifa
		4	Berta
		5	Arabic
		6	English
		7	French
MF14	Who are better learners? **Let children choose one answer option!**	1	boys
		2	girls
		3	both equally
MF15	Who are better learners? **Let children choose one answer option!**	1	Berta
		2	Wollo
		3	both equally

SECTION 7: LEARNING & HOME

LH01	Do your parents / guardians read and write?	1 Yes 2 No
LH02	Do you have books other than schoolbooks at home?	1 Yes 2 No
LH03	Is there any one at home who helps you in your studies at home?	1 Yes 2 No

SECTION 8: SOCIOECONOMIC BACKGROUND

SEB02_1	How many people live in your house?	people
SEB04	What is the cover of your home?	1 Corrugated sheet 2 Thatched roof 3 Other, specify: _____
SEB05	How many animals does your family have? *Ask for each animal one after the other. Write down the specific number of each animal.*	Mules Cows Oxen Sheep/ goats Donkeys
SE10	How many people in your family have a mobile phone?	mobile phones

FINAL SECTION: ENUMERATOR NOTE

Read these questions before starting the interview and make notes in the process of the interview. Researchers affiliated with IFPRI would like to learn more about this.

X11	Which is the result of the interview?	1 Interview completed 2 Interview partly completed 3 Refusal, no interview obtained 4 No respondent at home 5 Other, specify: _____
X12	What language was the main language you used for the interview?	1 Amharic 7 Berta 10 Other, specify:_____
X15	Did the respondent find some of the questions difficult, embarrassing, or confusing?	1 Yes 2 No
X16	What questions did the respondent find difficult, embarrassing, or confusing? (write the section/part and question number)	_____ _____ _____
X17	What is your evaluation of the accuracy of respondent's answers?	1 Excellent 2 Good 3 Fair 4 Not so good 5 Very bad

X18	Do you believe the work you are doing for this project is difficult?	1	Very difficult
		2	Somewhat difficult
		3	About okay
		4	Very easy

THE END

Thank you very much for your time and all your hard work.

SHOWCARDS 1: Please cut out the cards below. The cards are grouped in four different categories: gender, ethnicity, religion, and nationality. Please pick the correct card of each category for each child (e.g., boy, Amharic, orthodox Christian, Ethiopian). Put the four specific cards of each child in front of the table of the child and follow the instructions. If one religion is missing use the blank card and write down the missing option.

Pick the specific cards for the child (gender, ethnicity, religion, nationality) and put all four cards on the table and say "These are all words that can describe you (name the specific words for this child): e.g., you are a boy, you are Amharic (the group around you belong to, the language you speak, your ethnicity/clan), your religion is orthodox Christian, and you are Ethiopian (you belong to the group of all Ethiopians in this country)."

Say: "Which of these words is the most important one to you, point to this one?"

Remove this word and say: "Which of the remaining words is most important to you, point to this?"

Repeat this process until all the cards are selected. Give each card a rank score between 1 and 4; a score of 1 is given to the card which is most
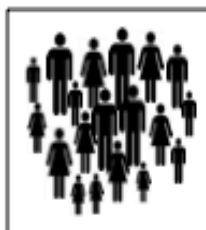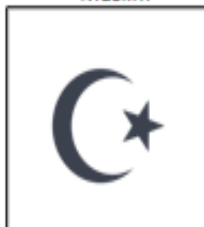
Gender (choose one)

Boy

Girl

Ethnicity/clan
Berta or Amhara, (name the child's specific ethnicity)

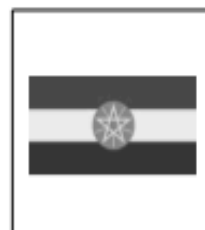**Religion (choose one)**

Muslim

Christian

Nationality

Ethiopian

Appendix VI)

Results Study 1

Table 2

Descriptive sample statistics per condition and total sample size.

	Experimental Group	Comparison Group 1	Comparison Group 2	Total sample
M_{age} (*SD*)	9.56 (2.57)	10.06 (2.11)	9.39 (1.78)	9.65 (2.18)
% girls	54.1	40.8	52.6	49.3
N grade 1	41	35	42	118
N Class 1a	40	27	37	104
N Class 1b	1	6	0	7
N grade 2	29	27	25	81
N Class 2a	23	13	10	46
N Class 2b	1	14	12	27
N grade 3	31	27	24	82
N Class 3a	30	10	22	62
N Class 3b	0	2	0	2
N grade 4	35	31	24	90
N Class 4a	33	18	12	63
N Class 4b	0	7	12	19
N Total	136	120	115	371

Note. If the frequency of students per grade is more than the sum of the frequencies of the classes of that grade then this is due to missing values on the level of the class variables.

Table 3

Cronbach's alpha coefficient statistics of the final personal self-esteem scale of the main data collection and the pre-test in brackets.

Cronbachs' Alpha	Items	Cronbach's alpha If item is deleted
α = .37	Do you have good opinions about yourself?	α = .31
	Are you respected by other children?	α = .32
	Are you able to do most things as well as your	α = .29
(α = .88)	friends?	

Table 4

Bivariate correlations of all final separate personal self-esteem items.

	Do you have good opinions about yourself?	Are you respected by other children?	Are you able to do most things as well as your friends?
Do you have good opinions about yourself?	_____		
Are you respected by other children?	.13*	_____	
Are you able to do most things as well as your friends?	.19**	.19**	_____

Note.   * *p* < .05 level
      ** *p* < .01 level
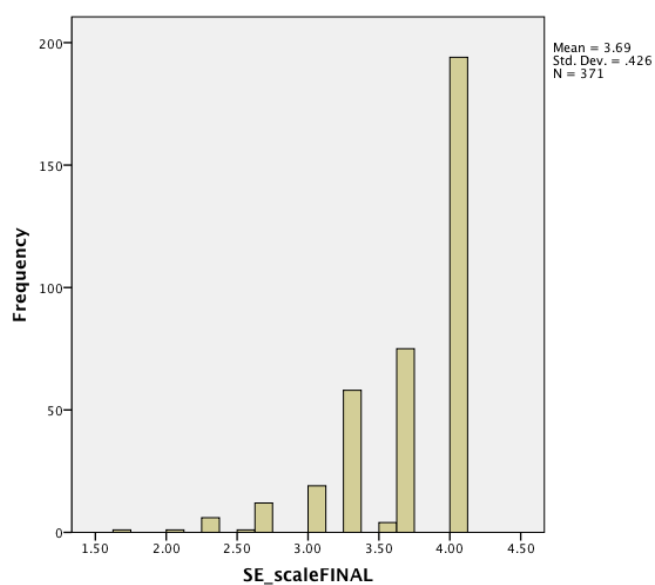
Figure 3. Univariate distribution of the mean of the final self-esteem scale indicating non-normality due to a ceiling effect.
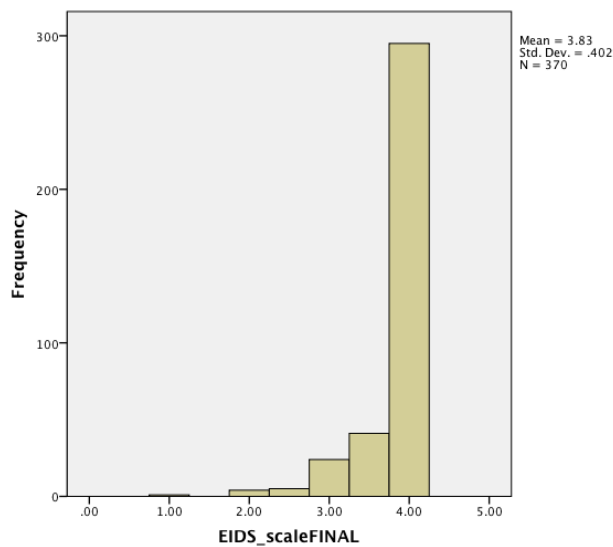
Figure 4. Univariate distribution of the mean of the final ethnic identity strength scale indicating non-normality due to a ceiling effect.

Table 5

Results of the one-way ANOVA of condition on personal self-esteem and the two-way ANOVA of condition and sex on personal self-esteem and respective interaction.

Personal Self-esteem	Condition M (SD)			F (df_{model}, df_{error})	p	η2
	Language minority group – Mother tongue	Language minority group – Second language	Language majority group – Mother tongue			
Condition	3.74 (.38)	3.74 (.38)	3.57 (.50)	6.40 (2,368)	.00***	.03
				5.47[a] (2,368)	.00**[a]	.03[a]
Sex	Girl	Boy	Girl	Boy	Girl	Boy			
	3.79 (.35)	3.70 (.42)	3.69 (.42)	3.77 (.35)	3.58 (.49)	3.58 (.49)	.02 (1,363)	.89	.00
Interaction Condition x Sex							1.21 (2,363)	.30	.01

Note.   * $p < .05$ level
      ** $p < .01$ level
     *** $p < .001$ level
      [a] Controlled for sex.

Table 6

Results of the one-way ANOVA's of condition on ethnic identity strength and on ethnic identity salience.

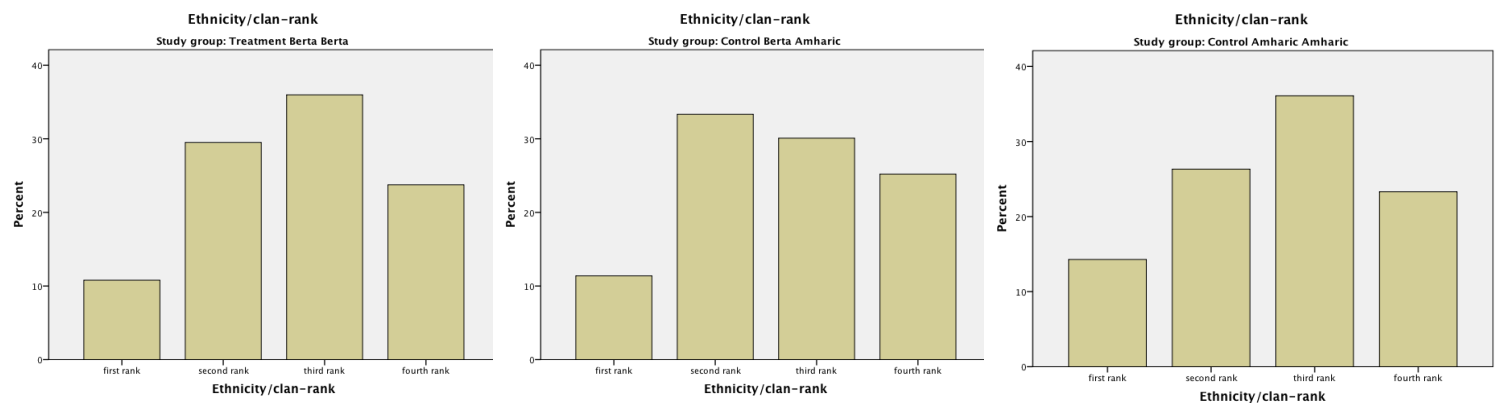|	Condition M (SD)			F $(df_{model},$ $df_{error})$	p	$\eta2$
	Language minority group – Mother tongue	Language minority group – Second language	Language majority group – Mother tongue			
Condition on *Ethnic identity strength*	3.85 (.37)	3.80 (.47)	3.83 (.36)	.56 (2, 367)	.57	.00
Condition on *Ethnic identity salience*	2.70 (.94)	2.70 (.98)	2.67 (.99)	.04 (2, 367)	.97	.00

Figure 6. Univariate percentage distribution of the ethnic identity salience measure per condition with first rank indicating highest salience and fourth rank indicating lowest salience. The conditions from the left to right are experimental group, comparison group 1 and comparison group 2.

Appendix VII)

Results Study 2

Table 7

Descriptive sample statistics per condition and total sample size.

	Language minority group mother tongue	Language minority group second language	Language majority group mother tongue	Total sample
M Age (*SD*)	7.75 (1.56)	8.27 (1.64)	7.85 (1.04)	7.92 (1.38)
% girls	50	13	46	38.9
N Grade 1	28	23	39	90
N Class 1a	28	22	35	85

Note. If the frequency of students of grade 1 is more than the frequency of the class of that grade then this is due to missing values on the level of the class variable.
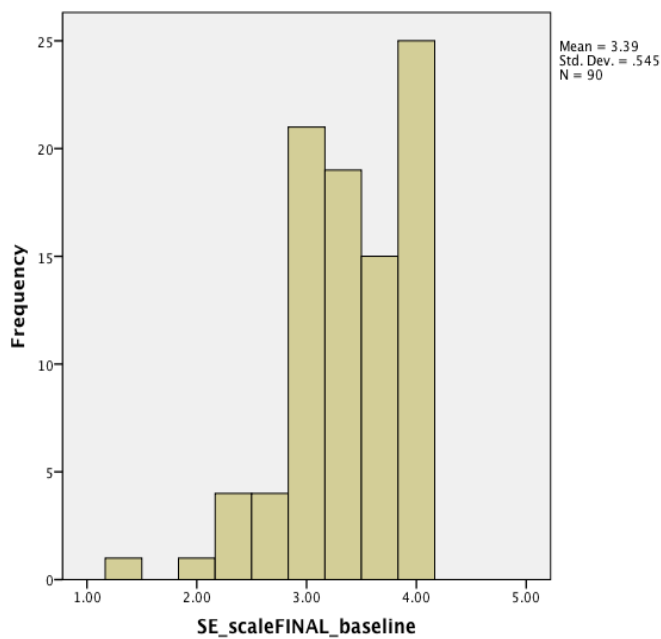

Figure 7. Univariate distribution of the mean of the final self-esteem scale at baseline indicating non-normality due to a ceiling effect.
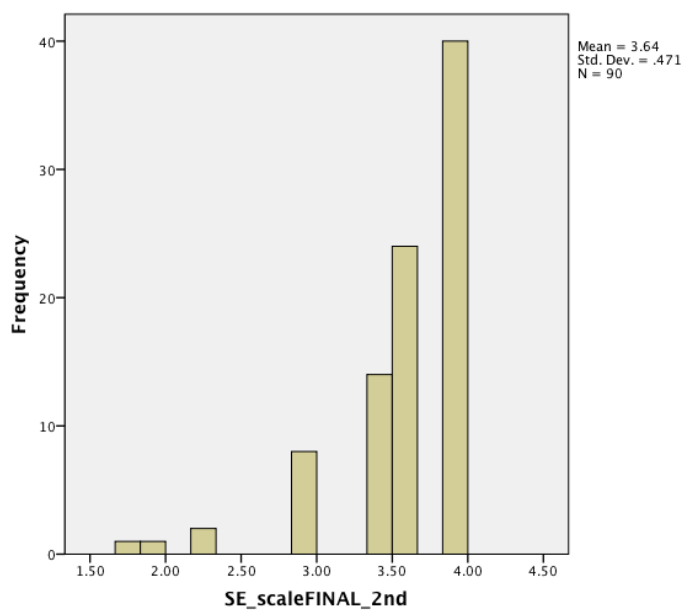
Figure 8. Univariate distribution of the mean of the final self-esteem scale at the second measurement point indicating non-normality due to a ceiling effect.
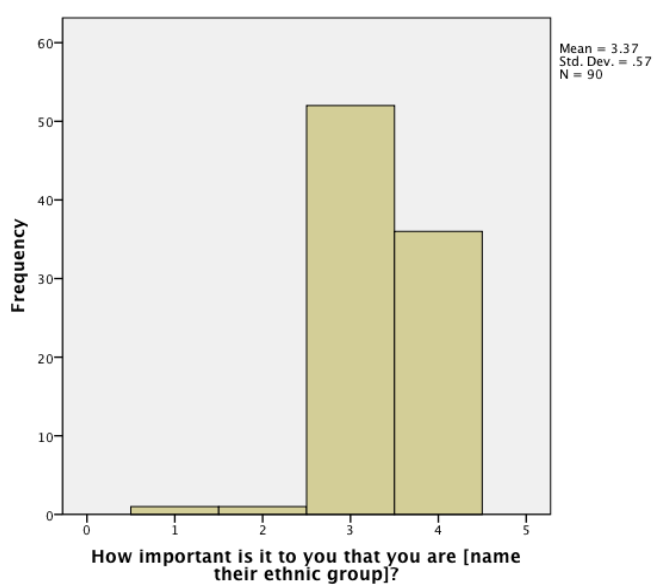

Figure 9. Univariate distribution of the mean of the ethnic identity strength measure at baseline indicating non-normality due to a ceiling effect.
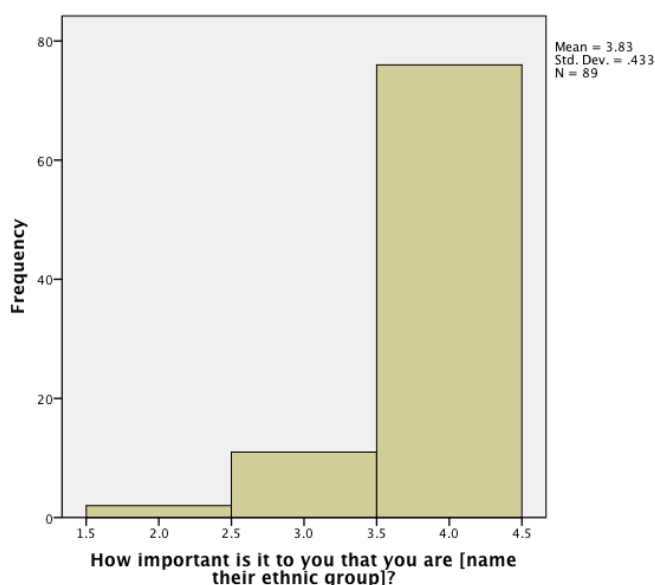
Figure 10. Univariate distribution of the mean of the ethnic identity strength measure at the second measurement point indicating non-normality due to a ceiling effect.

Table 8

Final items per self-esteem scale (baseline and second measurement) presented with the general Cronbach's alpha coefficient as well as the specific Cronbach's alpha statistic if item is deleted.

Cronbachs' alpha	Items	Cronbach's alpha If item is deleted
Self-esteem scale Baseline α = .73	Do you have good opinions about yourself?	α = .62
	Are you respected by other children?	α = .59
	Are you able to do most things as well as your friends?	α = .67
Self-esteem scale Second measurement α = .50	Do you have good opinions about yourself?	α = .44
	Are you respected by other children?	α = .43
	Are you able to do most things as well as your friends?	α = .33

Table 9

Bivariate correlations of the baseline self-esteem items.

	Do you have good opinions about yourself?	Are you respected by other children?	Are you able to do most things as well as your friends?
Do you have good opinions about yourself?	_____		
Are you respected by other children?	.51**	_____	
Are you able to do most things as well as your friends?	.42**	.45**	_____

Note.   * $p < .05$ level
          ** $p < .01$ level

Table 10

Bivariate correlations of the second measurement of the self-esteem items.

	Do you have good opinions about yourself?	Are you respected by other children?	Are you able to do most things as well as your friends?
Do you have good opinions about yourself?	_____		
Are you respected by other children?	.22**	_____	
Are you able to do most things as well as your friends?	.29**	.29**	_____

Note.   * $p < .05$ level
          ** $p < .01$ level

Table 11

Results of the repeated measures ANOVA of condition on self-esteem and sex on self-esteem with respective interaction.

Self-esteem	Condition M (SD)			F (df_{model}, df_{error})	p	$\eta2$
	Language minority group – Mother tongue	Language minority group – Second language	Language majority group – Mother tongue			
1st measurement	3.44 (.54)	3.32 (.40)	3.38 (.62)	12.96 (2, 87)	.00***	.13
2nd measurement	3.75 (40)	3.64 (.43)	3.55 (.53)			
Sex	Girl Boy	Girl Boy	Girl Boy			
1st measurement	3.38 (.65) 3.50 (.43)	3.00 (.00) 3.37 (.40)	3.39 (.62) 3.41 (.50)			
2nd measurement	3.90 (.16) 3.60 (.51)	3.89 (.19) 3.60 (.44)	3.51 (.53) 3.59 (.55)	3.50 (1,84)	.07	.04
Interaction Condition x Sex				1.88 (2,84)	.16	.04

Note.   * p < .05 level
   ** p < .01 level
   *** p < .001 level

Table 12

Results of the repeated measures ANOVA of condition on ethnic identity strength and ethnic identity salience.

	Condition M (SD)			F (df_{model}, df_{error})	p	$\eta2$
Ethnic identity strength	Language minority group – Mother tongue	Language minority group – Second language	Language majority group – Mother tongue			
1st measurement	3.43 (.57)	3.26 (.45)	3.45 (.50)	43.25 (2, 86)	.00***	.34
2nd measurement	3.96 (.19)	3.83 (.39)	3.74 (.55)			
Ethnic identity salience						
1st measurement	2.68 (1.22)	2.43 (1.08)	2.64 (1.09)			
2nd measurement	2.61 (.88)	2.48 (.95)	3.00 (1.05)	.72 (1, 87)	.49	.02

Note.   * p < .05 level
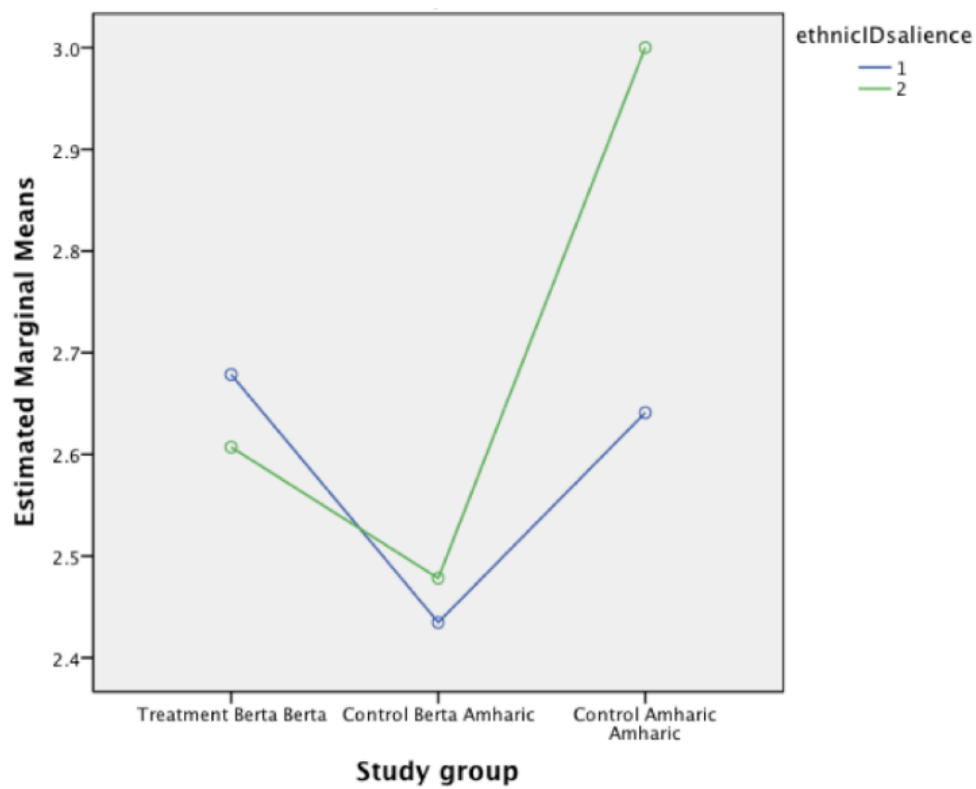   ** p < .01 level
  *** p < .001 level

Figure 11. Differences in ethnic identity salience per condition and per measurement time point showing tendencies that support hypothesis 3c