

The link between multilingualism, language learning and open-mindedness in secondary school students in Norway

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Abstract

A positive link between open-mindedness and multilingualism suggested in intercultural psychology research (e.g., Dewaele & Botes, 2020; Korzilius et al., 2011; Dewaele & Oudenhoven, 2009) has also been implicitly assumed in Norway's Core Curriculum (NDET, 2017) and in the curricula for English (NDET, 2019a) and Foreign Languages (NDET, 2019b). However, little empirical research has been conducted to explore how becoming multilingual, especially through learning foreign languages at school, can be connected to the development of students' open-mindedness. The present study addresses this gap by exploring open-mindedness in lower secondary school students (n=593) learning one or two foreign languages in school. In addition, other factors related to students' multilingualism, such as their multilingual identity, migration background, experience living abroad and having friends with home languages other than Norwegian, are also considered to better understand the complex relationship between open-mindedness and multilingualism in the school context. By analysing the data collected with the Ungspråk questionnaire (Haukås et al., 2021a), the study reveals no particular relationship between open-mindedness and students' migration background and experience of living abroad. However, it indicates that open-mindedness is positively linked to L3 learning at school, multilingual identity and having friends who use other languages at home. These findings have significant pedagogical implications suggesting that promoting learning a second foreign language at lower secondary school, developing students' self-identification as multilingual and encouraging the interaction with peers speaking further languages may contribute to the enhancement of open-mindedness among students.

Keywords: *open-mindedness, multilingualism, multilingual identity, foreign language learning, L2, L3*

In Norway, core democratic values of global citizenship and tolerance for diversity are reflected in the National Core Curriculum (2017), the central document providing direction for teaching and training in all subjects of primary and secondary school. The document states

that the school's primary tasks, among others, are to prepare students "to live together with different perspectives, attitudes and views of life" (p. 7), "to participate' in a diverse society", and "to open doors to the world and the future" (p. 8). The document suggests that, through promoting democratic values and attitudes, schools will teach students to respect the fact that people are different, will counteract prejudice and discrimination, and will ensure that there is room for collaboration, dialogue and disagreement (NDET, 2017). The document also emphasises the linguistic diversity of Norwegian society and considers "being proficient in a number of languages ... as a resource, both in school and society at large" (Core Curriculum, p. 7).

In addition to the National Core Curriculum, several subjects have formulated the aim to promote democratic values, one of them being the Foreign Language subject. The curriculum for this subject suggests that knowledge of several languages and language learning "open[s] up more ways of interpreting the world, help[s] to create curiosity and engagement and contribute[s] to preventing prejudice" (NDET, 2019b, p. 3, authors' translation). Thus, being and becoming multilingual is explicitly linked to students' better understanding of and openness towards cultural diversity.

While both documents suggest that being multilingual and learning foreign languages are strongly connected to students' developing democratic values and open and unprejudiced views towards diversity, there has been little research to support this claim empirically, especially in school settings. To explore this connection, we study students' open-mindedness, a psychological quality which, in intercultural psychology research, is often associated with a person's predisposition to develop open and unprejudiced attitudes towards differences (van der Zee & Oudenhoven, 2000). Drawing on the quantitative data collected with the Ungspråk questionnaire (Haukås et al., 2021a), we look at the possible links between open-mindedness and a number of relevant factors in students who study one (English) or two foreign languages (English plus Spanish, German or French) in Norwegian lower secondary schools. Specifically, we explore how students' open-mindedness is connected to learning a second foreign language at school, their self-identification as multilingual, and other factors such as having friends with home languages other than Norwegian, their migration backgrounds and their experience living abroad. By exploring a range of variables, we aim to estimate how being multilingual and learning foreign languages at school affect students' open-mindedness in comparison to other relevant factors.

Regarding the terms used in this article, it is important to clarify that we refer to the language subjects learned in school as L1, L2 and L3, although this may not be the chronological order these languages were learned by some students. Consequently, we refer to Norwegian as *L1 at school*, the first foreign language studied at school (English) as *L2 at school* and the second foreign language (typically Spanish, German or French) as *L3 at school* (see, for example, Hammarberg [2010] for a discussion of the various concepts in the field). However, many students know one or more languages in addition to the three language subjects in school, so the languages studied in school may actually be their L4 or Lx. Also, Norwegian is not the first (or native) language for all students. They could have Sami or another national minority language as their first language(s), or they could speak one or more home languages other than Norwegian due to their own or family members' previous immigration to Norway. Furthermore, students with a migration background represent a heterogeneous group. Some were born in Norway and are fully proficient in Norwegian, considering it their first/native language, whereas others have recently arrived and have just begun to learn Norwegian (Vikøy & Haukås, 2021). Consequently, referring to students with a migration background as a homogeneous group can be problematic. Therefore, it is important to clarify that, within this study, we refer to students with a migration background as those participants who do not perceive Norwegian or any other national Indigenous or minority language as their first/native language. By doing so, we assume that this criterion is a strong indicator of students' migration background. This approach also allows us to avoid asking students directly about their and their parents' ethnic or national backgrounds.

The paper continues by clarifying some key theoretical concepts and proceeds with an overview of research studies on open-mindedness in foreign language learning research, applied linguistics and intercultural psychology. We then present our research questions and introduce our research instrument, the Ungspråk questionnaire (Haukås et al., 2021a), which was developed specifically to investigate students' multilingualism and its connection to open-mindedness and other relevant factors in school settings. Our findings are based on the analysis of data collected from 593 lower secondary school students in Norway.

Theoretical framework and literature review

Defining the key concepts and the context

The central theoretical concepts of this study are open-mindedness, multilingualism and multilingual identity. These terms have a variety of meanings among scholars and in different contexts. Consequently, they need to be defined for the purpose of this study.

Open-mindedness. The Cambridge dictionary (McIntosh, 2013) relates open-mindedness to a person's receptiveness to new ideas and defines it as "the quality of being willing to consider ideas and opinions that are new or different to your own". Being open to new and different ideas can be considered an aspect of openness to experience (Piechurska-Kuciel, 2020; Costa & McCrae, 1997), which is one of the five key psychological traits constituting personality – together with extraversion, agreeableness, conscientiousness and neuroticism (Costa & McCrae, 1987). From an epistemological perspective, open-mindedness also refers to the ability to be aware of one's fallibility as a believer and to acknowledge the possibility that anytime one believes something, one could be wrong (Riggs, 2010; Hare, 1979). In addition, scholars in intercultural psychology, whose approach we adopt in this study, consider open-mindedness to be a predictor of how individuals will deal with intercultural situations (van der Zee & Oudenhoven, 2013). They refer to open-mindedness as the ability to be open and unprejudiced towards outgroup members and towards different norms and values (Dewaele & Oudenhoven, 2009; van der Zee & Oudenhoven, 2000). According to this perspective, open-mindedness is vital to understanding others' views and values and, thus, to cope with differences and diversity in an effective manner (Piechurska-Kuciel, 2020; van der Zee & Oudenhoven, 2013; Wilson et al., 2013; Dewaele & Oudenhoven, 2009).

Like any other psychological trait, open-mindedness develops dynamically over time under the influence of both internal and external factors. Researchers suggest that open-minded people are more inclined to reflect on various possibilities, to listen to and take seriously alternative views (Riggs, 2010), to respect diversity (McCrae & Costa, 2003), and to reconsider their social, political and religious values (Costa & McCrae, 1992). Van der Zee and Oudenhoven (2000) also suggest that people who have a high level of open-mindedness tend to have an open and unprejudiced attitude towards other groups, cultural values and norms. Low scores on open-mindedness, on the other hand, are associated with a tendency to defend perceived stability and safety and an acceptance of authority and traditions (Nekljudova, 2019). Furthermore, lower scores on open-mindedness are linked to bias

attitudes and a tendency to judge and stereotype other groups (Huxley et al., 2015; van der Zee & Oudenhoven, 2000).

Open-mindedness also shapes a person's communication behaviour. According to McCrae and Sutin (2009), open-minded people tend to be more curious and attentive when meeting a new person. They are also ready to see commonalities between their own and a partner's perspectives and identities (Nezlek et al., 2011). In addition, they are likely to have friends with different backgrounds, for example, of the opposite sex or another ethnic group (Laakasuo et al., 2017). In the case of disagreement, open-minded people are also generally more inclined to consider their interlocutor's views on an issue, not necessarily agreeing, but demonstrating an understanding of the other's reasoning (Nezlek et al., 2011).

Multilingualism and multilingual identity. Multilingualism is defined and understood in a number of ways, both among scholars and among people in general (Cenoz, 2013; Haukås, in press). In the framework of this study, however, multilingualism refers to “the dynamic and integrated knowledge and/or use of more than one language or language variety” (Haukås et al., 2021b, p. 84). According to the Curriculum for the Foreign Language Subject (L3 at school), all students in Norway are already multilingual when they start a second foreign language in grade eight (NDET, 2019b). Although multilingualism is never defined in the curriculum, this assumption probably derives from the fact that the students can communicate in two languages or more when they start learning an L3 at school. First, they study the official national languages: two variations of Norwegian (Bokmål and Nynorsk) and/or Sami languages. The Sami languages are usually studied in the regions of the country that are recognized as traditional areas of Indigenous Sami populations. Second, the students learn English as a first foreign language (L2 at school) from grade one. In addition to the multilingualism acquired in school settings, students with immigrant backgrounds, or born to parents with immigrant backgrounds, may know additional languages. According to Statistics Norway (2021), 18.5% of people living in Norway belong to this group. Moreover, most students use local dialects and typically understand multiple dialects of Norwegian (Haukås, in press). It is also not uncommon for students in Norwegian schools to be receptive multilinguals of Swedish and Danish (Zeevaert, 2007). Thus, in grade eight, when they can choose to study a new language in the Foreign Language Subject (typically Spanish, German or French), one can safely assume that these different ways of acquiring knowledge of multiple languages make *all* students in Norwegian schools already *multilingual*.

Nevertheless, while all students in Norway can be considered multilingual, their self-identification as such can differ from the researchers' perspective and from that of the curriculum (NDET, 2019b). Therefore, to include the respondents' perspective on their multilingualism, we introduce the concept of *multilingual identity* in our study. With reference to Fisher et al. (2020), multilingual identity can be defined as one's explicit self-identification as multilingual 'precisely because of an awareness of the linguistic repertoire one has' (p. 449). According to several scholars (Fisher et al. 2020; Henry 2017; Henry & Thorsen 2018; Ushioda 2017), awareness and self-identification as a multilingual can be a potentially significant and empowering factor influencing the willingness to invest time and effort in learning new languages and in maintaining the languages one already knows. Moreover, based on the analysis of students' associations related to learning multiple languages, Henry and Thorsen (2018) suggested that learners' reflection on whether they are multilingual may be linked to the development of personality traits such as openness, empathy and curiosity. Ożańska-Ponikwia (2012) revealed that "a feeling of being a different person" when using different languages is connected to higher scores on open-mindedness in multilingual users, among other factors. In addition, some scholars (Busse, 2017; Aronin, 2016) have argued that multilingual identity can be related to and can influence other dimensions of identity, such as beliefs, attitudes, and personal life scenarios, making it interesting to explore the link between multilingual identity and open-mindedness.

Previous empirical research on the connection between open-mindedness, multilingualism and other language learning-related variables

Research in intercultural psychology suggests a positive connection between open-mindedness and multilingualism, operationalised as the knowledge of and proficiency in several languages. For example, in a study exploring the effect of multilingualism on personality traits, Dewaele and Botes (2020) found a significant positive connection between multilingualism and open-mindedness in 651 multilinguals from around the world. A positive link between open-mindedness and multilingualism was also observed by Korzilius et al. (2011), who studied the relationship between personality dimensions and foreign language mastery in business professionals in a Dutch-based international company. Dewaele and Oudenhoven's (2009) study involving 79 London teenagers aged 13–15 with different ethnic backgrounds also showed that participants with a migration background who were proficient in and actively used several languages scored high on open-mindedness. However, in their

peers who were learning only one foreign language in school, there was no link between multilingualism and open-mindedness. Similarly, a study conducted by Pederson (1997) found no connection between intercultural sensitivity and learning one foreign language in school. It is important to emphasise here that while learning one foreign language in school has been, to some extent, considered a factor related to open-mindedness, studies that explore how learning an additional *second* foreign language can be linked to students' open-mindedness are still missing in the field.

Other scholars (e.g., Gross & Dewaele, 2018; Mellizo, 2017; Dewaele & Stavans, 2014) indicate that more research involving participants of school age is needed, as several studies suggest that the link between open-mindedness and multilingualism can be different in younger multilinguals than in adults (Gross & Dewaele, 2018; Melizo, 2017). Dewaele and Stavans (2014), for example, found no connection between the number of languages that young multilinguals know and their open-mindedness. However, frequent use of many different languages, linguistic and cultural heterogeneity within the family and exposure to different languages and cultural values appear to be important for participants' open-mindedness.

As previously mentioned, scholars (Forbes et al., 2021; Fischer et al., 2018) have suggested that self-identification as multilingual may be an important factor in language learning and may promote students' multilingualism. Furthermore, Fielding (2021) points out that promoting learners' multilingual identity may help enhance their intercultural understanding. In a forthcoming study by Tiurikova and Haukås (in press), language teachers have also suggested that there is an interconnection between seeing yourself as multilingual and being open-minded and that the development of both may help advance students' intercultural competence. However, this potential connection remains empirically unexplored.

Among other predictors of open-mindedness with relevance for language learning in school contexts, researchers have identified interactions with people from different cultural and linguistic backgrounds (Petrovic & Zlatkovic, 2009; Williams, 2005). Some studies show that, in the case of teenagers, intercultural friendship can be a particularly significant factor for the development of intercultural sensitivity and positive attitudes towards diversity (Chocce et al., 2015; Pederson, 1997). Researchers have also explored open-mindedness and

associated factors in relation to participants' migration backgrounds, with a range of different findings regarding the interconnection between these factors. Similar to the findings in Dewaele and Oudenhoven (2009), a higher level of intercultural sensitivity was found in students with a migration background by Morales (2017) and by Ruokonen and Kairavuori (2012). Other studies, however, have shown that multilingual students with an immigrant background scored lower on openness to change than students without an immigrant background (Gross & Dewaele, 2018; Dewaele & Stavans, 2014).

Similarly, there is no consensus among researchers on whether the experience of living abroad is significantly linked to open-mindedness and other associated psychological factors. On the one hand, numerous studies (Tompkins et al., 2017; Dewaele & Wei, 2013, 2012; Medina-Lopez-Portillo, 2004; Olson & Kroeger, 2001) have confirmed that the experience of living abroad is likely to be positively linked to the development of intercultural skills and personality traits that are important for constructive intercultural communication. However, Williams (2005) specified that living or studying abroad can enhance these skills only if people interact with the locals. On the other hand, Dewaele and Wei (2012) showed that cognitive empathy, defined as the ability to see the world from an interlocutor's point of view, is not connected to the experience of living abroad in multilingual speakers.

Following from the previous research, which has provided inconclusive results, the current study sets out to investigate the link between open-mindedness and multilingualism in lower secondary school students, in particular. Specifically, the study focuses on the differences between those who learn one (English) or two foreign languages (English plus French, German or Spanish) in school and those who identify as multilingual or not. Furthermore, it seeks to explore potential links between open-mindedness and three other factors that can also be relevant for the chosen age group and educational context, namely, students' friendships with peers whose first language is not Norwegian, the experience of living abroad, and migration background.

Research question and hypothesis

We seek to answer the following research question:

To what extent can open-mindedness in lower secondary school students be linked to L3 learning at school, self-identification as multilingual, having friends with home languages other than Norwegian, migration background, and experience living abroad?

Given the insights gained from previous research, although they are inconclusive, we hypothesise that all the above factors are significantly linked to students' open-mindedness.

Methodology

Research instrument

To answer our research question, we developed the Ungspråk questionnaire (see Haukås et al., 2021a, for a detailed account of the development and validation of the questionnaire). This questionnaire allows the exploration of students' multilingualism, multilingual identity, open-mindedness and a number of other variables. It has four main sections. Section one explores students' multilingualism through questions about which languages the respondent studies at school and which languages they know. For each language the student reports learning or knowing, the student is asked whether they perceive this language as their first/native language or not.

Section two investigates students' open-mindedness, among other aspects. In total, the construct includes 10 statements, to which responses are provided on a five-point Likert scale, ranging from 'strongly agree' to 'strongly disagree' (Table 1). The statements were developed based on an analysis of five questionnaires, including the Multicultural Personality Questionnaire (Van der Zee et al., 2013), which considers open-mindedness to be one of personality traits predicting a person's unprejudiced attitudes and constructive behavior in intercultural encounters. However, the Ungspråk questionnaire seeks to reflect a non-essentialist and non-differentialist paradigm in intercultural education. Instead of focusing on ethno-cultural and stereotypical national differences between people and contexts, as documented in other questionnaires (see Tiurikova, 2021 for further discussion), the Ungspråk questionnaire assumes that the identities of interlocutors in intercultural encounters are complex and diverse. Thus, differences between people cannot be reduced to ethnic or national distinctions. Cronbach's alpha for the construct 'open-mindedness', reported by Haukås et al. (2021a) when piloting the questionnaire, was 0.75. The Cronbach's alpha test run with the dataset of the current study was 0.79, which proved the validity of the Ungspråk questionnaire. Table 1. Statements composing the construct 'open-mindedness'

Table 1. Statements composing the construct ‘open-mindedness’

1.	It would be better if all people in Norway shared the same opinions.
2.	There are different ways of being Norwegian.
3.	I like to get to know new people.
4.	I would rather only be with people that I know from before.
5.	I would prefer if everyone around me had the same opinions as me.
6.	I like that people have different opinions.
7.	I like to talk with people that have different opinions than myself.
8.	I like that there are differences between myself and other people.
9.	I try to get to know people that are different from me.
10.	I am interested in many different things.

Section three explores students’ self-identification as multilingual. First, they are asked to provide their own definition of a multilingual person. Then, they are asked if they consider themselves to be multilingual by answering ‘yes’, ‘no’ or ‘not sure’. For further analysis, the two latter answers were merged into one category to distinguish students who explicitly identify themselves as multilingual (‘yes’ responses) and those who do not (‘no and ‘not sure’ responses).

Section four includes questions about students’ friendship with people whose home languages are other than Norwegian, their experience of living abroad, and other factors that can be significant in relation to students’ multilingualism, multilingual identity, and open-mindedness. As mentioned earlier, students’ migration background is assumed if they do not identify Norwegian or any national minority language as their first/native language. Students with a migration background could have either moved to Norway during childhood or been born in Norway to immigrant parents.

The questionnaire was administered digitally on the SurveyXact platform. It was available in two languages, Norwegian and English, to provide students with some autonomy and to make sure that the questions were understood by all. Newcomers to Norway who struggled with understanding both of these languages were assisted either by their teacher or by one of the researchers when answering the questionnaire.

The research project, including the questionnaire, was submitted for ethical assessment to the Norwegian Centre for Research Data (NSD). After approval was received, the questionnaire was piloted twice to verify its validity (for details, see Haukås et al., 2021a).

Participants

We invited lower secondary schools in urban and rural areas around Bergen, Norway, to take part in our study. Seven schools accepted our invitation. In total, 593 students ($m = 276, f = 317$) agreed to participate. Their mean age was 13.5 years old, and they were all in year 8 of lower secondary school. Although they may not identify as such themselves, all participants can be referred to as multilingual for the reasons mentioned earlier. In our study, most of the students were learners of a second foreign language (L3) at school (85%) in addition to the first foreign language (English; L2 at school), which is compulsory. Of the students, 297 were learning Spanish (50%), 109 were learners of German (18%), and 99 were learning French (17%). In total, 522 students reported that Norwegian was their first language, whereas 71 students reported that neither Norwegian nor any other national minority language was their first/native language. The latter group is referred to as students with a migration background in the context of this study.

Data collection and analyses

Data collection took place at the schools during class hours. At least one researcher was present at each session to answer any questions regarding the completion of the questionnaire.

For data analysis, we used SPSS version 25. Learning an L3 vs. only the L2 (English) at school, self-identifying as multilingual, having friends with home languages other than Norwegian, having a migration background, and having experience of living abroad were approached as dichotomous variables ('yes' or 'no' answers). The construct 'open-mindedness' was approached as a continuous variable. Since the sample size ($n = 593$) was enough to assume normal distribution, we chose to run parametric tests for further analyses (Piovesana & Senior, 2018).

To find out which factors were statistically significant in relation to open-mindedness and which were not, we ran independent samples *t*-tests. To understand the importance of the *t*-test results and to allow comparisons between studies, we calculated the effect sizes of the differences between groups (Cohen's *d*).

Results

The results of the independent samples *t*-tests with corresponding calculations of effect sizes (Cohen's *d*) for each factor are presented in Table 3.

Table 3. An overview of *t*-test values and effect sizes

<i>Students</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>T-test</i>	<i>p value*</i>	<i>Effect size (d)**</i>
1. Learning only the L2 at school (English)	88	3.92	0.66	-4.1	$p < 0.001$	0.47
Learning an L3 at school (Spanish, German or French)	505	4.2	0.58			
2. Self-identification as multilingual	396	4.22	0.56	-3.65	$p < 0.001$	0.3
No self-identification a multilingual	197	4.04	0.65			
3. Friends with home languages other than Norwegian	406	4.26	0.53	4.89	$p < 0.001$	0.65
No friends with home languages other than Norwegian	83	3.89	0.79			
4. Migration background	71	4.13	0.58	-0.53	$p = 0.6$	0.07
No migration background	522	4.17	0.6			
5. Experience living abroad	78	4.1	0.65	-1.28	$p = 0.2$	0.16
No experience living abroad	498	4.19	0.56			

* The value was significant at $p < 0.05$

** 0.2 = small, 0.4 = medium, 0.6 = large (Cumming & Calin-Jageman, 2018)

Statistically significant factors in relation to open-mindedness

Learning an L3 at school appeared to be a statistically significant factor in relation to students' open-mindedness. Learners of an L3, whether Spanish, German or French ($n = 505$) showed a higher level of open-mindedness ($M = 4.2$, $SD = 0.58$) than learners of only the L2

at school ($n = 88$, $M = 3.92$, $SD = 0.66$) ($t(591) = -4.1$, $p < 0.001$). Cohen's d indicated that the effect size was medium to large for L2 vs. L3 learning at school ($d = 0.47$).

Furthermore, the results of the independent samples t -test showed that the 396 students who self-identified as multilingual (those who answered 'yes' to the question 'are you multilingual?') scored higher on open-mindedness ($M = 4.22$, $SD = 0.56$) compared to the 197 students who did not know or did not identify as multilingual ($M = 4.04$, $SD = 0.65$). The t -test result ($t(591) = -3.65$, $p < 0.001$) indicates that this difference between groups is statistically significant. The value of Cohen's d ($d = 0.3$) indicates a small to moderate effect size.

Having friends with home languages other than Norwegian appeared to be a statistically significant factor as well. Students who reported having such friends ($n = 406$) scored higher ($M = 4.26$, $SD = 0.53$) than those who reported not having such friends ($n = 83$, $M = 3.89$, $SD = 0.79$) ($t(487) = 5.28$, $p < 0.001$). Cohen's d indicated that the effect size was large for the factor of having friends with home languages other than Norwegian ($d = 0.65$).

Factors with no statistical significance in relation to open-mindedness

The independent samples t -test revealed that there is no statistically significant difference in open-mindedness between students with a migration background ($n = 71$, $M = 4.13$, $SD = 0.58$) and without a migration background ($n = 522$, $M = 4.17$, $SD = 0.6$) ($t(591) = -0.53$, $p = 0.6$). The same result was obtained for the factor of having experience living abroad. Those who have lived abroad ($n = 78$, $M = 4.1$, $SD = 0.65$) did not score significantly differently from those who have no experience of living in another country ($n = 498$, $M = 4.19$, $SD = 0.56$) ($t(574) = -1.28$, $p = 0.2$).

Discussion

The main objective of this study was to investigate to what extent open-mindedness can be connected to lower secondary school students' multilingualism and related variables. The main findings are that learning an L3 at school (Spanish, German or French), self-identification as multilingual and having friends with home languages other than Norwegian are factors that are likely positively linked to students' open-mindedness.

A statistically significant difference between students learning two foreign languages at school and those learning only English may hint at the particular role of learning an L3 at school in developing this psychological trait. To the best of our knowledge, no studies have yet compared the open-mindedness of students' learning the L2 (English) as well as an L3 in school settings. However, our findings may partly correspond to the results of previous research that found that learning a first foreign language was not a factor in developing open-mindedness and related psychological traits. For instance, Dewaele and Oudenhoven (2009) and Pedersen (1997) found no connection between learning one foreign language at school and students' open-mindedness or related qualities. Given the results of these studies and our findings, we may assume that, in contrast to learning only one foreign language, which typically begins in primary school, actively deciding to study a second foreign language in secondary school is positively linked to students' open-mindedness.

A possible explanation for the discrepancy between L2 and L3 student learners in this study might be the novelty of knowledge and experience that learning a new foreign language (whether it is Spanish, German or French) brings to secondary school students. As stated in both the English curriculum (NDET, 2019a) and the Foreign Language Subject curriculum (NDET, 2019b), learning a new language includes learning about new ways of interpreting the world, developing curiosity and helping students become more open towards differences. Nevertheless, one may argue that learning only English as a foreign language at school can, to a lesser extent, be associated with new experiences and new knowledge in the Norwegian setting compared with learning a second foreign language. Due to its status as a global lingua franca, English has a special place in Norwegian society and school education. It has long been in use in society and in the education system, and it is also broadly available in the media, on the internet, and elsewhere. Thus, students in Norway are widely exposed to the English language, as well as to the cultures of English-speaking countries. In fact, secondary school English teachers in Norway report that many students feel that they know enough already and that there is little new to learn (Haukås et al., 2021). Furthermore, as the status of English as a global language is strengthened (Crystal, 2003), it is perceived more often as a fundamental skill in the educational system (Graddol, 2006). Consequently, students increasingly may associate learning English at school with necessity, utility, advantages, social capital and power (Ushioda, 2017) rather than with discovery, curiosity, opening new perspectives and so on. It is interesting to note that this transition of the English language

from a “foreign language” to a fundamental skill has been reflected in the Norwegian curriculum, where English is no longer referred to as “a foreign language”.

Along with learning an L3 at school, students’ self-identification as multilingual also appeared to be significantly connected to their open-mindedness. This finding provides empirical evidence for other, mainly theoretical, studies (Fielding, 2021; Tiurikova & Haukås, in press), which posit that explicitly identifying as multilingual can be connected to open-mindedness and intercultural competence and that multilingual identity negotiation is likely to help advance this competence in language learners. While scholars have indicated that self-identification as multilingual can be connected to students’ motivation and investment in language learning (Forbes et al., 2021) and academic achievements (Rutgers et al., 2021), our study, thus, contributes to the field by suggesting one more potential benefit of developing students’ multilingual identity.

It is worth mentioning, however, that the students completed the questionnaire after learning an L3 at school for approximately one year. Thus, we do not know whether learning an L3 and self-identification as multilingual contributed to increased open-mindedness among the students, or whether those who decided to study an additional foreign language and identified themselves as multilingual did so because they were more open to and curious about new things. This causality dilemma requires further exploration of the possible links between language learning, multilingual identity, and open-mindedness (see, for example, Pfenninger [2021] and Larsen-Freeman [2017] for discussions on the problem of causality).

Higher scores on open-mindedness in students who have friends with home languages other than Norwegian confirmed the studies by Mellizo (2017), Petrovic and Zlatkovic (2009), Williams (2005), and Pederson (1997), who related a higher level of intercultural sensitivity and intercultural adaptability to exposure to diverse linguistic and cultural environments and intercultural experience and friendship. The powerful effect size of this result ($d = 0.65$) suggests that promoting more activities in school that invite students from diverse cultural and linguistic backgrounds to interact with each other and to learn more about each other’s backgrounds could be fruitful in enhancing all students’ open-mindedness. However, such efforts should be made continuously and systematically, as brief interventions probably have limited effects (Vezzali et al., 2019; McKeown et al., 2017).

Interestingly, a migration background and experience living abroad appeared not to be linked to the students' scores on open-mindedness. Consequently, our findings contradict the studies by Morales (2017), Ruokonen and Kairavuori (2012) and Dewaele and Oudenhoven (2009), who found a positive connection between students' migration background and intercultural sensitivity or open-mindedness. Similarly, our findings are at variance with the results of studies by Tompkins et al. (2017), Dewaele and Wei (2013) and other studies that showed that the experience of living or studying abroad was likely to be positively connected to psychological factors facilitating intercultural communication. These conflicting results related both to migration background and stays abroad are reminders of the fact that the contexts and populations of the studies need to be taken into consideration when comparing results. For example, a lower score on open-mindedness among immigrants may reflect the need for stability among children who have recently fled war zones or contexts with a lack of political or economic safety, as suggested by Gross and Dewaele (2018). As for living abroad, the results are also probably highly dependent on the contexts and the purpose for living abroad. For example, Norwegian children who spend one year at a school in Spain administered by Norwegians are perhaps less likely to develop their open-mindedness than children who go to an international school with a strong emphasis on diversity. Therefore, our study supports Williams' (2005) conclusion that immersion in different linguistic and cultural environments and intercultural communication with locals are likely to be more significant for open-mindedness than just living or studying abroad. Furthermore, adult students who decide to study abroad for a year are likely to be more open-minded in the first place, whereas children who are forced to move abroad to follow their parents may develop different attitudes.

Conclusion

Our research explores the link between secondary school students' open-mindedness and a number of factors related to their multilingualism. The study revealed that this psychological trait is likely positively linked to learning an L3 at school, self-identification as multilingual, and having friends with home languages other than Norwegian, whereas migration background and experience living abroad did not show any statistically significant connection with open-mindedness. In addition, the calculation of effect sizes of the differences between groups for significant factors provided some nuanced insights into the

complex interplay between open-mindedness and the considered factors. The study found that while having friends with other home languages and learning an L3 at school seemed to be the most important factors, students' self-identification as multilingual was also significantly associated with open-mindedness.

Given the potential link between open-mindedness and a positive attitude towards cultural and linguistic differences found by previous research in intercultural psychology, our findings may carry important pedagogical implications. First, they suggest that learning an L3 at school may indeed be connected to promoting democratic values in secondary school students, as stated in the Norwegian Core Curriculum (2017) and the Curriculum for Foreign Languages (2019). Second, introducing activities that would help students not only enrich their linguistic repertoires but also develop their multilingual identity are likely to be beneficial for promoting tolerance and positive attitudes towards diversity. Finally, actively supporting and promoting activities in schools so that all students, regardless of their ethnic, cultural or linguistic background, can interact with peers who understand or speak languages other than the school language subjects can also be important for enhancing students' open-mindedness and promoting democratic values.

While this study contributes to research investigating the relationships among language learning, multilingualism, and open-mindedness, it should be acknowledged that to better understand the reasons why certain factors are linked to open-mindedness and how they may affect the development of this psychological trait, more research is needed. In addition, complementing the findings from the questionnaire with additional qualitative methods, such as semi-structured interviews and case studies, could be a fruitful path to triangulate the data and increase the robustness of the findings. Finally, using our 10-item scale and an adapted version of the Ungspråk questionnaire (Haukås et al. 2021a) in other educational, political, national and geographical contexts with the same or different age groups and with other language constellations at play could bring further important perspectives to the field.

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