



How do others think about my group? Adolescents' meta-stereotypes about Turkish- and German-origin students' subject-related German and general school competence

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Abstract

In Germany, Turkish-origin students face negative competence-related stereotypes held by different groups in society, including teachers at school. While a large body of research has examined stereotypes (i.e., *other-stereotypes*) about immigrant students, little is known about their own competence-related *meta-stereotypes*, i.e., beliefs regarding the other-stereotypes that outgroup peers hold about them. The present study addresses this research gap by examining Turkish- and German-origin students' meta-stereotypes about two dimensions of competencies not yet investigated, namely Turkish- and German-origin students' subject-related German competence as well as their general school competence using a newly developed instrument combining verbal and non-verbal measures. These assessments are juxtaposed to the evaluations of a group of peers with other immigrant backgrounds (i.e., *others' meta-stereotypes*). In line with previous evidence, we found *positive* meta-stereotypes (as well as other- and others' meta-stereotypes) towards German-origin students reported by all three groups. However, our study is the first that supports the existence of *negative* meta-stereotypes (as well as other- and others' meta-stereotypes) towards Turkish-origin adolescents, again, among all participants. This pattern was particularly pronounced regarding the dimension of subject-related German competence. We discuss the findings' potential relevance for students' self-concepts and intergroup interactions in classrooms.

Keywords Meta-stereotypes · Other-stereotypes · Intergroup attitudes · Turkish- and German-origin students · School classes · Diverse ethnic groups

1 Introduction

As a consequence of migration movements worldwide, school classrooms have become increasingly diverse (Cerna et al., 2021). In Germany, one of the largest groups of students with an immigrant background is of Turkish descent (i.e., *Turkish-origin students*; Statistisches Bundesamt, 2021). For this group of students, research including large-scale performance assessments has repeatedly shown performance disadvantages in scientific and verbal academic domains when compared to both non-immigrant students (i.e., *German-origin students*) and those from other migrant groups (i.e., *other-origin students*, e.g., Gebhardt et al., 2013; Relikowski et al., 2015; Stanat et al., 2019). Similar large disparities could only be observed among students from Arabic-speaking countries¹ in STEM (science, technology, engineering, and mathematics) domains (Stanat et al., 2019). These performance gaps between Turkish-origin students and other student groups can be partly explained by negative competence-related stereotypes that Turkish immigrants face (e.g., Asbrock, 2010; Froehlich & Schulte, 2019). Accordingly, various studies in school contexts have demonstrated lowered performance of Turkish-origin students in different domains as a result of the activation of negative competence-related stereotypes in achievement situations (e.g., Froehlich et al., 2022).

In social psychological research, two types of stereotypes are differentiated. Traditionally, and still more frequently, studies have examined *other-stereotypes*, i.e., group members' beliefs about the characteristics (e.g., traits, interests, abilities) of other social outgroups (Hamilton & Uhles, 2000; for the term other-stereotypes see Vorauer et al., 1998). However, Vorauer et al. (1998) were the first to reverse this direction of evaluation proposing the term *meta-stereotypes*, i.e., ingroup members' beliefs regarding the other-stereotypes that outgroup members hold about their social group.² Meta-stereotypes can be understood as reflected appraisals of intergroup attitudes, i.e., individuals' relative evaluations of one social group compared to others (e.g., Bigler et al., 1997; Raabe & Beelmann, 2011). They are activated in intergroup contexts when individuals expect to interact with outgroup members and evaluations by them are likely (Vorauer et al., 2000; see also Klein & Azzi, 2001). Transferring the concept of meta-stereotypes to heterogeneous classrooms, it seems crucial to investigate meta-stereotypes about ethnic majorities and minorities in diverse classrooms where interaction between different ethnic groups occurs permanently—particularly because meta-stereotypes have been found to have negative consequences for students' self-concepts and intergroup contact such as selective interaction (Vorauer et al., 1998). Therefore, we argue that due to the salience of ethnic group membership within classroom peer interactions (see Williams et al.,

¹ In the present study, students from Arabic-speaking countries were assigned to the group of other-origin students, i.e., students with other immigrant backgrounds than Turkish.

² It is important to distinguish meta-stereotypes from *meta-perceptions*, among others, because the latter refer to individual beliefs about impressions that others have about oneself (Kenny & DePaulo, 1993; see also Vorauer & Miller, 1997), and thus, relate to an individual level rather than a group level.

2012), students will hold differently valenced (i.e., positive and negative) competence-related meta-stereotypes about the groups of unfavorably stereotyped (low status) Turkish- and favorably stereotyped (high status) German-origin students.

Previous research on meta-stereotypes has been conducted mostly in adult (work) domains (e.g., Dong et al., 2022; Hinton et al., 2019; Klein & Azzi, 2001; Vorauer et al., 2000), but, to our knowledge, only few studies have examined meta-stereotypes among adolescents. While Issmer et al. (2013) and Kamans et al. (2009) have investigated adolescents' non-school-specific meta-stereotypes, Martiny et al. (2014) and Vezzali (2017) have examined adolescents' meta-stereotypes within school contexts. However, only Martiny et al. (2014) have focused on competence-related meta-stereotypes, namely Turkish- and German-origin students' meta-stereotypes about their mathematical competence. Our study seeks to extend these previous studies by examining two dimensions of competencies not yet investigated, i.e., subject-related German as well as general school competence among different student groups. Given Turkish-origin students' disadvantages regarding German language skills (e.g., Relikowski et al., 2015) and the impact of stereotypes on achievement, it seems crucial to investigate language-related meta-stereotypes within school contexts for this group. In addition, language competencies have been found to be determinants of various indicators of educational success such as learning development in other subjects like mathematics (for an overview see Kempert et al., 2016), and thus, for competence acquisition and educational participation in general (e.g., Autorengruppe Bildungsberichterstattung, 2016). Further, because general school competence relates to the entirety of the cognitive representations of one's own group abilities in various academic performance situations (for school self-concept see Schöne et al., 2012), we have included this dimension to tap into students' non-subject-specific reflected estimations and to contrast it to the domain-specific language-related meta-stereotypes.

To our knowledge, there is no established designation for assumed meta-stereotypes between two groups that are rated by a third group. In our study, we therefore extend the definition of meta-stereotypes by Vorauer et al. (1998) by examining not only adolescents' meta-stereotypes about their respective ingroup but also by adding a third group's meta-stereotypes, assessing evaluations of one outgroup about another outgroup as a subtype of meta-stereotypes, hereafter referred to as *others' meta-stereotypes*.

Due to their limited examination in school contexts and limited definitional breadth to understand complex intergroup attitudes, our aim was to take a closer look at (a) students' meta-stereotypes, i.e., Turkish- and German-origin adolescents as rating the respective ingroup's beliefs about the outgroup's other-stereotypes about them and (b) others' meta-stereotypes, i.e., other-origin students as rating Turkish- and German-origin adolescents' meta-stereotypes about German- and Turkish-origin students' subject-related German as well as general school competence combining verbal and non-verbal measures.

1.1 Meta-stereotypes in intergroup peer interaction in heterogeneous classrooms

Children and adolescents spend a considerable part of their time with other peers, who become increasingly important compared to teachers and parents during adolescence (del Valle et al., 2010). Relationships with peers differ from those with adults, primarily in that the interactions within these relationships usually take place on equal terms, i.e., without the clear experiential advantage of certain individuals (see Zander et al., 2017). In general, peers of the same age are at a similar level of cognitive and moral development at the same time, they are confronted with similar life events, and have to cope with similar developmental tasks (see von Salisch, 2000).

Social identity theory (e.g., Tajfel & Turner, 1986) asserts that people strive for positive perceptions of the social groups they identify with, affecting both their self-concept and their intergroup orientation. During intergroup interaction in ethnically heterogeneous classrooms, ethnic peer groups form salient social identities that are preserved and reinforced by comparing the ingroup to an outgroup on relevant dimensions (see Hannover & Zander, 2020). Hereby, members of ethnic groups constantly process information about the value of their social identity, with some theories proposing this information to be a crucial basis for students' self-concepts (i.e., reflected appraisals, Mead, 1934; see also Felson, 1985). Group-related information can be explicitly and implicitly transmitted through intergroup attitudes. Both other- and meta-stereotypes are considered indicators of positive and negative intergroup attitudes (Kim & Oe, 2009). However, meta-stereotypes may even stronger reflect intergroup attitudes because assessed other-stereotypes involve the possibility of response biases such as social desirability (Vorauer et al., 1998). When being asked about meta-stereotypes, by contrast, students may be less concerned about their responses.

Meta-stereotypes connect self- and other-representations and can be considered knowledge structures in the classroom reflecting the relationship between ingroup and outgroup as well as the ingroup's beliefs about the outgroup's likely perspective on that relationship (see Vorauer et al., 1998). Although peer relationships are typically characterized by status equality (see Zander et al., 2017), competence-related other- and meta-stereotypes may reflect a status hierarchy that peers agree upon in the classroom (for expectation states theory see Correll & Ridgeway, 2006).

Other-stereotypes can directly threaten students' social identity, for instance, when negative competence-related other-stereotypes are activated in achievement or learning situations (e.g., Sander et al., 2018). Meta-stereotypes as anticipated evaluations of the outgroup can include experiences of implicit potential threats during the prospect of an interaction as well as during actual future interactions with the outgroup (Vorauer et al., 1998). Students entering intergroup interactions with such anticipated concerns about how their group is viewed in terms of competencies can experience a specific form of social identity threat in classrooms (for social identity threats see Steele et al., 2002) even when explicit cues signaling other-stereotypes by the outgroup are missing.

Considering meta-stereotypes as knowledge structures, potentially shared by different student groups in the classroom, it seems crucial to investigate a third group whose members are considered representatives of both unfavorably stereotyped (low status) and favorably stereotyped (high status) groups—in addition to two of the largest student groups in German classrooms in terms of origin (i.e., German- and Turkish-origin students). An example of an unfavorably stereotyped group would be students from Arabic-speaking countries, while students with an Italian or Russian language background would rather be favorably stereotyped in terms of their competencies (see e.g., Froehlich & Schulte, 2019). Because the largest subgroup within the third group in our study was of Arabic descent, we explored potential differences between Arabic-origin students' estimations and those of students with other immigrant backgrounds (see Results and Tables 3, 4 in the “Appendix”). These evaluations by other social groups can shed light on generalized negative reflected appraisals of intergroup attitudes representing a stigma from the highest status group towards one of the lowest status groups.

1.2 Other- and meta-stereotypes about Turkish- and German-origin adolescents' competencies

Given the existence of negative competence-related other-stereotypes about Turkish immigrants (e.g., Asbrock, 2010; Froehlich & Schulte, 2019), Turkish-origin students are likely to hold unfavorable meta-stereotypes (see Vorauer et al., 1998). These reflected estimations can be reinforced by public discourse and the media, where negative other-stereotypes and devaluing content about negatively stereotyped groups still appear frequently and have even been shown to harm the achievement of targeted groups (Appel & Weber, 2021).

Consistent with these general findings, it has been shown that German-origin preservice teachers hold negative implicit attitudes towards the specific group of Turkish immigrant students (Kleen et al., 2019). The existence of negative competence-related other-stereotypes is also reported in stereotype threat research showing that Turkish immigrant students underperform when being confronted with negative other-stereotypes in mathematics and German (Martiny et al., 2014; Mok et al., 2017). A study among primary school teachers has found that teachers are positively biased towards non-immigrant students (Tobisch & Dresel, 2017), while other studies have shown that these positive other-stereotypes can manifest themselves in German-origin students' actual performance in the form of stereotype lift effects (e.g., Froehlich et al., 2016).

Given the prevalence of other-stereotypes in different social contexts, students are expected to be aware of them. Supporting this proposition, Martiny et al. (2014) have found that German-origin adolescents reported positive meta-stereotypes, i.e., they believed that other people would ascribe rather high competencies to their group in terms of mathematical competence. Somewhat unexpected, however, Turkish-origin adolescents also reported positive meta-stereotypes regarding their mathematical competence despite existing negative other-stereotypes.

2 The present study

We hypothesized that Turkish-origin students (meta-stereotypes) and German-origin students (other-stereotypes) would report that Turkish-origin students would be perceived as less competent by a hypothetical group of German-origin students than, conversely, German-origin students by a hypothetical group of Turkish-origin students. We did so because, unlike previous research, we did not ask students about their beliefs what others thought about their competencies, but rather what a particular student outgroup thought about their competencies, i.e., in the case of Turkish-origin students (low status), what they believed German-origin students (high status) thought about them. Further extending previous research, we tested this hypothesis by examining students' evaluations for subject-related German competence and general school competence. Moreover, we expected that other-origin students would share the perception of this competence-related hierarchy. We focused on adolescent students given that identity development is a crucial part of adolescence (Albarello et al., 2018) and cognitive concepts of ethnic groups as well as concomitant other-stereotypes are well developed (e.g., Aboud & Mitchell, 1977; Degner & Wentura, 2010; Nesdale et al., 2005; Rutland et al., 2005).

3 Method

3.1 Participants

Two hundred and eighty-six adolescent students (54.9% female, $M_{\text{age}} = 13.8$ years, range: 11–17 years) participated in the study. Of the respondents, 17.1% attended institutions of primary education (*Grundschule*), 3.4% of lower and middle secondary education (*Hauptschule* and *Realschule*), 13.3% of comprehensive education (*Gesamtschule*), 58.4% of higher secondary education (*Gymnasium*), and 7.8% stated the option *Other*. Students' immigrant backgrounds were operationalized by parents' first languages. Participants who reported at least one parent as having another first language than German were categorized as having an immigrant background. Accordingly, 43.4% of the participants had no immigrant background, 18.2% a Turkish immigrant background, and 38.4% an immigrant background other than Turkish (for absolute frequencies of mothers' and fathers' first languages of all participants see Table 2 in the "Appendix").³

3.2 Procedure and material

Students participated in an online survey using the web-based survey software Unipark.de to which a link was sent to schools throughout Germany. Before starting the

³ Our total sample is representative in terms of the composition of heterogeneous school classes in Germany regarding immigrant backgrounds (Statistisches Bundesamt, 2021).

survey, students read about the voluntary character of the study and the anonymity of their responses.

Research on meta-stereotypes has typically used verbal measures asking about traits relevant to the meta-stereotype (e.g., Martiny et al., 2014; Vorauer et al., 1998). To better illustrate the material and the response scale, we combined verbal and non-verbal measures in the present study. Participants were presented with an illustration of ten stick figures with neutral physical and facial features, so that gender and emotional expression were not identifiable (see Fig. 1). The attached text solely provided information on whether the depicted figures represented a group of either Turkish- or German-origin boys and girls, additionally indicated by the respective national flag. The different versions were presented randomly (for an overview of the frequency distribution of all experimental conditions see Table 1).

3.3 Measures

Considering that the school self-concept is a result of a complex learning-related process (see Daseking & Lemcke, 2006; see also Marsh, 1986) and that it includes an evaluative competence component (Arens et al., 2011), we used the German

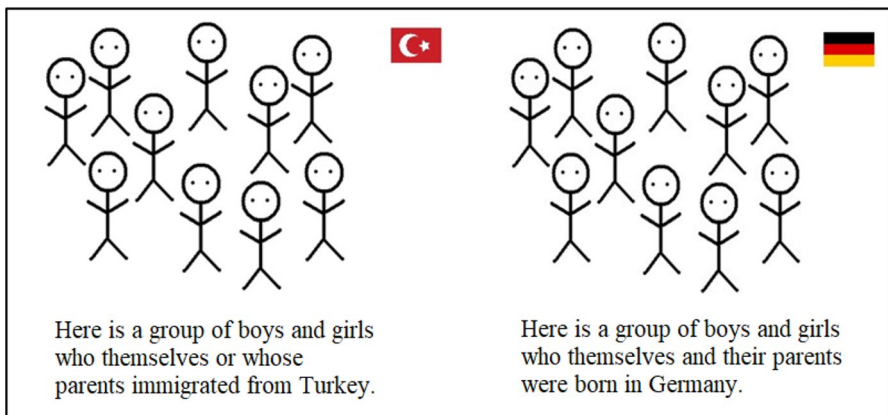


Fig. 1 Illustrations of the stick figure groups and attached texts

Table 1 Absolute frequencies of participants by experimental condition and immigrant background

| | Immigrant background of participants | | | |
|------------------|--------------------------------------|--------|----------------------|-------|
| | Turkish | German | Other | Total |
| German → Turkish | 22 (M) | 64 (O) | 49 (M _o) | 135 |
| Turkish → German | 30 (O) | 60 (M) | 61 (M _o) | 151 |
| Total | 52 | 124 | 110 | 286 |

Versions measuring meta-stereotypes are marked with M, those measuring others' meta-stereotypes are marked with M_o, those measuring other-stereotypes are marked with O

scales for the measurement of adolescents' school self-concept (SESSKO; Schöne et al., 2012) as a basis to develop our items. Specifically, we developed items measuring students' meta-stereotypes with regard to both the German language domain and to general competencies. The items measuring subject-related competence in German were "Turkish/German students are very good at German" and "Reading is easy for Turkish/German students" ($\alpha=0.841$). General school competence was assessed by four items, e.g., "Turkish/German students are talented at school", "Turkish/German students are very good at school" ($\alpha=0.863$).

Participants were instructed to estimate how many of the potential group members would attribute a certain competence to the respective other group. For example, when presented a group of German-origin boys and girls, the respondents were asked to rate how many of these group members would ascribe the respective competence to a group of Turkish-origin adolescents. On a 5-point Likert scale, the respondents were asked to indicate whether the respective group would assess that *none (0 out of 10)*, *a few (2 out of 10)*, *half (5 out of 10)*, *most (8 out of 10)* or *all (10 out of 10)* of the group members possessed the particular competence.

3.4 Statistical analyses

All data analyses were performed using SPSS (version 28.0; IBM Corp., 2021).

4 Results

4.1 Subject-related German competence

To test our assumption that—irrespective of the rating participants' background—German-origin adolescents would be rated as more competent regarding their German competence than Turkish-origin adolescents, we ran a 3 (background: German vs. Turkish vs. Other) X 2 (direction of estimation: German → Turkish vs. Turkish → German) ANOVA. As expected, there was no significant main effect of participants' background, $F(2, 280)=0.06$, $p=0.942$, $\eta_p^2=0.00$. However, the analysis showed a significant main effect of the direction of estimation such that German-origin adolescents were rated as more competent by a hypothetical group of Turkish-origin adolescents than, contrariwise, Turkish- by German-origin adolescents, $F(1, 280)=83.36$, $p<0.001$, $\eta_p^2=0.23$. The interaction between both factors was not significant, $F(2, 280)=0.71$, $p=0.419$, $\eta_p^2=0.01$ (see Fig. 2).

When comparing the means within the groups for both directions of estimation, we found differences between German-origin students' estimations (German → Turkish: $M=2.56$, $SD=0.92$; Turkish → German: $M=3.84$, $SD=0.86$, $t(122)=-8.03$, $p<0.001$), Turkish-origin students' estimations (German → Turkish: $M=2.75$, $SD=0.67$; Turkish → German: $M=3.65$, $SD=1.26$, $t(46.13)=-3.33$, $p<0.001$) and estimations of students with other immigrant backgrounds (German → Turkish: $M=2.55$, $SD=0.82$; Turkish → German: $M=3.77$, $SD=1.15$, $t(106.63)=-6.50$, $p<0.001$).

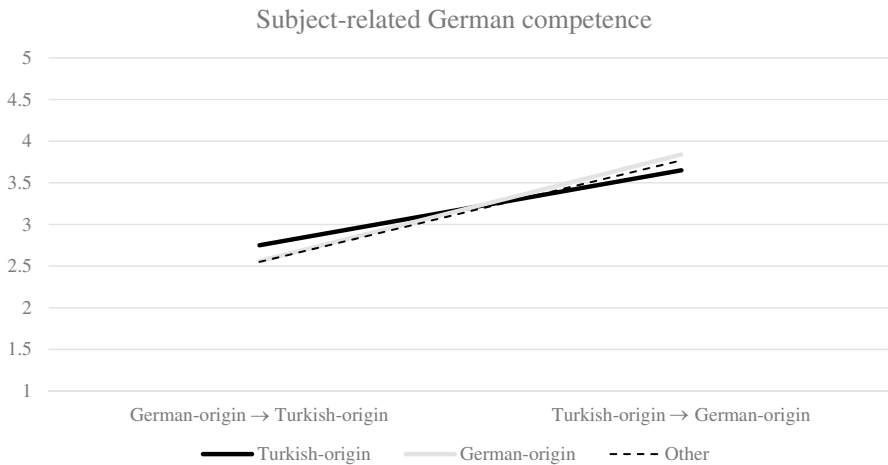


Fig. 2 Meta- and other-stereotypes as well as others' meta-stereotypes about students' subject-related German competence

4.2 General school competence

To test our assumption that—irrespective of the rating participants' background—German-origin adolescents would be rated as more competent regarding their general school competence than those of Turkish origin, we ran another 3 (background) X 2 (direction of estimation) ANOVA with the same levels for both factors as for the subject-related German competence above. Again, there was no main effect of participants' background, suggesting that the ascription of general school competence was not influenced by adolescents' own background, $F(2, 280) = 0.72$, $p = 0.486$, $\eta_p^2 = 0.01$. However, there was, again, a main effect of the direction of estimation, $F(1, 280) = 17.20$, $p < 0.001$, $\eta_p^2 = 0.06$, such that German-origin adolescents were rated as more competent by a hypothetical group of Turkish-origin adolescents than, contrariwise, Turkish- by German-origin students. The interaction between both factors did not reach significance, $F(2, 280) = 2.51$, $p = 0.083$, $\eta_p^2 = 0.18$ (see Fig. 3).

When comparing the means within the group of Turkish-origin students for both directions of estimation, we found no differences between their estimations (German → Turkish: $M = 3.14$, $SD = 0.82$; Turkish → German: $M = 3.19$, $SD = 0.90$, $t(50) = -0.23$, $p = 0.410$). By contrast, we found differences between German-origin students' estimations (German → Turkish: $M = 2.73$, $SD = 0.87$; Turkish → German: $M = 3.33$, $SD = 0.61$, $t(113.49) = -4.50$, $p = 0.001$) and between estimations of students with other immigrant backgrounds (German → Turkish: $M = 2.69$, $SD = 0.74$; Turkish → German: $M = 3.32$, $SD = 0.89$, $t(108) = -3.93$, $p = 0.001$).

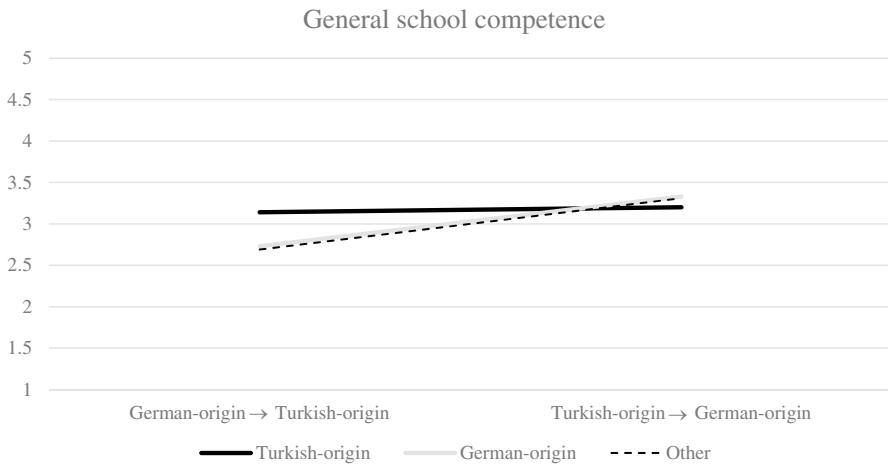


Fig. 3 Meta- and other-stereotypes as well as others' meta-stereotypes about students' general school competence

4.3 Additional analyses

To explore potential differences within the third group, i.e., between Arabic-origin students' estimations and those of students with other immigrant backgrounds, we conducted t-tests for both dimensions of competencies and directions of estimation, respectively (see Tables 3, 4 in the "Appendix"). We found no differences between the subgroups for both dimensions of competencies, i.e., all students with other immigrant backgrounds than Turkish estimated that Turkish-origin students would be perceived as less competent by a hypothetical group of German-origin students than vice versa.

5 Discussion

Much research has examined other-stereotypes about immigrants as well as their negative impact on students' achievement. Yet, so far, little is known about students' competence-related meta-stereotypes, i.e., their beliefs regarding the other-stereotypes that outgroup peers hold about them. Considering students' meta-stereotypes as reflected appraisals of implicitly reported intergroup attitudes that represent the relationship between Turkish-, German-, and possibly other-origin students in the classroom, the purpose of our experimental study was to examine meta-stereotypes about Turkish- and German-origin adolescents in two different dimensions of competencies from three perspectives: Turkish- and German-origin students as respective in- and outgroups (meta-stereotypes; other-stereotypes) and students

with an immigrant background other than Turkish as another outgroup (others' meta-stereotypes).

5.1 Competence-related meta-stereotypes about German- and Turkish-origin students

There are three central results in our study. First, we found that Turkish-origin adolescents were evaluated significantly less positive than adolescents of German origin in terms of both their subject-related competence in German and their general school competence. These asymmetric evaluations of Turkish- and German-origin students reflect the existence of a socially shared knowledge structure about a competence-related hierarchy that is agreed upon by students. These findings are in line with studies examining other-stereotypes about Turkish immigrants showing that negative intergroup attitudes are held by different groups in society, including teachers (Kleen et al., 2019; Lorenz, 2021). However, it is not clear whether the concordance of participants' ratings is rooted in students' experiences in their schools and classrooms and/or in public discourse and medial representations (Appel & Weber, 2021). Noteworthy, our study is the first that empirically shows *negative* competence-related meta-stereotypes reported by Turkish-origin students and is therefore in contrast to previous evidence showing Turkish-origin students' *positive* meta-stereotypes (Martiny et al., 2014). Thus, Turkish-origin adolescents seem to be firmly aware of existing other-stereotypes about their ingroup.

Second, we found that the pattern of the perception of competence-related status differences was particularly pronounced in the language domain because participants' ratings were consistent across the three groups. These meta-stereotypic perceptions correspond to language-related performance gaps repeatedly documented in (inter)national large-scale student assessments (e.g., Stanat et al., 2019) and to language-related stereotypical beliefs within society (e.g., Appel & Weber, 2021).

Finally, we identified a diverging pattern for general school competence such that Turkish-origin students anticipated a more positive view by their German-origin peers. Although this is just a tendency that needs to be replicated, we propose that students' more positive views of their general school competence indicate a psychological process to maintain a positive social identity (see Tajfel & Turner, 1986) in the face of prevailing (meta-)stereotypic expectations. Building on theories of psychological control and person-environment fit models (Eccles et al., 1993; Heckhausen & Schulz, 1995; Skinner, 1996), Hannover and Zander (2020) assert that students try to achieve fit between their social identity and social environment through different strategies such as the choice of different behavioral options or of interaction partners. However, when students face a threat against their social identity, they possibly engage in other strategies aiming at reducing losses and saving resources. One of these strategies can be that they reactively redefine themselves. We would therefore like to suggest that—while

facing the threat of negative language-related meta- and other-stereotypes—Turkish-origin students' meta-stereotypic perceptions of their general school competence can be such an active strategy to redefine the assessed evaluations about their own ingroup, and thus, achieve or maintain a positive social identity.

The majority of students within the third group who estimated others' meta-stereotypes were students from Arabic-speaking countries. These students are typically unfavorably stereotyped in terms of their competencies, similar to Turkish-origin students (see Froehlich & Schulte, 2019). It is not clear from previous research how Arabic-origin students—and students with other immigrant backgrounds—perceive German-origin students' estimations of Turkish-origin students and vice versa. When investigating potential socially shared knowledge structures related to meta-stereotypes in classrooms, future research may benefit from our approach to examine others' meta-stereotypes among different high and low status groups.

5.2 Consequences of competence-related meta-stereotypes for both positively and negatively stereotyped groups in diverse classrooms

Despite the similarities of peers in terms of their cognitive and moral development (see Zander et al., 2017), our results point to the existence of a clear competence-related status hierarchy that seems to be agreed upon by students from various ethnic backgrounds (for expectation states theory see Correll & Ridgeway, 2006). This hierarchy can be consequential for students' self-concepts and intergroup interactions in academic situations because it represents a stigma from the highest status group towards one of the lowest status groups and may hinder peer interactions on equal terms, for example, during in-class group work or the exchange of academic help and advice (Zander et al., 2019).

Because reflected appraisals are a relevant source of individuals' self-concepts, adolescents are likely to search for information about the value of their ingroup identity in the classroom (e.g., Felson, 1985), interpreting situational cues (e.g., in the form of comments or evaluations) from peers (Murphy & Taylor, 2012). Positive competence-related meta-stereotypes about German-origin students can be considered positive outgroup identity validation, i.e., the recognition and acceptance as members of their ingroup from an outgroup (Choi & Hogg, 2020), which can positively affect German-origin students' self-concepts. Analogously, the lack of positive outgroup identity validation may negatively affect Turkish-origin students' self-concepts. Competence-related self-concepts and anticipated perceptions, in turn, provide a frame for perceiving, interpreting, and reacting to others in intergroup interactions in educational settings, and thus, guide how these interactions are experienced (see Vorauer & Ross, 1993). Throughout the course of achievement- and learning-related interactions with the outgroup, both Turkish- and German-origin students may focus on preconceptions that the respective outgroup has about their competencies. Since evidence is showing that activating positive meta-stereotypes can increase perceptions that an upcoming cross-group interaction would be positive

(e.g., Vezzali, 2017), it seems plausible that, whenever German-origin students are aware of their probably positively assessed competencies by Turkish-origin students, they expect positive achievement- and learning-related interactions with the outgroup.

The negative meta-stereotypes that Turkish-origin students hold may evoke various affective and behavioral identity management strategies (Cupach & Imahori, 1993; see also Vorauer, 2006; Vorauer et al., 1998), such as disidentifying with the domain that does not allow to maintain a positive view of the self, increasing their efforts, or redefining themselves as already outlined (Hannover & Zander, 2020). While some Turkish-origin students may actively approach or seek to affiliate with high-achieving students to improve their competencies (Zander et al., 2019), others may experience negative feelings towards German-origin students as members of the (positively stereotyped) outgroup, develop intergroup anxiety, i.e., anxiety related to contact with German-origin students, including fear of negative evaluations and uncertainty about appropriate behavior towards them, or avoid contact and withdraw into their peer ingroup (Dovidio et al., 2003; Vorauer et al., 1998). These identity management strategies can have particularly negative academic consequences if they manifest in the avoidance of seeking academic help from outgroup members, which, in turn, considerably limits the pool of available resources within the classroom, especially for students who constitute a minority (Zander et al., 2019).

In line with stereotype threat research, Turkish-origin students may also react with behaviors related to the content of negative meta-stereotypes, i.e., show lower performance when reflecting about outgroup members' other-stereotypes. For example, an experimental study on meta-stereotypes about Dutch-Moroccan adolescents showed that when being confronted with negative meta-stereotypes about their ingroup, adolescents tended to legitimize the same meta-stereotypical behavior in question (e.g., aggressive and teenage loitering behavior; Kamans et al., 2009). Studying the effects of the activation of negative competence-related meta-stereotypes on Turkish-origin students' motivation as well as on learning- and achievement-relevant outcomes thus remains an important next research step. More broadly, we think that the detailed examination of students' positive and negative meta-stereotypes—also about perceptions of warmth and competence (e.g., Froehlich & Schulte, 2019)—and their role for interactive learning processes as well as the role of teachers in reacting to these perceptions and the resulting intergroup dynamics in classrooms will be an important addition in future research.

Appendix

See Tables 2, 3 and 4.

Table 2 Absolute frequencies of mothers' and fathers' first languages within the sample

| Mother | Father | | | | | | | | | | |
|----------|--------|---------|--------|---------|--------|---------|-------|----------|--------|---------|-------|
| | German | Turkish | Arabic | English | French | Italian | Greek | Croatian | Polish | Russian | Other |
| German | 124 | 5 | 3 | 4 | 2 | 1 | 1 | 0 | 1 | 1 | 13 |
| Turkish | 4 | 40 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Arabic | 0 | 0 | 18 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| English | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| French | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Italian | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Greek | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Croatian | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Polish | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Russian | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 |
| Other | 11 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 19 |

All values were estimated using SPSS version 28.0 (IBM Corp., 2021). Students categorized as being German-origin ($n = 124$) and Turkish-origin ($n = 52$) are highlighted. Students who indicated Arabic at least once and who did not indicate Turkish at least once were categorized as being Arabic-origin ($n = 27$). The category "Other" included Spanish, Portuguese, Romanian, Serbian, Hungarian, Albanian, Lithuanian, Slovenian, Norwegian, Danish, Dutch, Isoko, Afrikaans, Amharic, Kiswahili, Twi, Mandinka, Chinese, Vietnamese, Thai, Korean, Urdu, Bengali, Kurdish, Persian, Hindi, Chechen, and Hebrew. Students could indicate multiple first languages of their parents

Table 3 Means and standard deviations of others' meta-stereotypes about subject-related German competence within the third group (Arabic-origin students and all other students) as well as group mean comparisons

| Direction of estimation | <i>n</i> | German-origin → Turkish-origin <i>M (SD)</i> | <i>n</i> | Turkish-origin → German-origin <i>M (SD)</i> | |
|---|----------|--|---|--|-------------|
| Arabic-origin students (third group) | 13 | 2.73 (0.95) | Arabic-origin students (third group) | 14 | 3.68 (1.19) |
| All other students (third group) | 36 | 2.49 (0.77) | All other students (third group) | 47 | 3.80 (1.15) |
| <i>t (df)</i> | | 0.92 (47) | <i>t (df)</i> | | -0.34 (59) |
| <i>p</i> | | 0.361 | <i>p</i> | | 0.736 |

We found no differences between the subgroups for the subject-related German competence (German → Turkish: $M = 2.73$, $SD = 0.95$ (Arabic-origin students), $M = 2.49$, $SD = 0.77$ (other immigrant backgrounds), $t(47) = 0.92$, $p = 0.361$; Turkish → German: $M = 3.68$, $SD = 1.19$ (Arabic-origin students), $M = 3.80$, $SD = 1.15$ (other immigrant backgrounds), $t(59) = -0.34$, $p = 0.736$)

Table 4 Means and standard deviations of others' meta-stereotypes about general school competence within the third group (Arabic-origin students and all other students) as well as group mean comparisons

| Direction of estimation | <i>n</i> | German-origin → Turkish-origin <i>M (SD)</i> | <i>n</i> | Turkish-origin → German-origin <i>M (SD)</i> | |
|---|----------|--|---|--|-------------|
| Arabic-origin students (third group) | 13 | 2.73 (0.93) | Arabic-origin students (third group) | 14 | 3.21 (1.07) |
| All other students (third group) | 36 | 2.68 (0.76) | All other students (third group) | 47 | 3.35 (0.83) |
| <i>t (df)</i> | | 0.21 (47) | <i>t (df)</i> | | -0.48 (59) |
| <i>p</i> | | 0.836 | <i>p</i> | | 0.631 |

With regard to general school competence, again, we found no differences between the subgroups (German → Turkish: $M = 2.73$, $SD = 0.93$ (Arabic-origin students), $M = 2.68$, $SD = 0.76$ (other immigrant backgrounds), $t(47) = 0.21$, $p = 0.836$; Turkish → German: $M = 3.21$, $SD = 1.07$ (Arabic-origin students), $M = 3.35$, $SD = 0.83$ (other immigrant background), $t(59) = -0.48$, $p = 0.631$)

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Jannika Haase. All authors commented on previous versions of the manuscript, read, and approved the final version.

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Declarations

Conflict of interest The authors declare that they have no competing interests.

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