

Impact of Single-case Pupil Descriptions on Student Teacher Attitudes Towards Inclusive Education

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Institutional and individual stigmatization are still major barriers for children with disabilities to access education. Teacher attitudes towards inclusive education play a crucial role in this regard, and are shaped by single-case descriptions from mass media or other sources. Building on exemplification theory and priming, two experiments with full factorial $3 \times 2 \times 2 \times 2$ between-designs investigated the influence of different descriptions of individual pupils on student teachers' generalized attitudes towards inclusive education. Study 1 ($N = 416$) examined the impact of pupil disability, behavior, origin, and sex. Study 2 ($N = 706$) examined the roles of pupil origin, behavior, sex, and school grades, as well as the respondents' teaching self-efficacy as a moderator. The results support the general assumption that descriptions of individuals affect generalized attitudes towards inclusive education. Yet, the effect pattern is complex and occasionally counter-intuitive. Overall, the roles of pupil ethnic origin and teacher self-efficacy deserve increased attention for creating inclusive education settings.

Keywords: Inclusive Education, Stigmatization, Exemplification, Student Teacher Attitudes, Teaching Self-Efficacy

INTRODUCTION

According to Liasidou (2012), inclusive education “constitutes an international policy imperative that promotes the rights of disabled children to be educated alongside their peers in mainstream classrooms” (p. 168). Since institutional and, especially, individual stigmatization are still major barriers for children with disabilities to access education (Cooney, Jahoda, Gumley, & Knott, 2006; Scior, Addai-Davis, Kenyon, & Sheridan, 2012), teacher attitudes towards inclusive education play a crucial role in this regard (Avramidis & Norwich, 2002; De Boer, Pijl & Minnaert, 2011; Schwab & Seifert, 2015). Attitudes are generally conceptualized as having an *affective* (e.g., emotions towards a person, group, or issue), a *cognitive* (e.g., knowledge about a person, group, or issue), and a *conative* (e.g., behavioral intentions toward a person, group, or issue) component, which jointly affect a persons' judgements and actions in certain situations (Breckler, 1984). In the context of inclusive education, affective attitudes refer to teachers' emotions towards educating pupils with a disability, such as anxiety. Cognitive attitudes encompass teachers' beliefs about the success of inclusive education, whereas behavioral intentions reflect “teachers' views on how to act with

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a child with special needs in his/her classroom” (De Boer et al., 2011, p. 3). Overall, however, recent studies yielded inconsistent findings regarding attitudes of teachers and student teachers towards inclusive education (e.g., Gebhardt, Schwab, Nusser, & Hessels, 2015; Schwab & Seifert, 2015; Schwab, Tretter, & Gebhardt, 2013; Urton, Wilbert, & Hennemann, 2015). A review of 26 studies by De Boer and colleagues (2011) indicated that teachers had mostly neutral or negative attitudes towards the inclusion of children with a disability in classes. Respondents’ attitudes differed depending on their own education, personal experiences with inclusive education, and, in particular, the children’s type of disability. The teachers’ experience with inclusive education was positively correlated with their attitudes towards it, but children with learning or other cognitive disabilities yielded generally most negative attitudes. In an earlier review, Avramidis and Norwich (2002) found evidence for positive attitudes of teachers towards inclusive education, which likewise depended on pupil characteristics such as the type and severity of their disability, indicating that children with severe mental disabilities evoked less favorable attitudes.

Teacher and student teacher attitudes towards their pupils are considerably shaped by single-case descriptions and anecdotes (e.g., Schwab et al, 2013), which stem from personal experiences as well as from mass media and social media sources (Zillmann, 2006). Nonetheless, it is still largely unclear which features of single-case descriptions (“exemplars”) of children with disabilities affect student teacher attitudes in which direction. Thus, two experimental studies were conducted to shed some light on the influence on attitude changes of certain stigma-related pupil characteristics, such as type of disability, behavior, ethnic origin, sex, or school grades, as well as respondents’ traits like sex and teaching self-efficacy.

Single-Case Descriptions and the Role of Stigma-Related Pupil Characteristics

According to *exemplification theory* (Zillmann & Brosius, 2000), single-case descriptions (i.e., exemplars) significantly influence recipients’ attitudes towards issues. Since a depicted person (e.g., an exemplar with a disability) is perceived as a typical representative of the whole group (e.g., people with disabilities in general), recipients’ attitudes towards this exemplar are generalized towards the whole group (Zillmann, 2006). For example, Oliver, Dillard, Bae, and Tamul (2012) observed that after reading a story about an exemplar from one of three stigmatized groups (immigrants, prisoners, or elderly people), respondents reported more positive attitudes not only towards the depicted individual, but also towards the exemplar’s social group.

Priming processes, which are defined as the unintentional and unaware activation of emotions, opinions, and intentions through a stimulus (Molden, 2014), are of great relevance for the formation of attitudes (Cho, Gil de Zuniga, Shah, & McLeod, 2006; von Sikorski & Schierl, 2014) and have been extensively investigated in the context of mass media effects (Roskos-Ewoldsen, Roskos-Ewoldsen & Dillman Carpentier, 2009). Von Sikorski and Schierl (2014), for example, found that priming of disability-related information, compared to sport, politics, or no cues, reduced respondents’ positive attitudes towards people with an amputation. Thus, priming a stigma-relevant pupil characteristic through a single-case description is likely to activate stigma-relevant attitudes of student teachers. In line with previous research (Hastall et al., 2018; Avramidis & Norwich, 2002; De Boer et al., 2011; Schwab & Seif-

ert, 2015), and due to the common invisibility and frequently attributed severity and controllability of mental and intellectual disabilities (e.g., Miller, Chen, Glover-Graf, & Kranz, 2009; Venville et al., 2016), we assume that pupil descriptions including cues for a physical disability evoke less stigmatization than pupil portrayals suggesting a cognitive disability.

Hypothesis 1: Compared to descriptions of pupils with a learning disability, descriptions of pupils with a physical disability evoke more favorable attitudes towards inclusive education and less social distance.

Building on Schwab and Seifert's (2015) observation that children with a conduct disorder, who showed challenging behaviors yielded the most negative reactions from student teachers, we furthermore assume that it makes a significant difference if children are depicted with or without a tendency for challenging behaviors (see also Herz, 2014; Schwab et al., 2012).

Hypothesis 2: Compared to descriptions of pupils with challenging behaviors, descriptions of pupils showing no challenging behaviors evoke more favorable attitudes towards inclusive education and less social distance.

Research on multicultural classroom management suggests that teacher attitudes and expectations towards their pupils are often influenced by pupils' ethnic origin (e.g., Glock, 2016; Hachfeld, Anders, Schroeder, Stanat, & Kunter, 2010; Kaiser, Südkamp, & Möller, 2017). Yet, these findings are not fully conclusive: Glock (2016), for example, ascertained that teachers rated ethnic minority pupils as less linguistically competent than ethnic majority pupils when they were depicted as below-average pupils, but no difference emerged when their performance was described as above-average. Yet, other studies found no effect of pupil ethnicity on teacher judgments, although foreign pupils were judged more accurately (Kaiser et al., 2017) or even overestimated (Hachfeld et al., 2010) regarding their performance. However, based on *social comparison theory* (Festinger, 1954), we propose that the specification of a pupil's ethnic origin in a single-case description makes an important in-group/out-group distinction salient, resulting in the devaluation of pupils with a foreign (out-group) origin, compared to pupils with the same (in-group) origin:

Hypothesis 3: Compared to descriptions of pupils with a foreign ethnic origin, descriptions of pupils with the same ethnic origin as the respondents evoke more favorable attitudes towards inclusive education and less social distance.

Likewise, pupil's and teacher's sex can affect teacher expectations towards their pupils. Kaiser and colleagues (2017) found that depicting children as part of a sex-related minority increased teacher judgment accuracy towards these pupils. However, no overall difference emerged between male and female pupils. Yet, a few studies indicated that girls generally reach higher school achievements than boys and are generally more positively evaluated (Burusic, Babarovic, & Seric, 2012; Demie, 2001; Steinmayr & Spinath, 2008). Building on these findings, we assume that single-case descriptions about female pupils create more positive attitudes than descriptions of male pupils:

Hypothesis 4: Compared to single-case descriptions of male pupils, female pupils evoke more positive attitudes towards inclusive education and less social distance.

Further, some evidence suggests a preference of same-sex pupil-teacher constellations over opposite-sex pupil-teacher constellations (Dee, 2007). As findings from related fields of research in the context of social comparison processes suggest, biological sex can serve as an in-group/out-group distinction (e.g., Knobloch-West-erwick & Hastall, 2006), thus, resulting in a preference of same-sex over opposite-sex conditions:

Hypothesis 5: Single-case descriptions which depict a pupil with the same sex as the respondent evoke more positive attitudes towards inclusive education and less social distance than descriptions of pupils with the opposite sex.

Intersectionality of Stigma-Related Pupil Characteristics

Previous examinations focused primarily on single characteristics, thus overwhelmingly disregarding the possibility of interactions of different stigma-related attributes. Crenshaw (1989) proposed the *intersectionality hypothesis* to explain multiple discrimination faced by black women due to racism and sexism, which was later adopted to different contexts (e.g., Else-Quest & Hyde, 2016). In the context of the current study, it is also not unlikely that a specific combination of stigma-relevant pupil characteristics yields particularly low or high levels of stigmatization. Initial empirical evidence for such interactions stems from studies examining the intersection of a stigmatized person's type of disability and sex (e.g., Hastall et al., 2018; Kavanagh et al., 2015; Shaw, Chan, & McMahan, 2011). Kavanagh et al. (2015), for example, noted that women with a disability reported being more socio-economically disadvantaged than men with disability, as well as women and men without a disability. Regarding the interplay of stigma-relevant characteristics, Cho and colleagues (2006) likewise presume that the interaction of various cues (*cue convergence*) can contribute to a stronger effect on one's reaction and attitudes towards a depicted issue (e.g., increased or decreased stigmatization of an exemplar) than single cues alone. In light of the limited empirical evidence, our study addresses this issue as a research question.

Research question 1: Do effects of reading a single-case description emerge as an interaction of different pupil characteristics – and if yes, which combinations increase or decrease attitudes towards inclusive education and social distance?

STUDY 1

Method

Design and Procedure

In a $3 \times 2 \times 2 \times 2$ full-factorial online-experiment, German student teachers were recruited through social media and then randomly assigned to a LimeSurvey (Limesurvey GmbH, 2016) online questionnaire featuring one of 24 brief single-case descriptions of a pupil. The descriptions were experimentally manipulated regarding pupil *disability* (learning disability vs. physical disability vs. no disability), *behavior* (challenging vs. non-challenging), *sex* (male vs. female), and *origin* (German vs. refugee from Syria). After reading the description, participants were asked to indicate their attitudes and social distance towards people with disabilities, as well as their

attitudes towards inclusive education. The chance to win a ten Euro voucher for a big online retailer was offered as an incentive for completing the survey.

Stimulus material and experimental manipulations.

The stimulus material consisted of single-case descriptions depicting a new ten-year old pupil in fifth grade of a secondary school. A picture of a general classroom setting was embedded in the description, in which the described child was not displayed. The text characterized the pupil behavior in class as well as towards other children, his or her need for support, and his/her ability to work attentively (see Appendix A). The brief texts consisted of 114 words on average ($SD = .48$).

Experimental manipulations. The factor *type of disability* was manipulated in the last paragraph of the text, in which the pupil was described as having either a learning disability or a physical disability, or in which no disability was mentioned. Accordingly, he or she had a high need (learning or physical disability) or no need for support (no disability). Pupils with *challenging behaviors* were depicted as being disruptive in class and aggressive towards their classmates, and unfocused doing class work. Pupils with *non-challenging behaviors*, in contrast, participated in class and were nice to other children, and their work was more focused. *Pupil sex* was either male or female, with accordingly adjusted personal pronouns and names in the text. *Pupil origin* was indicated by common names from Germany (male: Julian; female: Anna) or Syria (male: Yasin; female: Aylin). The student had either moved to the new location from Berlin (German background), or was a refugee from Syria.

Stimulus check. A pretest with $N = 28$ students ($M = 22.93$ years; $SD = 2.85$; 82.1% female) confirmed the successful manipulation of the descriptions (Krippendorff's alphas: disability = .93; behavior = .95; sex = 1.00; origin = 1.00).

Sample

Six hundred ninety-seven student teachers from different German universities were recruited for this study, but only $N = 416$ ($M = 24.44$ years; $SD = 4.10$; 87.5% female) fully completed the survey (40% dropout). Of those participants, 18.5% were student teachers for elementary schools (71 females; six males), 17.3% for secondary schools (58 females; 14 males), 25% for special education (102 females; two males), 4.3% for vocational schools (16 females; two males), 33.9% indicated miscellaneous schools (113 females; 28 males), and 1% (four females) gave no answer. A Chi-square test indicated that participants' sex and course of study were not independent of each other, $\chi^2(4, N = 412) = 22.19, p < .001$. Moreover, male participants ($n = 52$; $M = 26.38$ years; $SD = 5.55$) were older than female participants ($n = 364$; $M = 24.17$; $SD = 3.77$), $t(414) = -3.71, p < .001$.

Measures

Social distance. Respondents' tendency to distance themselves from people with disabilities was assessed through eight items taken from the *social distance* subscale from the German adoption of the *Mental Retardation Attitude Inventory* (MRAI-d; Schabmann & Kreuz, 1999) According to the authors' original psychometric analysis, this scale provides a valid and reliable measure for attitudes towards people with a disability (Schabmann & Kreuz, 1999). Our participants indicated their

agreement or disagreement on a four-point Likert scale (1 = “do not agree at all”; 4 = “strongly agree”; Cronbach’s alpha = .86) to statements like “I would rather not invite people with a disability to dinner with my friends, who do not have a disability”. High scores represent a high intention for social distancing behavior.

Attitudes towards inclusive education. The 20-item scale from Lüke and Grosche (2016) was used to measure respondents’ attitudes towards inclusive education in the dimensions of *affective attitudes* (five items; Cronbach’s alpha = .86; sample item: “The thought of an inclusive school system makes me happy.”), *cognitive attitudes* (ten items; Cronbach’s alpha = .91; sample item: “I think an inclusive school system would be fairer than the current school system.”), and *behavioral intentions* (five items; Cronbach’s alpha = .86; sample item: “I would do a lot to ensure that my own child is educated in an inclusive school system.”). Before completing the scale, respondents were asked to read a brief definition of an inclusive school system, which emphasized the opportunity for all children to participate in education. Then they stated their agreement or disagreement with the items on a five-point Likert scale (1 = “do not agree”; 5 = “agree”).

Table 1 shows means, standard deviations, and intercorrelations of all dependent measures. All data analyses were conducted using IBM SPSS version 25.

Table 1. Means, Standard Deviations, and Intercorrelations of all Dependent Variables (Study 1 & 2) and Teaching Self-Efficacy (Study 2)

| | | Study 1 | | | | | |
|-----|------------------------|----------|-----------|---------|---------|---------|--------|
| | | <i>M</i> | <i>SD</i> | (2) | (3) | (4) | |
| (1) | Social Distance | 1.18 | .35 | -.36*** | -.27*** | -.30*** | |
| (2) | Affective Attitudes | 3.74 | .90 | | .86*** | .88*** | |
| (3) | Cognitive Attitudes | 3.26 | .90 | | | .86*** | |
| (4) | Behavioral Intentions | 3.50 | .98 | | | | |
| | | Study 2 | | | | | |
| | | <i>M</i> | <i>SD</i> | (2) | (3) | (4) | (5) |
| (1) | Social Distance | 1.51 | .44 | -.20** | -.19** | -.23** | -.13** |
| (2) | Affective Attitudes | 3.49 | .91 | | .82** | .84** | .12** |
| (3) | Cognitive Attitudes | 3.05 | .87 | | | .80** | .09* |
| (4) | Behavioral Intentions | 3.31 | .97 | | | | .08* |
| (5) | Teaching Self-Efficacy | 2.13 | .32 | | | | |

Note. *** $p < .001$; ** $p < .01$; * $p < .05$.

Results

A multivariate analysis of variance (MANOVA) with all four experimental manipulations (1. pupil disability, 2. pupil behavior, 3. pupil sex, 4. pupil origin) and respondents' sex as factors was computed for all dependent variables (social distance; affective attitudes, cognitive attitudes, and behavioral intentions towards inclusive education). To ensure sufficient cell sizes with $n > 30$ respondents per cell, the MANOVA model was limited to main effects, two-way interactions, and three-way interactions. To protect subsequent univariate analyses of variance (ANOVAs) against type I error, only effects of the MANOVA with $p < .05$ using Pillai's trace are reported (Field, 2018). The significance of differences between the estimated marginal means was determined through Sidak-corrected simple effect post-hoc tests, which compare all levels of one experimental factor for each level of all other factors (instead of comparing all means with each other).

Main effect of respondent characteristics.

There was a significant main effect of respondents' sex on reported social distance and attitudes towards inclusive education, $V = 0.055$, $F(4, 376) = 5.475$, $p < .001$. Subsequent ANOVAs revealed significant effects of respondents' sex on social distance, $F(1, 379) = 18.914$, $p < .001$, $\mu^2 = .003$, and affective attitudes towards inclusive education, $F(1, 379) = 5.512$, $p = .019$, $\mu^2 = .001$. Male respondents reported significantly more social distance and less affective attitudes than female respondents (see Table 2).

Table 2. Estimated Marginal Means of the Main Effect of Respondents' Sex on all Dependent Variables (Study 1 & 2)

| | Study 1 | | | | |
|-----------------------|------------------|-----------|--------------------|-----------|----------|
| | Male Respondents | | Female Respondents | | <i>p</i> |
| | <i>M</i> | <i>SE</i> | <i>M</i> | <i>SE</i> | |
| Social Distance | 1.44 | .07 | 1.15 | .02 | < .001 |
| Affective Attitudes | 3.38 | .17 | 3.80 | .05 | = .019 |
| Cognitive Attitudes | 3.02 | .17 | 3.31 | .05 | = .111 |
| Behavioral Intentions | 3.30 | .19 | 3.54 | .05 | = .208 |
| | Study 2 | | | | |
| | Male Respondents | | Female Respondents | | <i>p</i> |
| | <i>M</i> | <i>SE</i> | <i>M</i> | <i>SE</i> | |
| Social Distance | 1.58 | .04 | 1.50 | .02 | = .116 |
| Affective Attitudes | 3.47 | .09 | 3.47 | .04 | = .934 |
| Cognitive Attitudes | 3.17 | .09 | 3.01 | .04 | = .094 |
| Behavioral Intentions | 3.31 | .10 | 3.30 | .04 | = .918 |

Note. Sidak-corrected simple effect post-hoc comparisons.

Main effects of experimental manipulations.

A significant main effect of pupil sex emerged on the outcome variables, $V = 0.029$, $F(4, 376) = 2.772$, $p = .027$. Subsequent ANOVAs yielded significant effects of pupil sex on social distance, $F(1, 379) = 10.089$, $p = .002$, $\mu^2 = .002$, and affective attitudes towards inclusive education, $F(1, 379) = 3.935$, $p = .048$, $\mu^2 < .001$. Compared to a single-case description of a female pupil, participants reported significantly less social distance (female pupil: $M = 1.42$, $SE = .07$; male pupil: $M = 1.16$, $SE = .04$, $p = .002$) and more affective attitudes (female pupil: $M = 3.38$, $SE = .17$; male pupil: $M = 3.80$, $SE = .09$, $p = .048$) after reading a description of a male pupil.

Higher-order interactions.

A type of disability \times pupil behavior two-way interaction became significant for all dependent variables, $V = 0.043$, $F(8, 754) = 2.057$, $p = .038$. However, this effect only emerged on social distance, $F(2, 379) = 5.509$, $p = .004$, $\mu^2 = .002$. Pupils with no disability but challenging behaviors evoked significantly more stigmatization compared to behaviorally challenging pupils with a physical or learning disability as well as pupils with no disability and no challenging behaviors (see Figure 1).

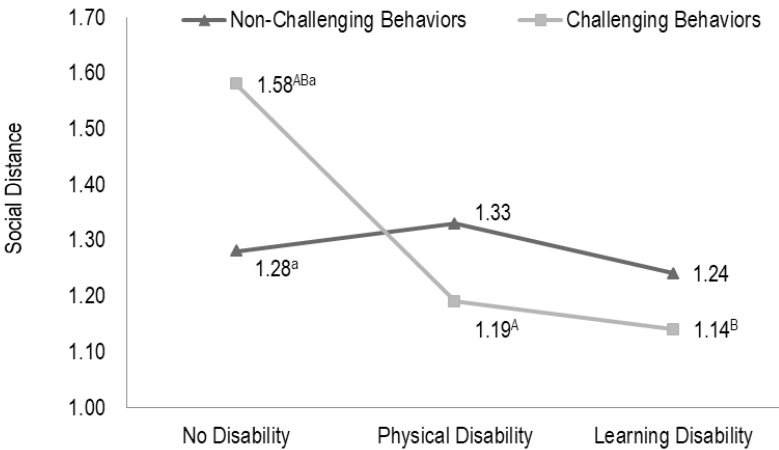


Figure 1. Estimated marginal means for the type of disability \times pupil behavior two-way interaction on social distance. Means sharing the same capital letter indicate significant mean differences between pupil disability, whereas means sharing the same small letter indicate significant differences between pupil behavior ($p < .05$; Sidak-corrected simple effect post-hoc comparisons).

The MANOVA also revealed a type of disability \times pupil origin two-way interaction on the outcome measures, $V = 0.052$, $F(8, 754) = 2.513$, $p = .011$. Subsequent ANOVAs showed that this effect became significant for social distance, $F(2, 379) = 3.510$, $p = .031$, $\mu^2 = .001$, affective attitudes, $F(2, 379) = 3.104$, $p = .046$, $\mu^2 = .001$, and behavioral intentions towards inclusive education, $F(2, 379) = 3.424$, $p = .034$, $\mu^2 = .001$. As depicted in Figure 2, respondents reported significantly more social distance towards a pupil with no disability, when he or she originated from Germany,

compared to a Syrian pupil with no disability and a German pupil with a physical or learning disability. Likewise, German pupils with a physical disability evoked more positive affective attitudes than German pupils with no disability. Furthermore, compared to no disability, participants stated more positive behavioral intentions towards a Syrian pupil with a learning disability as well as towards a German pupil with the same condition.

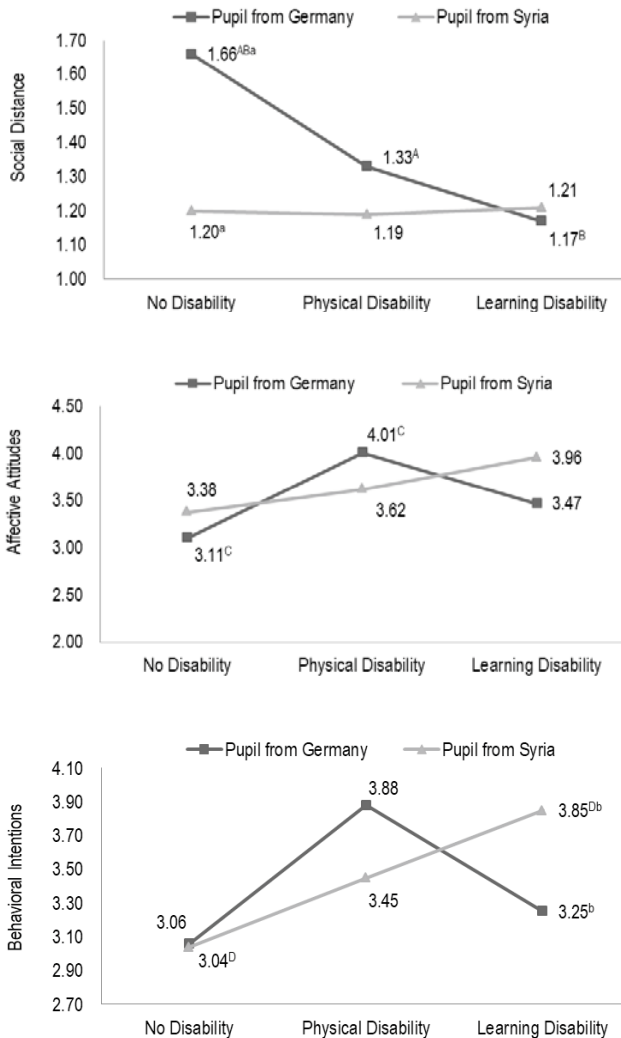


Figure 2. Estimated marginal means for the type of disability \times pupil origin two-way interaction on social distance, affective attitudes, and behavioral intentions towards inclusive education. Means sharing the same capital letter indicate significant mean differences between pupil disability, whereas means sharing the same small letter indicate differences between pupil origin ($p < .05$; Sidak-corrected simple effect post-hoc comparisons).

In addition, two three-way interactions including respondents' sex emerged from the MANOVA, which are not interpreted because of too small cell sizes ($n < 30$) due to the involvement of too few male participants.

The results of study 1 show that differences in social distance and attitudes towards inclusive education emerged primarily as higher-order interactions of pupil characteristics. Hypothesis 1 that proposed a higher stigmatization of pupils with a learning disability compared to a physical disability was not supported, since respondents reported more positive behavioral intentions towards, physical as well as learning disability compared to no disability in interaction with both pupil behavior and ethnic origin. Hence, there was only partial support for hypothesis 2 that postulated a higher stigmatization of pupils depicted with challenging behaviors compared to non-challenging behaviors. However, in contrast to hypothesis 3, a foreign ethnic origin (Syria) could decrease social distance towards pupils with no disability as well as increase positive behavioral intentions towards pupils with a learning disability. Likewise, disproving hypothesis 4 and 5, female pupils were generally more stigmatized than male pupils, while female respondents reported less stigmatization than male respondents. However, no interaction of pupils' and respondents' sex emerged. Findings also support the notion derived from the intersectionality hypothesis, according to which stigmatizing cues interact in complex ways, but the emerged patterns were not fully consistent and need further investigation.

STUDY 2

The second study aimed to gain more insights about the roles of pupil origins and academic performance for stigma-related attitudes. Pupil disability (physical impairment) was kept constant in this study while his or her behavior was manipulated similar to study 1. Pupil school grades were added as a new manipulation while the origin manipulation was expanded to also include Romania, thus allowing us to contrast two foreign backgrounds (war refugees vs. poverty-induced immigration). We furthermore examined the role of student teacher *self-efficacy*, their belief in his or her competences to achieve goals in a certain situation (Bandura, 1977). This belief has been repeatedly linked to outcomes of their teaching in inclusive education settings (Gebhardt et al., 2015; Hachfeld et al., 2012; Klassen & Chiu, 2010; Knigge & Rotter, 2015) as well as to general attitudes towards this topic (Savolainen, Engelbrecht, Nel, & Malinen, 2012). Wischmeier (2012) found a connection between participants' teaching self-efficacy and their education of pupils from different origins: Teachers with high individual self-efficacy deemed themselves to be more competent for educating a culturally heterogeneous class. However, this connection was not always positively correlated and certainly deserves further investigation. Being confronted with a pupil with a foreign origin could pose a greater challenge to teacher competencies when their self-efficacy is low. We therefore assume that teacher self-efficacy is positively linked to inclusion-related attitudes.

Hypothesis 6: Student teachers with high teaching self-efficacy report more positive attitudes towards inclusive education and less social distance than respondents with low self-efficacy.

Furthermore, we want to examine if this effect is moderated by (a) pupil origin and (b) pupil performance in school:

Research question 2a: How do teacher self-efficacy and a pupil origin interact regarding respondents' attitudes towards inclusive education and social distance?

Research question 2b: How do teacher self-efficacy and pupil school grades interact regarding respondents' attitudes towards inclusive education and social distance?

Method

Design and Procedure

A $3 \times 2 \times 2 \times 2$ full-factorial experiment was conducted using a pencil-and-paper questionnaire. The stimulus material showed a single-case description of a pupil with spina bifida, a congenital neural tube defect, featuring four experimentally manipulated characteristics: (1) *pupil origin* (Germany vs. Syria vs. Romania), (2) *pupil behavior* (challenging vs. non-challenging), (3) *pupil sex* (male vs. female), and (4) *school grades* (good vs. bad). First, respondents' self-efficacy for teaching was assessed using a self-report scale. After reading one of the 24 randomly assigned single-case descriptions, they were asked to indicate social distance as well as affective and cognitive attitudes and behavioral intentions towards inclusive education. No incentives were offered for participating in this study.

Stimulus Material and Experimental Manipulations

The stimulus material consisted of single-case descriptions depicting a child (eight years old) in fourth grade of an elementary school in Cologne (Germany), who had moved there together with his/her parents and younger brother. Because of *spina bifida*, he or she is reliant on using walking aids. A class teacher describes the pupil's behavior and participation in class, school grades, and perspective for secondary schools (see Appendix B for full example). The brief texts consisted of 187 words on average ($SD = 1.07$).

Experimental manipulations. The *pupil origin* was indicated through his/her family that either moved to Cologne from Berlin because of a new workplace (Germany), because of poverty (Romania), or fled from war (Syria). The class teacher's statements depicted the *pupil behavior* as either difficult, disrespectful, and bullying towards class mates (challenging behavior condition), or as quiet, uncomplicated, and respectful towards class mates (non-challenging behavior condition). The depicted *pupil sex* was either male or female and emphasized through common names from the respective countries (Germany: David or Laura; Romania: Ciprian or Luena; Syria: Bilal or Sahar). The quoted class teacher accredited the pupil either good and very good *school grades*, or bad and very bad grades.

Stimulus check. A pretest with $N = 26$ student teachers ($M = 25.69$ years; $SD = 2.62$; 88.5% female) confirmed the successful manipulation of the descriptions (Krippendorff's alphas: behavior = 1.00; origin = 1.00; sex = 1.00; school grade = .99).

Sample

Seven hundred and fifty-four student teachers were recruited in different courses at German universities in North-Rhine-Westphalia, of which $N = 706$ ($M = 22.58$ years; $SD = 3.69$; 82.9% female) fully completed the survey (6% dropout). Of those participants, 39.7% were student teachers for elementary schools (250 females; 30 males), 10% for secondary schools (43 females; 27 males), 44.8% for special education (264 females; 52 males), 4.8% for vocational schools (26 females; eight males), 0.6% indicated miscellaneous schools (one female; three males), and 0.1% gave no answer (one female; one male). A Chi-quadrat test indicated that participants' sex and course of study were not independent of each other, $\chi^2(5, N = 704) = 41.74, p < .001$. Male participants ($n = 121$; $M = 24.49$ years; $SD = 4.54$) were again older than female participants ($n = 582$; $M = 22.18$; $SD = 3.36$), $t(701) = 6.44, p < .001$.

Measures

Teaching self-efficacy. Participants' self-efficacy regarding teaching as a trait was assessed using the teacher self-efficacy scale from Schwarzer and Schmitz (1999). Recipients were asked to indicate their agreement towards ten statements (e.g., "I know that I am able to teach even problematic pupils the test-relevant content.") on a four-point Likert scale (0 = "not true"; 3 = "exactly true"). High scores indicate high levels of teaching self-efficacy. The scale's internal consistency reached an acceptable Cronbach's alpha of .76 in our study and has shown sufficient validity and reliability in the original publication (Schwarzer & Schmitz, 1999).

Social distance. Social distance towards people with a disability was measured using Angermeyer and Matschinger's (1995) social distance scale. Participants were asked to state on a five-point Likert scale (1 = "on no account"; 5 = "in any case") if they would, for example, accept a person with a disability as a colleague or a subtenant. High scores on the seven-item scale indicate a high tendency for social distancing behavior. Cronbach's alpha = .76 showed sufficient internal consistency in this study, and this scale has shown to have high validity and reliability in previous research (Hastall et al., 2018; Röhm, Hastall, & Ritterfeld, 2017).

Attitudes towards inclusive education. Attitudes towards inclusive education were again assessed with the three subscales from Lüke and Grosche (2016), which showed a sufficient internal consistencies (affective attitudes: Cronbach's alpha = .87, cognitive attitudes: Cronbach's alpha = .90, behavioral intentions: Cronbach's alpha = .84).

Means, standard deviations, and intercorrelations of all dependent measures and the trait variable are depicted in Table 1. All data analyses were conducted using IBM SPSS version 25.

Results

A multivariate analysis of variance (MANOVA) with all four experimental manipulations (1. pupil origin; 2. pupil behavior; 3. pupil sex; 4. pupil school grades) as well as respondents' self-efficacy (median-split) and sex as factors was computed for social distance as well as affective attitudes, cognitive attitudes, and behavioral intentions towards inclusive education as dependent variables. To ensure sufficient cell sizes with $n > 30$ respondents per cell, the MANOVA model was again limited

to main effects, two-way interactions, and three-way interactions. To protect subsequent univariate analyses of variance (ANOVAs) against type I error, only effects of the MANOVA with $p < .05$ using Pillai's trace are reported (Field, 2018). The significance of mean differences were again determined through Sidak-corrected simple effect post-hoc comparisons.

Main Effect of Respondents' Characteristics

There was a significant main effect of respondents' sex on reported social distance and attitudes towards inclusive education, $V = 0.018$, $F(4, 638) = 2.956$, $p = .019$. However, subsequent ANOVAs revealed no significant effects of respondents' sex on any of the dependent measures, which indicates, according to Field (2018), an overall impact of respondents' sex on the interaction of social distance and attitudes towards inclusive education, but the direction of this effect remains unclear (see Table 2).

A significant main effect of respondents' teaching self-efficacy emerged on all outcome measures, $V = 0.030$, $F(4, 638) = 4.955$, $p = .001$. This effect became significant for social distance, $F(1,641) = 4.593$, $p = .032$, $\mu^2 < .001$, and affective attitudes towards inclusive education, $F(1,641) = 9.277$, $p = .002$, $\mu^2 = .001$. After reading the single-case description, student teachers who scored high on the self-efficacy measure reported significantly less social distance ($M = 1.49$, $SE = .03$) and higher affective attitudes ($M = 3.62$, $SE = .07$) than student teachers with low self-efficacy (social distance: $M = 1.59$, $SE = .04$, $p = .032$; affective attitudes: $M = 3.32$, $SE = .07$, $p = .002$).

Higher-Order Interactions

A respondents' sex \times self-efficacy \times pupil school grade three-way interaction became significant, $V = 0.020$, $F(4, 638) = 3.269$, $p = .011$. Subsequent ANOVAs showed that this interaction emerged on affective attitudes, $F(1,641) = 4.988$, $p = .026$, $\mu^2 < .001$, cognitive attitudes, $F(1, 641) = 7.070$, $p = .008$, $\mu^2 = .001$, and behavioral intentions, $F(1,641) = 11.267$, $p = .001$, $\mu^2 = .001$. Compared to female respondents with low self-efficacy, male respondents with low self-efficacy reported significantly more positive cognitive attitudes and behavioral intentions towards pupils with good grades (see Figure 3). However, these respondents also indicated fewer positive attitudes and behavioral intentions towards pupils with bad grades compared to good grades, as well as in comparison to male respondents with high self-efficacy or female respondents with low self-efficacy (only for behavioral intentions). For female respondents, self-efficacy only moderated the influence of well-graded pupils on affective attitudes and behavioral intentions.

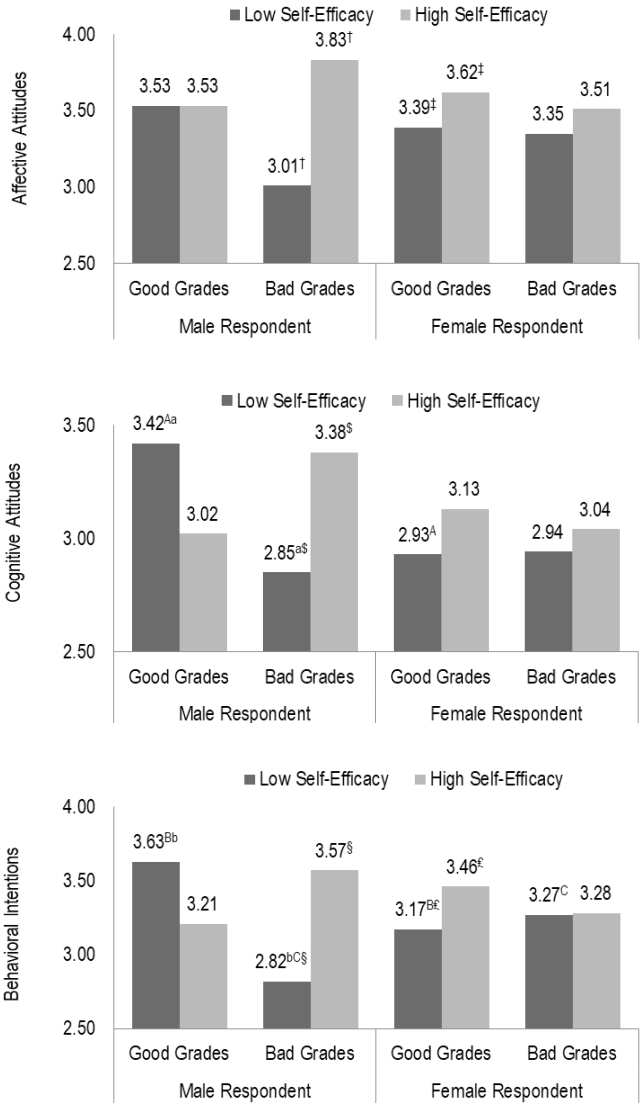


Figure 3. Estimated marginal means for the respondents’ sex × self-efficacy × pupil school grades three-way interaction on affective attitudes, cognitive attitudes, and behavioral intentions towards inclusive education. Means sharing the same capital letter indicate significant mean differences between respondent’s sex, whereas means sharing the same small letter indicate differences between pupil school grades, and means sharing the same symbol indicate differences between respondents’ self-efficacy ($p < .05$; Sidak-corrected simple effect post-hoc comparisons).

DISCUSSION

The aim of the two studies was to shed light on the role of pupil characteristics and respondents' teaching self-efficacy in the context of inclusive education. Based on exemplification theory (Zillmann & Brosius, 2000) and the concept of priming, we assumed that single-case descriptions of pupils featuring certain stigma-relevant characteristics influence student teachers' general attitudes towards inclusive education and their social distance. Overall, our results support this assumption, but the effect pattern is rather complex and occasionally counter-intuitive.

Hypothesis 1 predicted a higher stigmatization of pupils with a learning disability (compared to a physical disability), for which we did not find support in study 1. On the one hand, there was no main difference between pupils having a physical, learning disability, or no disability. However, compared to pupils with a disability, pupils from Syria with no disability evoked fewer positive behavioral intentions towards inclusive education, whereas pupils from Germany with no disability evoked concurrently most stigmatization. Overall, this finding is in contrast to many previous studies, which observed the main disability-related difference that we hypothesized (e.g., Avramidis & Norwich, 2002; De Boer et al., 2011; Schwab & Seifert, 2015). However, our results could be an indication that a disability cue is needed to promote inclusion-friendly attitudes. Moreover, an effect of the manipulation of pupil behavior only emerged in interaction with the disability type in study 1. Although pupils showing no disability but challenging behaviors were most stigmatized, hypothesis 2 was only partially supported, as pupils with challenging behaviors did not produce overall higher stigmatization and less favorable attitudes towards inclusive education. The observed affect can, nonetheless, indicate that challenging behaviors are expected from pupils with a disability and therefore only affects stigmatizing reaction when no disability cue is present. In accordance with other scholars (e.g., Herz, 2014), this adds to the importance of a view on challenging behaviors that is separated from disability, concerning teacher attitudes towards and the implementation of inclusive education.

The aforementioned interaction effect of pupil origin and type of disability in study 1 provides no support for hypothesis 3, in which we assumed that foreign pupils are generally more stigmatized than domestic pupils. Furthermore, in contrast with hypothesis 4, no pattern of generally more favorable attitudes towards female compared to male pupils emerged. Instead, female pupils evoked more stigmatization and fewer positive attitudes than male pupils. This, however, adds to the present, but inconsistent literature (e.g., Dee, 2007; Burusic et al., 2012), but clearly deserves further investigation. Additionally, no preference of same-sex pupil-respondent constellations over opposite-sex constellations emerged. Hypothesis 5 thus must also be rejected. With regard to Festinger's (1954) social comparison theory, these findings deserve further examination. Due to the rather complex nature of social comparison processes, it is possible that the pupil-respondent constellation has not been perceived as an opportunity for the assumed origin-related and sex-related in-group/out-group distinctions. Moreover, the hierarchical difference between pupils and student teachers could have prevented such comparison processes, because of too much dissimilarity between both groups (Festinger, 1954). Nonetheless, female participants in study 1 reported fewer stigmatizing and more positive attitudes regarding inclusive education than male participants, which is in line with own and findings from other

scholars (e.g., Hastall et al., 2018; Avramidis & Norwich, 2002; De Boer et al., 2011).

Regarding our first research question, the findings do not support Crenshaw's (1989) intersectionality hypothesis. The combination of two stigma-relevant characteristics (e.g., having a learning disability and being from Syria) led to an increase in positive behavioral intentions in study 1. In study 2, respondents' attitudes and social distance were not affected by a combination of stigma-related pupil characteristics. Moreover, effects were largely dependent on participants' teaching self-efficacy.

Concerning the role of teaching self-efficacy on attitudes towards inclusive education, study 2 shows that favorable attitudes are linked to high levels of teaching self-efficacy, thus supporting hypothesis 6. This finding is compatible with previous research (e.g., Savolainen et al., 2012). While there was no interaction with pupil sex, the relationships between respondents' sex, teaching self-efficacy, and pupil school grades remained complex. Teaching self-efficacy had a more important influence on male student teachers' perception of pupils, compared to female student teachers. According to Klassen and Chiu (2010), female teachers generally show lower (classroom management) self-efficacy. In our study, however, reading about a good-graded pupil decreased female participants' positive attitudes towards inclusive education, while reading about a bad-graded pupil increased attitudes in the short term, compared to male participants, when self-efficacy was low. With high self-efficacy, female respondents only reported increased positive attitudes towards inclusive education after reading a description of a good-graded pupil. Hence, especially bad-graded pupils seem to evoke more positive attitudes in male student teachers than female student teachers with high teaching self-efficacy. All in all, these results emphasize the role of individual pupil evaluations and teachers' achievement expectations in the context of inclusive education.

Limitations

The interpretation of our results is limited to the German education system and its implementation of inclusive education. Furthermore, we only collected explicit self-reported measures, so a certain social desirability bias must be expected. Due to the use of an online experiment in study 1, issues like a high dropout-rate and self-selection bias may limit the generalizability of our result (Reips, 2002). However, since we targeted a rather specific sample, self-selection bias of student-teachers was limited to respondents' sex and age, which had a similar distribution in study 2. Although our samples reflect the general demographic distribution, particularly regarding primary and special education teachers' sex (UNESCO, 2018), and respondents' sex was included as a control variable in both studies, we observed a systematic difference in both studies between male and female participants regarding age and desired teaching profession that needs to be accounted for in further studies. Since most results have a rather small effect size that reduces their generalizability (Ellis, 2010), further investigations may require a more powerful approach to examine the impact of each single manipulation as well as possible long-term effects. Although our analyses strictly controlled for type 1 errors, we cannot rule out that some effects became incidentally significant, which is why future research is needed to replicate the effect patterns. Future research should also take student teachers' origin into ac-

count, as this could explain the influence on attitudes towards pupils with a migration context (e.g., Hachfeld et al., 2012). Additionally, student teacher experience in teaching in general and teaching in inclusive education should be considered in further studies, because of a possible positive relation between experience in teaching and the attitudes towards an inclusive education system (Avramidis & Kalyva, 2007).

Conclusion

The findings of both studies underline the importance of stigma-sensitive communication in the context of inclusive education and the impact of single-case descriptions on teacher attitudes. Even small differences in pupil characteristics can affect teacher perceptions and expectations, and therefore influence the opportunities of pupils to achieve certain educational goals. In order to diminish stigmatization and promote equal access to education for children with and without disabilities, pupil ethnicity and teacher self-efficacy, in particular, deserve greater attention in the context of inclusive education, teacher training, and strategic anti-stigma communication.

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APPENDIX A

EXAMPLE OF STIMULUS MATERIAL FROM STUDY 1

The following sections display the original German version and an English translation of one experimental stimulus condition (disability: learning disability; behavior: challenging; sex: female; origin: Syria).

Original German Version

Aylin (10) ist seit zwei Wochen neu in der fünften Klasse einer Sekundarschule im Ruhrgebiet. Sie ist mit ihren Eltern aus Syrien hierhin geflohen. Ihr Verhalten ist auffällig: Sie stört im Unterricht und ist aggressiv gegenüber den anderen Kindern. Sie lacht nicht wie die anderen Kinder, wirkt stattdessen hart und unnachgiebig. Im Unterricht flüstert sie ihren Sitznachbarn häufig gemeine Kommentare zu, weshalb niemand lange neben ihr sitzen will. Auf dem Schulhof gerät sie oft in Streit.

In ihrer Klasse sind insgesamt 30 Kinder, zum Teil mit Migrationshintergrund. Manche haben auch eine Behinderung. Aylin hat eine Lernbehinderung und ist daher bei vielen Aufgaben auf Unterstützung angewiesen. Sie benötigt mehr Zeit und arbeitet oft unkonzentriert.

English Translation

Aylin (10) has been new to the fifth grade of a secondary school in the Ruhr area for two weeks. She and her parents have fled Syria. Her behavior is challenging: she is disturbing in class and aggressive towards the other children. She does not laugh like the other children, but appears tough and relentless instead. In class, she often whispers mean comments to her neighbors, which is why no one wants to sit next to her for long. She often gets into a fight in the schoolyard.

There are a total of 30 children in her class, some of them with immigrant backgrounds. Some also have a disability. Aylin has a learning disability and is therefore dependent on support for many tasks. She needs more time and often works without being focused.

APPENDIX B

EXAMPLE OF STIMULUS MATERIAL FROM STUDY 2

The following sections display the original German version and an English translation of one experimental stimulus condition (origin: Romania; behavior: non-challenging; sex: male; school grades: bad).

Original German Version

Ciprian (9) geht in die 4. Klasse einer Grundschule in Köln. Geboren ist er mit der Diagnose „Spina bifida“ und ist beim Laufen auf Krücken angewiesen. Er hat ein turbulentes halbes Jahr hinter sich. Mit seinen Eltern und seinem kleinen Bruder (4) zog er vor einem halben Jahr von Rumänien nach Köln, um der dortigen Armut zu entkommen.

Seine Klassenlehrerin, Frau Martens, beschreibt sein Verhalten als sehr unauffällig. Ciprian sei einer der unkomplizierten Schüler. Er folge immer konzentriert dem Unterricht und schreibe trotzdem durchweg schlechte bis sehr schlechte Noten. Sein Umgang mit den eigenen Schulmaterialien und dem Eigentum anderer ist sehr respektvoll. Auch bei Streit in der Klasse versucht er immer eine Lösung zu finden und ist noch nie handgreiflich geworden. Seine allgemeine Gelassenheit und große Hilfsbereitschaft, vor allem bei Gruppenarbeiten, kommen der ganzen Klasse zugute.

Für Frau Martens steht fest, dass Ciprian dennoch weiterhin Probleme in allen Fächern haben, schlechte Noten schreiben und keinen Erfolg auf der weiterführenden Schule haben wird. „Die Anpassung an die neue Umgebung und die geänderten Anforderungen in der Schule im Vergleich zu Rumänien haben Ciprian große Schwierigkeiten bereitet“, so die Lehrerin.

English Translation

Ciprian (9) goes to the 4th grade of a primary school in Cologne. He was born with the diagnosis “spina bifida” and is depending on crutches when walking. He has been through a turbulent half-year. Six months ago, he moved from Romania to Cologne with his parents and his little brother (4) to escape poverty there.

His class teacher, Mrs. Martens, describes his behavior as very unnoticeable. Ciprian is one of the uncomplicated students. He always follows the lessons with concentration and yet he still writes bad to very bad grades. His handling of his own school materials and the property of others is very respectful. He also tries to find a solution for disputes among classmates and has never become physical. His general calmness and great helpfulness, especially in group work, benefit the whole class.

For Mrs. Martens it is clear that Ciprian will nevertheless continue to have problems in all subjects, write bad grades, and will not be successful in secondary school. “The adaptation to the new environment and the changing demands of the school compared to Romania have caused great difficulties for Ciprian”, the teacher says.