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Can students with special educational needs overcome the “success” expectations?<sup>1</sup>

Arnaud Stanczak<sup>1</sup>

Cristina Aelenei<sup>2</sup>

Julie Pironom<sup>1</sup>

Marie-Christine Toczek-Capelle<sup>1</sup>

Odile Rohmer<sup>3</sup>

Mickael Jury<sup>1</sup>

<sup>1</sup>Université Clermont Auvergne, Laboratoire Acté. France

<sup>2</sup> Université Paris Cité, Laboratoire de Psychologie Sociale. France

<sup>3</sup> Université de Strasbourg, Laboratoire de Psychologie des Cognitions. France

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Correspondence should be addressed to Mickaël Jury, Laboratoire Acté, Université Clermont Auvergne, 36 av Jean-Jaurès CS 20001, 63407 Chamalières Cedex-France

(<mailto:mickael.jury@uca.fr>).

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**Abstract**

The present study examines the poor fit between the idea of school meritocracy and the successful inclusion of students with special educational needs (SEN). Because students with SEN are assigned negative stereotypes related to suffering, failure, and difficulty regarding their school achievement, we argue that, if they succeed at levels comparable to those of regular students, they may experience backlash, a sanction for challenging the *status quo*. The results of two studies show that backlash can manifest itself in the form of lower assigned competence to students with special educational needs who succeed. More precisely, across a pilot and a main study, our findings indicate that while performing as well as students without special educational needs, the perceived competence of students with special educational needs was evaluated as lower by participants (pre- and in-service teachers), particularly when these students benefitted from an accommodation perceived as “unfair”. Due to its potential role in justifying inequities within educational contexts, the backlash effect is discussed as an ideological barrier to the inclusion of students with special educational needs.

*Keywords:* Inclusive education, special educational needs, backlash, selection.

Can students with special educational needs overcome the “success” expectations?

## 1. Introduction

Inclusive education is based on the principle that all students should be welcomed and given the opportunity to succeed in school, regardless of their needs (Ainscow et al., 2019; Nilholm & Göransson, 2017). Research has highlighted the tensions between an inclusive school, and a meritocratic one in which students are presumably rewarded based on their academic accomplishment and aptitude and thus, where norms of competition are liable to predominate (Butera et al., 2021; Darnon, Wiederkehr, et al., 2018; Khamzina et al., 2021; Mijs, 2016; Stanczak et al., 2023). In the present paper, we will argue that these tensions may be particularly salient during grading. Although schools are supposedly responsible for ensuring that selection is made on a fair basis, i.e., the principle of “equal opportunity” (Dubet & Duru-Bellat, 2020), students with special educational needs require accommodations to fully participate in assessments. However, these accommodations can sometimes be perceived as “unfair advantages”, especially when it comes to grading and ranking students (Brueggemann et al., 2001; De Beco, 2018; Paetzold et al., 2008). This may lead to an undervaluing of competence, with academic success being attributed to this additional “help”, i.e., the accommodation (Brueggemann et al., 2001).

Considering that students with special educational needs are usually not expected to perform as well as students without special educational needs (Louvet & Rohmer, 2016; Rohmer et al., 2022), we will argue that they are likely to face backlash, namely a sanction used to protect the *status quo*, should they succeed at an accommodated assessment. In other words, the goal of this research is to examine the extent to which acknowledging and accommodating students’ special educational needs while evaluating them could conflict with the principle of equity at play within meritocratic educational systems (Stanczak et al., 2023).

### 1.1. Inclusive education

Inclusive education is a policy having emerged in many countries in response to the problem of the segregation of children with special educational needs<sup>2</sup> (or SEN) in special schools (see Ainscow et al., 2019 for a historical perspective). Its present-day definition has been broadened to encompass the inclusion of every child (see Amor et al., 2019, Kefallinou et al., 2020 for reviews), even though researchers often point out the complexity and heterogeneity of the concept (Göransson & Nilholm, 2014; Nilholm & Göransson, 2017). In this article, we consider inclusive education to be best understood as a set of educational practices and processes that promote the social participation of all students, regardless of their differences (Florian, 2014; Nilholm & Göransson, 2017). Such policy goes beyond the simple reception of these students: it is a commitment by society as a whole that each individual has the right to an education that meets their needs (Ainscow, 2019). Consequently, its implementation is a topic of great importance for politics, scholars, teachers and students (de Beco, 2018; Nilholm, 2021).

If the literature notably shows that students with special educational needs can benefit greatly from studying with their peers without special educational needs (Kefallinou et al., 2020), the implementation of inclusive education remains a challenge (Ferguson,

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<sup>2</sup> Although there is no clear definition of what special educational needs refer to (see Wilson, 2002 for a critic), the Individuals with Disabilities Education Act (IDEA) states that a child is considered as having special educational needs (SEN) if they have learning difficulties which require special educational provision, i.e., that is provision more than the average child, to be made for them.

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2008). In a recent review of literature, García-Barrera (2022) identify several challenges in implementing inclusive education, such as a lack of resources (like specialized instructional materials, assistive technology, and support staff), teacher training (to understand and address diverse learning needs), or attitudes and beliefs (educators, parents, and community members holding negative beliefs about students with disabilities or other differences). Addressing these concerns requires a systemic approach that involves providing teachers with adequate resources and training, creating supportive school environments, and also examining how these concerns interact among teachers (Jury et al., 2023; Sahli Lozano et al., 2022).

To address these challenges, research has mainly focused on teachers' individual characteristics, such as attitudes (de Boer et al., 2011; Jury et al., 2021; van Steen & Wilson, 2020), or self-efficacy (Desombre et al., 2019), overlooking the fact that teachers are embedded in broader educational contexts (Florian, 2014). Indeed, one cannot understand teachers' attitudes without considering the dominant values prevailing in our society. For example, as it has been argued (Butera et al., 2021), the influence of competition and neoliberalism has a significant impact on educational practices, since these ideologies have permeated the institution. As a result, the process of inclusive education can be seen as conflicting with other educational policy ideals, such as neoliberalism discourse which involves both the reinforcement of highly competitive structures and the expansion of the free-market rhetoric to support them (De Beco, 2018; Magnússon et al., 2019; Stanczak et al., 2023). This tension between policies is not without consequences on teachers and their students.

### **1.2. The incompatibility between inclusive education and merit-based selection**

By definition, educational systems should be designed to provide equal opportunities to students, regardless of their social background or special needs, to uphold social fairness and promote social mobility. Yet, the meritocratic framework makes it clear that the evaluation of students and the distribution of merit mainly depend on their personal abilities (Mijs, 2016). Therefore, the placement of students in the educational hierarchy is greatly impacted by their academic performance: based on grading and selection, students are ranked with merit as an indicator designed to reflect their academic achievement.

However, a long line of research indicates that while competition is an important feature of educational systems, it also exacerbates existing inequalities (Butera et al., 2021; Jury et al., 2017). If the concept of "school meritocracy" is based on the belief that education is a level playing field where students can rise to the top through their efforts, it has been criticized for ignoring the structural inequalities that exist in society while being an oversimplified view of the education system. More precisely, scholars have highlighted numerous flaws within the practice of meritocratic selection (Butera et al., 2021; Dornbusch et al., 1996; Mijs, 2016), such as the fact that several factors unrelated to merit such as students' social background, race, or gender are still closely linked to success and merit (OECD, 2019; Sirin, 2005). Recent studies even showed that, while promoting individual effort and motivation as a natural path to success, Belief in School Meritocracy (BSM), or the idea that educational success is based on individual merit and hard work, rather than factors such as family background, socio-economic status, race, or gender, may paradoxically enhance the perpetuation of inequalities in schools (Darnon, Smeding et al., 2018; Wiederkehr et al., 2015).

For example, a study indicated that promoting a belief in school meritocracy undermined the performance of fifth graders and even decreased both students' and

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parents' willingness to apply educational procedures aimed at reducing achievement inequalities in their classroom (Darnon, Wiederkehr, et al., 2018). In sum, despite a large body of research addressing its negative impacts, the ideal of school meritocracy appears to be deeply rooted within educational institutions and continues to influence policies and practices (Brown & Tannock, 2009; Trevisan et al., 2021).

Recently, this problem has emerged as a specific barrier to inclusive education. Stanczak et al. (2023) have pointed out that prevalent meritocratic competition in schools makes it particularly difficult for students with special educational needs to participate (see also Khamzina et al., 2021; Lloyd, 2008 for similar arguments), notably in evaluative contexts (e.g., tracking, final exams, summative evaluation). Indeed, to produce the ideal conditions for a meritocratic or “fair” selection, schools must create similar evaluation conditions among students such that the acknowledgment of their achievement is essentially determined by relative ability and effort (Batruch et al., 2019; Darnon, Smeding et al., 2018; Mijs, 2016). However, schools must also guarantee inclusion, which means recognizing that some of their students have special educational needs that must be met in order to enable full participation and fair assessment. These accommodations can take several forms, providing extended time, shortening the assessment, reading the instructions aloud, or having the assistance of a scribe or learning support worker (Dubois, 2016; Sireci et al., 2005). More generally, accommodations can consist of modifications to the curriculum (e.g., adjusting the content, pace, and format of instruction), the learning environment (e.g., physical classroom environment, noise reduction tools) as well as the use of assistive technology (e.g., speech-to-text software, magnification tools, adaptive keyboards). Literature shows that extended time and oral (i.e., reading aloud, screen-reading software) are mostly used to accommodate the timing and presentation of the tests (Sireci et al., 2003; 2005). Finally, recent research showed that contrary to common misconceptions, students who had accommodations either performed comparably to or slightly worse than those who did not, indicating that, for the most part, the accommodations were effective in “leveling the playing field” (Vidal Rodeiro & Macinska, 2022). Providing accommodations in selective and evaluative contexts could thus be seen as undermining the equity principle, as teachers may advocate that an assessment should be strictly identical for everyone (Dubois, 2016) to be comparable (Lang et al., 2005).

In the following section, we argue that this incompatibility could have unexpected and detrimental effects for the students who have benefitted from these accommodations. In fact, by succeeding at these accommodated assessments, students with special educational needs would in a sense be challenging and defying the meritocratic system in school (Stanczak et al., 2023). Therefore, another ideological barrier, the devaluation of their abilities and competence, or “backlash”, could stand in the way of their academic achievement.

### **1.3. Responding to system threat with backlash**

System justification theory assumes that humans have a motivated tendency to defend and rationalize existing social, economic, and political arrangements to minimize psychological discomfort, even when these arrangements are disadvantageous to them (Jost et al., 2002). This theoretical framework has been used to explain a wide range of phenomena, including why people support corrupt and oppressive governments, are resistant to change, or cling to false beliefs (Jost, 2019).

System-justifying beliefs frequently consist of supporting group stereotypes that assign low competence and agency to low-status groups, while assigning other

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“compensative” traits (such as sociability and morality), although these are related to a lesser power and control (Jost & Kay, 2005; Rohmer et al., 2022).

Put differently, when low-status individuals defy these hierarchies by displaying high-status traits (i.e., members of historically marginalized groups who succeed in a field where they have been objectively underrepresented and/or where they are subjectively not expected), people tend to embrace system-justifying ideologies that may lead them to adopt restorative behaviors like backlash (Rudman & Fairchild, 2004; Rudman et al., 2012). The backlash effect postulates that those who observe counter-stereotypical behavior likely to challenge existing social hierarchies are motivated to sanction the violation by, for instance, assigning lower competence to a counter-stereotypical individual in order to deter further deviation that could endanger the system (Rudman et al., 2012). While extensively studied among women (see Williams & Tiedens, 2016 for a meta-analysis), the backlash effect has also been highlighted in groups such as low socioeconomic students, who suffer from the stereotype of being less competent than others (Croizet & Claire, 1998). In educational contexts, two studies (Batruch et al., 2017) showed that participants (i.e., psychology students in the first experiment and pre-service teachers in the second) used backlash as a tool to reduce the threat of undermining social-class hierarchies. According to the authors, because students from poor backgrounds typically perform worse than their counterparts from more advantaged backgrounds, their achievement was perceived as a threat that triggered cognitive and behavioral reactions intended to undermine it. In other words, these findings suggest that teachers may purposefully hinder the success of unexpectedly high-achieving pupils to legitimate and protect the hierarchies disfavoring them within schools.

Accordingly, if providing accommodations for students with special educational needs was perceived as a threat to the meritocratic system and its values, backlash could be triggered to sanction the success of these students. In fact, due to negative stereotypes about their competence and the expectation that they will not succeed in school (Krischler & Pit-ten Cate, 2020; Rohmer & Louvert, 2011), students with special educational needs may be particularly vulnerable to backlash when they do succeed. Paradoxically, raising their chances of success may also increase the likelihood that they will be perceived as less deserving of their achievement. In the present paper, a pilot and a main study examine this hypothesis at both the elementary and the middle school level, among fifth and sixth graders.

More precisely, we test the idea that students with special educational needs who succeed in an evaluation accommodated to their needs (through either the use of a computer assistance - i.e., assistive technology - or the reduction of the assignment length - i.e., modification to the curriculum-) represent a challenge to the *status quo* that teachers are willing to defend through backlash (i.e., a “restorative behavior”) by decreasing recognition of these students’ competence. Following recent trends in open science and replicability as part of social and educational psychology research, we preregistered our research hypotheses and planned our statistical analyses (Open Science Collaboration, 2015; Świątkowski & Dompnier, 2017). Hence, the datasets, materials, and hypotheses are accessible on [https://osf.io/re6xs/?view\\_only=9c1d82cc860340b6b13fb865b7673f95](https://osf.io/re6xs/?view_only=9c1d82cc860340b6b13fb865b7673f95)

## 2. Pilot Study

### 2.1 Overview

The purpose of this pilot study was to pretest the materials used for the main study, as well as to test our main hypothesis of a backlash effect in educational settings against students with special educational needs (SEN) who succeed at accommodated assignments. Specifically, in this pilot study, we choose to compare two different accommodations that a student with special educational needs could receive to compensate for their dyspraxia<sup>3</sup>: either computer assistance (i.e., transcription software) or a half-exercise (i.e., a reduction in assessment length). This choice was motivated by a preliminary study involving 86 participants that showed that when comparing five different types of accommodation, the half-exercise was significantly perceived as “more unfair” than the computer-assistance condition<sup>4</sup>.

### 2.2. Research hypotheses

We expected that, compared to a student who takes a test and succeeds (i.e., fill-in-the-blank exercise) in the regular way, a student with special educational needs who succeeds at the same test with an accommodation (i.e., use of computer assistance or a half-exercise) would receive a lower grade and be judged as less competent. Finally, we predicted that, compared to computer assistance, backlash would be greater when the half-exercise was used as the accommodation.

### 2.3. Method

#### 2.3.1. Participants

An a priori power analysis was performed with G power 3.1. revealed that 92 participants would be needed to detect a small-sized effect ( $f = .17$ ) with targeted power of .80 for the planned repeated measures ANOVA (Faul et al., 2007). Thus, the participants were 104 French students enrolled in a teaching curriculum to become middle school teachers ( $M_{age} = 25.59$ ,  $SD = 7.55$ ). Among the respondents, 55 described themselves as “male”, 45 as “female” and 4 non-reported. It should be noted that 11 participants were filtered out of our analyses due to extreme scores and their influence on our data (i.e., observed residuals greater than 4 and less than -4 on the main regression analysis, Judd & Sadler, 2003), bringing the final sample to 93 participants.

#### 2.3.2. Procedure

The participants were invited by mail to answer an online questionnaire lasting approximately 15 minutes. The study was presented as a survey of the perception of students’ assessments; the participants were informed that it required reading and evaluating two written exercises carried out by sixth graders. First, two copies of written exercises were presented to the participants in succession: that of a student without special educational needs, then that of a student with SEN, i.e., a student with dyspraxia. The order of this presentation was chosen for two reasons. Firstly, for ecological reasons, as students in ordinary learning condition represent the majority of learners, and secondly, to force a comparison between a target in ordinary learning conditions and a target with SEN. For the latter, participants were informed that the student was either allowed to use a computer to complete the assessment (computer assistance condition) or asked to do half of the written

<sup>3</sup> Dyspraxia, also known as developmental coordination disorder, is a neurological condition that affects a person's ability to plan and coordinate physical movements. It is a developmental disorder that typically manifests in childhood and can affect people throughout their lives (Polatajko & Cantin, 2005).

<sup>4</sup> See Figure S1 in Supplementary Material for more details.



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exercise (half-exercise condition) to compensate for their writing difficulties. This information was provided under the form of an additional sentence at the beginning of the written exercise (e.g., “Please note that due to their dyspraxia (difficulties with motor skills), the teacher allowed the student to use their computer to complete the assessment, with the spell checker turned off). For the student without SEN, no information was given to the participants. The participants were requested to rate both of the exercises out of 20. These exercises consisted of fill-in-the-blank texts that required students to correctly conjugate several verbs. Following the grading, participants were asked to respond to a series of questions regarding the social perception of the two students on a 5-point Likert scale. For this step, we retained items classically used in the field of social judgment (see Louvet & Rohmer, 2016). Judgments were assessed through three consensual facets within academic contexts: competence (e.g., “performing”, “competent”), effort (e.g., “determined”, “persevering”) and sociability (e.g., “warm”, “kind”). Finally, participants responded to a measure of perceived “fairness” of accommodations for students with special educational needs, as well as demographic questions (e.g., age, gender, education). Hence, the experimental design consists of a 2<sub>within</sub> (without SEN – SEN) by 2<sub>between</sub> (computer assistance; half-exercise) plan, with each participant being randomly assigned to one experimental block, which determines the type of accommodation, as well as the copy of the participant.

### 2.3.3. Material

**Fill-in-the-blank exercise.** The two copies with fill-in-the-blank exercises were evaluated by the participants on a scale from 0, indicating that the competence was not mastered, to 20, indicating total mastery of the competence (i.e., the classic grading system in French middle and high schools). The copies were designed by the experimenters in charge of the study and validated by another researcher and a teacher. Each copy contained four mistakes specific to the evaluated competence and was available in two versions randomly distributed within an experimental block. In the case of the “half-exercise” condition, the length of the copy was divided by a factor two and only two mistakes remained. Since the only difference between the two copies was the location of the mistakes, the average score for each copy was expected to be roughly 16/20, thus controlling for students’ performance.

**Judgment of competence.** We used the competence subscale in a social judgment scale (Louvet & Rohmer, 2016) to test our hypothesis. Concerning the exercise score, participants were asked to judge each student consecutively (Student 1 = “Without SEN”, Student 2 = “SEN”). The subscale corresponds to a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*completely*) with items referring to attributes of the students’ perceived competence (e.g., “competent”, “efficient”). The reliability of this subscale was satisfactory for both the “without SEN” ( $M = 3.73$ ,  $SD = 0.65$ ,  $\alpha = .79$ ) and the “SEN” student ( $M = 3.71$ ,  $SD = 0.66$ ,  $\alpha = .77$ ). Descriptive statistics, as well as results on the other subscales (i.e., warmth and effort) are presented in Table S1 and S2 in Supplementary Material.

## 2.4. Results

### 2.4.1. Manipulation check

Descriptive statistics show that Copy A averages a score of 15.58 ( $SD = 1.70$ ), and Copy B averages 15.90 ( $SD = 1.62$ ), which was very close to the expected score of 16/20. Paired t-test analysis shows some tendential difference between the two copies,  $t(92) = 1.83$ ,

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$p = .071$ . Even after adjusting for significant outliers, some ratings (such as 20/20, or total mastery of the competence) remained extremely high<sup>5</sup>.

#### 2.4.2. Strategy for the statistical analyses

Because our hypotheses were based on a comparison between one student with SEN and one without, we computed new variables corresponding to the difference score of each variable. More precisely, we subtracted the score of the student with SEN from that of the student without SEN and obtained newly computed variables for exercise score ( $\text{diff}_{\text{copy}}$ ) and competence ( $\text{diff}_{\text{comp}}$ ). A positive difference indicates a greater score for the student without SEN, and a negative difference a greater score for the student with SEN. This slight deviation from preregistration of the statistical analyses was performed to test our hypotheses with a general linear model. The analyses were conducted with the software JAMOVI version 2.2.5.

With respect to our hypotheses, we expect a significant intercept to indicate an overall difference between the student with and without SEN, and a main effect of the accommodation type (contrast coded: computer assistance = -0.5; half-exercise = 0.5) to indicate that the difference in grading between the two students varies as a function of accommodation type.

#### 2.4.3. Differences in the exercise grading

We did not observe any difference between the student with and that without SEN in the grading of their exercise,  $t(91) = 1.52$ ,  $p = .133$ , nor did this difference vary by accommodation type,  $\beta = -.26$ ,  $t(91) = 1.23$ ,  $p = .222$ . Contrary to our hypotheses, there were no differences in grades either when comparing the relative performance of the two students with computer assistance or a half-exercise.

#### 2.4.4. Differences in perception of competence

Regarding the first hypothesis, we did not observe significant differences in the perceived competence between the students,  $t(91) < 1$ . Regarding our second hypothesis, the main effect of the accommodation on the difference in competence ratings was statistically significant at the  $\alpha < .05$  threshold,  $\beta = -.50$ ,  $t(91) = 2.44$ ,  $p = .016$ ,  $\eta_p^2 = .06$ . This implies that the difference in competence perception between the student with SEN and that without was larger when the accommodation provided to the SEN student was a half-exercise ( $M = 0.11$ ,  $SE = 0.05$ ) than when it was computer assistance ( $M = -0.06$ ,  $SE = 0.05$ ). In other words, the student accommodated with a half-exercise was considered as less competent than their peer without SEN, a difference that did not occur for the student who benefitted from computer assistance.

#### 2.5. Intermediate conclusion

Regarding our hypotheses, the accommodation type had an impact on the perceived competence of the student with SEN when compared with that without SEN. In fact, we did not find significant differences in grading per se, which could indicate that the pre-service teachers evaluated the students' performance similarly. However, even holding their objective performance on the fill-in-the-blank exercises equal, the student with SEN who benefitted from a half-exercise was judged as less competent than their peer without SEN. This difference was not observed when they benefitted from computer assistance. Since we argued that backlash is more likely to occur when success is perceived as undeserving (Rudman et al., 2012), we expected to see differences in the ways participants perceived the

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<sup>5</sup> It could be noted that the difference was the same between the copies of the student without special educational needs ( $M = 15.59$ ,  $SD = 1.78$ ) and those of students with special educational needs ( $M = 15.89$ ,  $SD = 1.53$ ),  $t(92) = 1.70$ ,  $p = .093$ .

different accommodations. Exploratory analyses provide further justification for this claim. Indeed, participants reported that a half-exercise was significantly less fair ( $M = 3.54$ ,  $SE = 0.12$ ) than using computer assistance ( $M = 4.09$ ,  $SE = 0.09$ ),  $t(91) = 3.40$ ,  $p = .010^6$ . To sum up, it is possible that because a half-exercise was considered unfair, the competence of students with SEN who benefitted from it was undermined by the participants.

Consequently, we made several modifications in the main study. Firstly, we added the measure of perceived fairness of accommodations to replicate our results, as well as a measure of beliefs in school meritocracy (Wiederkehr et al., 2015) to examine their relationships with backlash and perceived fairness of accommodations. Because we considered merit and unfairness to be linked to some extent (Deutsch, 1975), we expected they could partially explain the backlash phenomenon. However, we decided to examine these two variables in exploratory analyses since they were not directly related to our main research question. Secondly, we added an experimental condition in which the student with SEN outperforms the student without SEN. In this scenario, we expected the perceived threat to be greater (Paetzold et al., 2008) and assumed that a greater perceived threat would lead to an increased level of backlash. Finally, we modified the grading scale to better fit the population that comprised the main study (i.e., elementary school teachers).

### 3. Main Study

#### 3.1. Overview

The objective of this study was twofold: to replicate the main results obtained previously and to test the salience of the perceived threat to the *status quo* under controlled experimental conditions. Consequently, we add another independent variable to manipulate the level of perceived threat: in half of the conditions, the student with SEN outperformed the student without SEN (i.e., higher perceived threat), whereas in the other, they performed equally (i.e., lower perceived threat). As in the pilot study, the hypotheses and statistical analyses were preregistered.

#### 3.2. Research Hypotheses

Based on the preliminary results, we expected a stronger backlash (i.e., a difference in grading disadvantaging the student with special educational needs) when the accommodation was perceived as unfair such as with the half-exercise, compared with the computer assistance accommodation. Consequently, we sought to replicate our result for the main effect of accommodation on the difference score for perceived competence. Furthermore, we hypothesized that the performance gap between the two students (i.e., implying different levels of threat) could also play a role: if the student with a half-exercise outperformed the student without special educational needs, then the backlash might be greater. In other words, we expected a significant interaction between accommodation type and level of threat on perceived competence and the exercise score.

#### 3.3. Method

##### 3.3.1. Participants

The participants were 197 primary in-service teachers recruited by mail. However, due to a consequential amount of missing data (e.g., questionnaire started but not completed, demographic information not filled in), the total sample consisted of 136 participants ( $M_{\text{age}} = 37.12$ ,  $SD = 13.03$ ), of which 15 self-identified as “males”, 116 “females”

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6 See figure S2 in Supplementary Material.

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and 4 “other”. Following the same exclusion criteria as in the pilot study, three participants were filtered out of our analyses. The final sample consisted of 133 participants<sup>7</sup>.

### 3.3.2. Procedure

The bulk of the procedure followed the one presented in the pilot study. Because we manipulated the level of threat, two additional copies with exercises were created for the student without SEN. In these conditions, two mistakes were added in the exercises so that the relative performance of the student with SEN was greater compared to the student without SEN. Hence, the experimental design consisted of a 2<sub>within</sub> (without SEN – SEN) by 2<sub>between</sub> (computer assistance; half-exercise) by 2<sub>between</sub> (low threat, high threat) plan.

The statement for evaluating the students was also changed slightly: participants were asked “whether the skill is acquired or not” on a continuum from 1 (*not acquired*) to 10 (*acquired*). This change was made to better fit the evaluative process in the French classroom at this school level (i.e., elementary school). As in the pilot study, participants responded to the same items on social judgment and perceived fairness of accommodations after grading. Finally, they answered the Belief in Meritocracy scale (Wiederkehr et al., 2015) and demographic questions.

### 3.3.3. Material

**Judgment of competence.** The scales were the same as those used in the pilot study<sup>8</sup>. Participants were asked to judge each student consecutively (Student A = student without SEN, Student B = student with SEN). The reliability of this subscale, as indicated by the Cronbach’s alpha, was satisfactory for the student without SEN ( $M = 3.66$ ,  $SD = 0.65$ ,  $\alpha = .74$ ) as well as for the student with SEN ( $M = 3.74$ ,  $SD = 0.61$ ,  $\alpha = .70$ ).

**Belief in school meritocracy.** The Belief in School Meritocracy scale (Wiederkehr et al., 2015) encompasses 8 items (e.g., “At school, students who obtain poor grades are those who have not worked enough”), including a reverse-coded item in which participants must indicate their level of agreement on a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*completely agree*). Overall, the reliability of this subscale is satisfactory ( $M = 2.78$ ,  $SD = 0.91$ ,  $\alpha = .69$ ).

**Fairness of accommodation.** Participants were asked to evaluate five different accommodations (e.g., extra time, computer assistance, half-exercise, oral examination, scribe) on a Likert scale ranging from 1 (*very unfair*) to 5 (*very fair*) considering the following statement: “In the context of schooling for students with dyspraxia, these students are entitled to educational compensations to enable them to overcome the barriers associated with their disorder. We would like you to tell us to what extent you think it is fair for them to benefit from each of the following compensations during assessments”. Then, we computed a mean score by averaging the answers. Overall, the reliability of this measure is satisfactory ( $M = 4.19$ ,  $SD = 0.61$ ,  $\alpha = .70$ )<sup>9</sup>.

## 3.4. Results

### 3.4.1. Manipulation check

Copy A averaged a score of 7.34 ( $SD = 1.48$ ), and copy B averaged 7.78 ( $SD = 1.44$ ). As expected, since Copy A included more mistakes from the student without SEN for

<sup>7</sup> The final sample size was lower than what was expected from the pre-registration. Implications are considered in the General Discussion section.

<sup>8</sup> Descriptive statistics are presented in Table S7 and S8 in Supplementary Material.

<sup>9</sup> It should be noted that as in the preliminary and the pilot study, the differences between the use of computer assistance ( $M = 4.54$ ,  $SE = .05$ ) and half-exercise ( $M = 3.98$ ,  $SE = .10$ ) were statistically significant,  $t(129) = 5.90$ ,  $p < .001$ . The details of the scores are presented in figure S3 in Supplementary Material.

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participants in the high threat condition, a repeated measures analysis of variance with copy as a within factor and threat as a between factor confirmed a significant difference between the copies,  $F(1, 131) = 14.65, p < .001$ , namely an interaction with the threat condition,  $F(1, 131) = 10.25, p = .002$ . Post-hoc analyses with Bonferroni correction indicated a significant difference between the copies in the high threat condition,  $t(131) = 4.53, p < .001$ , but not in the weak condition,  $t(131) < 1$ .

### 3.4.2. Strategy for the statistical analyses

We used the same strategy as in the pilot study, with a few changes. Since the student with SEN performed better than the student without SEN in half of the experimental conditions, it was expected that some differences, particularly on the fill-in-the-blank score, were to be expected. This led us to focus our strategy, reporting the main and interaction effects rather than the intercept.

### 3.4.3. Differences in the exercise grading

As expected, we observed a main effect of the threat condition,  $\beta = -.55, t(129) = 3.19, p = .002, \eta_p^2 = .07$ . The difference in score was greater in the high threat condition ( $M = -0.98, SE = 0.22$ ) when compared to the low threat condition ( $M = -0.08, SE = 0.18$ ), indicating that teachers recognized the greatest success in the student with SEN in comparison with the student without SEN.

However, contrary to our hypothesis, the effect of the accommodation type was not statistically significant,  $\beta = -.12, t(129) < 1$ , and we did not observe the expected interaction between threat and accommodation,  $t(129) < 1$ . Put differently, the performance of the student with SEN was evaluated independently of the accommodation, and its interaction with a higher level of threat did not result in backlash in the exercise score.

### 3.4.4. Difference in perception of competence

Results indicated an effect of the threat condition,  $\beta = -.41, t(129) = 1.81, p = .019, \eta_p^2 = .04$ , with the student with SEN being perceived, on average, as more competent than the student without SEN when the threat was high ( $M = -0.19, SE = 0.06$ ) rather than low ( $M = 0.01, SE = 0.05$ ), as well as a main effect of the accommodation type,  $\beta = -.41, t(129) = 2.39, p = .018, \eta_p^2 = .04$ . Contrary to the previous results and our hypothesis, the student with SEN was judged as more competent compared to the student without SEN when they received a computer assistance accommodation ( $M = -0.19, SE = 0.06$ ), but this advantage was no longer apparent when they were given a half-exercise ( $M = 0.01, SE = 0.06$ ). This suggests a devaluation of competence in the half-exercise condition in comparison with the computer assistance condition. Finally, the interaction between threat and accommodation did not reach statistical significance,  $t(129) < 1$ .

### 3.4.5. Exploratory analyses

The Belief in School Meritocracy (BSM) scale did not correlate with our dependent variables of interest and only weakly with the perceived fairness of accommodations,  $r = -.16, p = .072$  (see Tables S6 and S7 in Supplementary Material). Adding BSM as a covariate in the general linear regression did not have any impact on the difference in test scores, nor on perceived competence (see Table S8 in Supplementary Material).

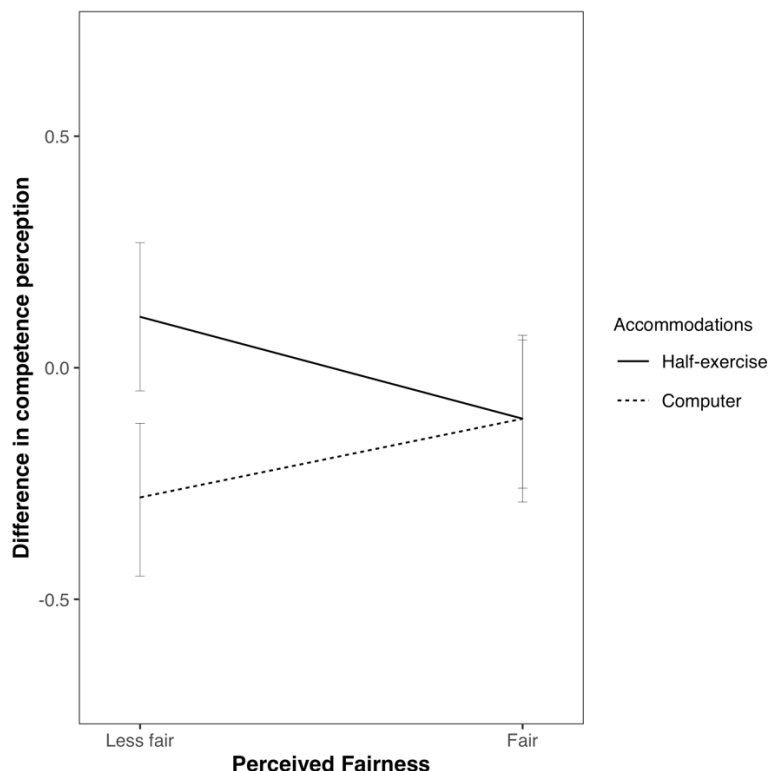
In contrast, perceived fairness accommodation (mean-centered) interacted significantly with accommodation type when added to the model,  $\beta = .41, t(125) = 2.39, p = .018, \eta_p^2 = .04$ . Decomposing this interaction showed that the effect of accommodation type on the judgment of competence with and without SEN relative to the student was statistically significant for participants who perceived accommodations as less fair (-1 standard deviation below the mean),  $\beta = -.39, t(125) = 3.42, p < .001, \eta_p^2 = .06$ , but not for

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teachers who perceived them as fairer (+1 standard deviation above the mean),  $\beta = .00$ ,  $t(125) < 1$ ,  $\eta_p^2 = .00$ . More precisely, teachers who believed that the accommodations were less fair considered the student with SEN accommodated with a half-exercise less competent than their peer without SEN ( $M = 0.11$ ,  $SE = 0.08$ ), a difference which was opposite for those who benefitted from computer assistance ( $M = -0.28$ ,  $SE = 0.08$ , see Figure 1).

**Figure 1.**

*Interaction effect of the accommodation type and the perceived fairness of accommodations on the difference in competence perception.*



#### 4. General Discussion

In this article, we have argued that evaluating students' special educational needs while providing them accommodations might conflict with the principle of equal opportunity embodied by meritocratic selection in school. We expected this incompatibility to be particularly visible during grading, where accommodations can be perceived as unfair (Brueggemann et al., 2001; Stanczak et al., 2023). In this scenario, backlash would be used as a tool to sanction students who threaten the *status quo* by performing at the same level as their peers who did not benefit from these accommodations (Batruch et al., 2017). More precisely, we hypothesized that such a sanction would be observed both on the grading (i.e., test performance) and the perceived competence of the student with special educational needs who benefitted from a test accommodation and performed at the same level as peer without SEN. Our data show that backlash did not occur directly on students' performance assessments per se, but rather vis-à-vis their perceived competence. Indeed, although the students with and without special educational needs were graded similarly on the exercise, participants judged their competence at a lower level when the latter received a certain type of accommodation: a half-exercise. In other words, even though the "copy" was assessed correctly (i.e., two similar grades in the pilot study, and a higher grade for the SEN student in

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the main study), the competence associated with that grade was perceived as lower for SEN students who receive the half-exercise. It should be noted that we did not find significant differences between the pattern of results observed among pre- and in-service teachers in our studies, suggesting that teacher experience did not seem to interfere here.

Such results suggests that the type of accommodations students received is particularly likely to affect their degree of impairment in their judgment of competence: performing a half-exercise led to a more flawed judgment than using a computer assistance. As stated by Moss-Racusin et al. (2010), it is critical to examine when, how, and which type of stereotype violations may result in backlash. Our results could imply that some accommodations are seen as being quite fair and genuine, while others as being considerably less legitimate (Egan & Giuliano, 2009; Rasooli et al., 2021), and that the latter are particularly prone to produce backlash phenomenon. The fact that the participants who reported lower perceptions of fairness regarding accommodations were those who particularly devalued the competence of the student receiving a half-exercise supports this idea.

Overall, these findings provide further evidence that backlash can occur in educational contexts (Batruch et al., 2017), notably regarding students with special educational needs, a population suffering negative stereotypes regarding their academic skills (Krischler et al., 2018). As long as teachers perceive accommodations not as necessary adjustments enabling student participation, but rather as unfair help, students with special educational needs will face difficulties in benefitting from their mainstream education (Brueggemann et al., 2001; Paetzold et al., 2008). According to Sireci (2005), this issue of fairness is directly related to the psychometric properties of test accommodations, namely test validity. Accommodations are typically provided to deal with the issue of “construct-irrelevant variance” (i.e., when a test evaluates skills unrelated to the intended construct) that may develop as a result of the testing environment used in standardized exams. Consequently, teachers may perceive some accommodations to be fairer than others due to their own biases or beliefs of the impact these accommodations have on the test validity (Lang et al., 2008). Although teachers and parents usually evaluate accommodations positively, Lang et al. (2005) do point out that they consider that accommodated assessments are less equivalent to unaccommodated assessments. It seems that while offering accommodations is generally viewed as desirable because it meets the student’s needs, it also implies that the assessments are no longer identical or comparable. Future research needs to explore this idea and test more directly the role of fairness in backlash at school.

Finally, these results seem to also provide indirect evidence of the conflicts between meritocracy and inclusive education. Although BSM was not significantly related to our variables of interest, our data show an effect of the type of accommodation, and in particular teachers' perception of its degree of "fairness," on the perceived competence of students with special educational needs. Despite this initial evidence, it should be noted that our research contains several limitations that must be considered when interpreting these findings.

### **4.1. Limitations and perspectives**

Firstly, we were not quite able to reach the sample size we aimed for in the main study’s preregistration, although we believe this would not greatly change the implications of our findings. Indeed, the differences in grading were too small to even account for an effect size of practical interest (Lakens et al., 2018; McCartney & Rosenthal, 2000). Even without

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proving the absence of such an effect, it appears acceptable to draw the conclusion that our research would not reveal practical differences (Funder & Ozer, 2019) in grading.

Nonetheless, a direct replication of the results from our main study with a larger sample size would still be informative to see if the observed effects remain stable. In particular, it would allow for a better estimate of the effects of accommodation type on the difference in perceived competence, notably in interaction with the perceived fairness attributed to accommodations (Lakens & Caldwell, 2021). In a similar way, although the main effect of the type of accommodation could have been studied, for example by adding an experimental condition for the “ordinary” student, or by concealing their “status” (i.e., a student with or without SEN), a limitation of this condition is that it has little or no reason to exist ecologically: teachers ought to have little incentive to provide accommodations for students who don't require or benefit from them.

A second limitation worth mentioning is the focus on one particular kind of special educational need, dyspraxia. With regard to inclusion, the literature shows that the type of disability matters. For instance, teachers report having more trouble envisioning the inclusion of students with behavioral and intellectual disabilities than those with physical impairments (Jury et al., 2021). Dyspraxia is also referred to as an “invisible disability” which may not be immediately apparent to others. Consequently, some individuals may not consider dyspraxia to be an “actual” disability, as it does not manifest itself as visibly as a wheelchair (Kattari et al., 2018). In other words, it is possible that the stereotypes associated with students with dyspraxia relative to their academic success and expectations were ambiguous, decreasing the strength of backlash. Reciprocally, it could be argued that students with behavioral and intellectual disabilities would suffer from a greater backlash than students with dyspraxia since these students are even less expected to succeed (Williams & Tiedens, 2016). Future work could investigate how the different types of needs and their accommodations impact the social judgment of teachers.

Thirdly, one could argue that meritocracy, a justification for the selection function, is less prominent in primary schools than in higher education, which could explain its lack of explanatory power in our analyses. In our main study, the average score on meritocratic beliefs was around the median point of the scale, indicating that most of the respondents did not report a strong adhesion to school meritocracy (Wiederkehr et al., 2015). This is likely because higher education institutions are generally more selective in their admissions processes than primary schools and therefore can better ensure that their students are those who have demonstrated academic merit. Further research could explore whether or not the school level affects the degree to which teachers believe in school meritocracy, and to what extent it plays a role in backlash in the educational context.

Finally, future research could also look deeper at what motivates perceptions of (un)fairness regarding accommodations. While backlash depends on how these accommodations are perceived, it could be informative to examine whether or not these perceptions are shared by others, such as the students' peers, parents or even themselves (Nowicki & Sandieson, 2002). For example, in their study, Lang et al. (2008) showed that students believed that giving test accommodations (i.e., motivation, scheduling, setting, assistance before the administration of the test, assessment directions, assistance during the assessment, equipment or assistive technology, or changes in format) to students who needed them was fair, and particularly to students with disabilities. Although students' disability status and grade level did have an impact on the results, test accommodations had



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a good overall impact on all children's reading scores, and the effect and impact of these accommodations were positive.

On the contrary, a perception of unfairness, unreservedness or incomprehension could fuel negative dynamics in class, resulting in rejection, segregation or even bullying (Rose et al., 2011), thereby hindering the full inclusion and participation of students with special educational needs. Accommodations for students with special educational needs are generally meant to support their learning and remove barriers to their participation in the classroom (Lang et al., 2008). However, under some circumstances, it could be argued that accommodations may not be helpful and can even have detrimental effects on the student's learning. If accommodations are perceived as providing unfair advantages or making differences visible, stigma and negative labeling can increase the stereotypes about students with special educational needs (Allday et al., 2011; Shifrer, 2013). According to Shifrer (2022), labels themselves can cause others' views and behaviors to shift, affecting the labeled person's outcomes. In other words, labeling can lead to bias or the tendency for people to judge someone based on their label or diagnosis rather than their characteristics or talents. This can result in lesser expectations for the student, which results in reduced possibilities for their learning and development (Allday et al., 2011). In this situation, providing resources for students with special needs could be seen as favoring members of underprivileged groups, which is known as positive discrimination or affirmative action. Even when implemented with the best of intentions, affirmative action measures can have drawbacks. According to Brown et al. (2000), many affirmative action programs prefer to avoid the question of merit entirely, leaving people who have benefited from affirmative action to wonder if they possess the required abilities to succeed or whether others believe they do not. Affirmative action programs may result in lower academic standards or expectations for students with special educational needs because the label "special educational needs" may generate stigmatization and bias against them. It is important to note, however, that framing affirmative action policies by presenting accommodations as a means of correcting for unequal treatment based on the students' learning situations could help to ensure that students with SEN have access to the resources and accommodations they require without experiencing backlash (Autin et al., 2014).

Notwithstanding these limitations and perspectives, this article contributes to the emerging research examining the effects of backlash in educational contexts. Indeed, by showing that receiving an accommodation perceived as unfair during a test can be perceived as threatening the meritocratic principle of fair selection, the present research provides an empirical element to the hypothesis of incompatibility between inclusive school and meritocracy. These findings confirm that in addition to practical obstacles to inclusion (e.g., funding, equipment, and access), ideological barriers may also contribute to the issue. As stated by Barton (1997), these barriers should be explicitly identified, challenged, and ultimately removed in order to reach equity, social justice, and a more inclusive society.

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