



# Interactions and Acts of Teachers in the Classroom Primary School: Indication Bias

Afib Rulyansah<sup>1\*</sup> 

<sup>1</sup> Elementary School Teacher Education, Universitas Nahdlatul Ulama Surabaya, Surabaya, Indonesia

## ARTICLE INFO

### Article history:

Received September 02, 2022

Accepted November 11, 2022

Available online November 25, 2022

### Kata Kunci:

Guru Sekolah Dasar, Siswa Sekolah Dasar, Bias Indikasi, Ruang Kelas

### Keywords:

Primary School Teachers, Primary School Students, Indication Bias, Classroom



This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright © 2022 by Author. Published by Universitas Pendidikan Ganesha.

## ABSTRAK

Studi terbaru telah memasukkan penilaian bias implisit guru, dengan beberapa menyarankan bahwa bias tersebut dapat digunakan untuk memprediksi kinerja siswa di kelas. Tujuan dari penelitian ini adalah untuk menganalisis interaksi sehari-hari guru dengan siswa mereka untuk mengidentifikasi potensi bias dalam praktik mereka. Penelitian ini menggunakan format penelitian kualitatif eksploratif lapangan. Penelitian ini melibatkan dua puluh guru sekolah dasar sebagai subjek. Metode pengumpulan data pada penelitian ini adalah observasi. Masing-masing guru diamati selama 4 jam dalam studi kualitatif eksploratif. Penelitian ini menerapkan teknik analisis tematik untuk menemukan pola di seluruh data. Validitas dan reliabilitas penelitian meliputi validitas eksternal, validitas internal, dan reliabilitas. Hasil penelitian ini menunjukkan satu penjelasan yang mungkin untuk prasangka yang kita lihat adalah bahwa prasangka itu dimediasi oleh berbagai cara guru berperilaku. Namun, beberapa pendidik menunjukkan bias. Bias dapat ditunjukkan dalam berbagai pertukaran nonverbal dan akademik. Prestasi siswa yang ada dalam sistem sekolah dapat dipengaruhi oleh guru yang memperlakukan siswa secara berbeda.

## ABSTRACT

Recent studies have incorporated teacher implicit assessment bias, with some suggesting that such bias could be used to predict student performance in class. The aim of this study was to analyze teachers' daily interactions with their students to identify potential biases in their practice. This study uses a qualitative exploratory field research format. This study involved twenty elementary school teachers as subjects. The data collection method in this study is observation. Each teacher was observed for 4 hours in an exploratory qualitative study. This study applies thematic analysis techniques to find patterns across the data. The validity and reliability of the research includes external validity, internal validity, and reliability. The results of this research suggest that one possible explanation for the prejudice we see is that it is mediated by the different ways in which teachers behave. However, some educators show bias. Bias can be shown in a variety of nonverbal and academic exchanges. Student achievement within the school system can be affected by teachers treating students differently.

## 1. INTRODUCTION

One definition of implicit bias is the tendency for people to create snap opinions in response to unfamiliar stimuli. As opposed to implicit bias, which occurs automatically when a person is exposed to a stimuli, explicit bias requires conscious analysis of the evaluations made (Kurdi et al., 2021; Schirrmeyer et al., 2020). To apply this to a school setting, a teacher's implicit bias might stem from preconceived notions about a certain subset of students, leading to altered instinctive reactions and perhaps altered interactions with specific students who stand in for that group. Teachers might not want to be seen as tacitly supporting stereotypes about students based on their type, and might therefore give serious thought to how they evaluate students (Caneiro et al., 2021; Castronovo et al., 2022). When evaluations that ought to be accomplished objectively and logically are impacted and warped in a good or negative manner by the teacher's expectations of these pupils. As a result, one's verbal and implicit assessments of a given individual might be polar opposites.

Understanding how prejudice is transmitted via teachers' verbal and nonverbal behaviors in the classroom is crucial for designing strategies to counteract it. Teachers' interactions with students may reveal their biases and lead to varied results for various pupils (Bakken et al., 2017; Budiarti & Sugito, 2018; Pit-ten Cate & Glock, 2018). An understanding of how teachers' biases manifest in the classroom may be gleaned by careful observation and documentation of teachers' actions and how they seem to vary

\*Corresponding author.

E-mail addresses: [afibrulyansah@unusa.ac.id](mailto:afibrulyansah@unusa.ac.id) (Afib Rulyansah)

depending on the students and student groups being studied. To better comprehend how prejudice may manifest itself in the actions of educators, the present research in Indonesia used a qualitative method.

Many scholars have conducted cutting-edge research on the interaction of bias indicators in the educational field, but it is still quite challenging to locate studies on teacher behavior for the interaction of bias indicators in primary school children. Previous study revealed both explicit and implicit biases, albeit they only examined how prejudice is manifested in the classroom (Podsakoff et al., 85 C.E.). Another study have shown that implicit bias may be used as a predictor of academic performance, although it is currently unclear how this bias is conveyed in the classroom (Sukhera et al., 2018). Additionally another study in which similar procedures offered a fresh chance to investigate teacher prejudice in the classroom (Bonefeld & Dickhäuser, 2018). Even if teachers don't realize they have prejudices, they could show up on implicit bias testing. The fact that research suggests a connection between teacher implicit biases and student achievement is concerning, as is the fact that research on bias indicators in primary schools is still scarce. As a result, it is currently unclear how implicit bias manifests itself on a daily basis in classrooms.

In light of the aforementioned literature, we conjectured that prejudice might be uncovered in various educational settings. We also conjectured that bias would manifest itself through different levels of encouragement in academic and emotional domains. This study sheds light on how to improve applicants for primary school teaching positions' competency, particularly in terms of how to engage with pupils. It seems possible to recognize and predict teachers' implicit biases in relation to student results. As a result, it seems that teacher conduct is a mediating factor in these results. This exploratory study's objective was to qualitatively record teacher-student interactions in typical classroom settings in order to see if bias might be identified in typical classroom interactions. The primary goal of this study was to analyses more about student instructors' thoughts on classroom management in the future.

## 2. METHOD

This study uses Using a qualitative exploratory field research format, we aim to biases can be uncovered via observation of their everyday interactions with students classes. To find out the results of teacher and student interactions, observations were made in elementary schools that had been selected from Grades 3–6 (9–12 years). The research in this case study was conducted on elementary school teachers and elementary school students in Madiun. Recruiting primary schools was done using a systematic sampling strategy. In total, 20 teachers participated in this study. 7 are elementary school teachers with high socioeconomic status, 13 are elementary school teachers with low socioeconomic status. Most provide the age, gender, race, and number of years they've been a teacher. That's why we had 20 people, ranging in age from 22 to 60, take part in the study.

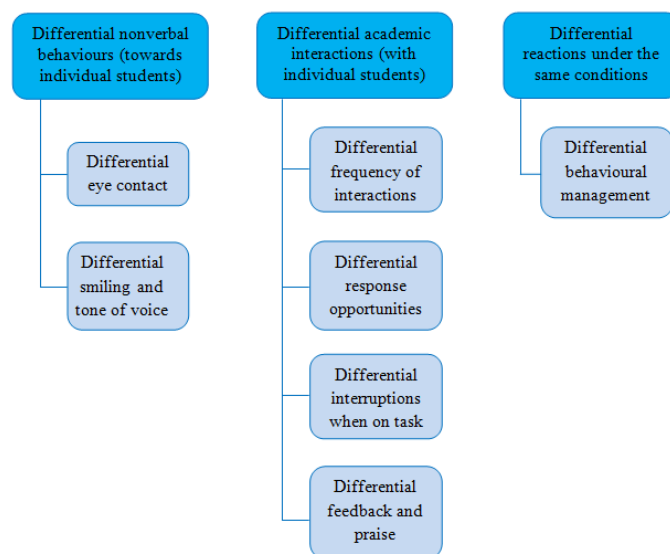
This is a qualitative field research with exploratory aims, and it is being conducted in a typical school setting. Each participant will have around 4 hours of teaching observation time. Teacher observations were conducted without the need for parental or student agreement, as determined according to the standards set forth by the second author's institution's ethics committee. Additionally, they were guaranteed that no student's identity would be divulged by the instructor at any point throughout the observation. Data collected and reported without identifying individual pupils. Concerned parents are invited to get in touch with the study's investigator. Validity and reliability of the study including external validity, internal validity, and reliability (Fell et al., 2020; FitzPatrick, 2019; Korstjens & Moser, 2018).

This study applied the thematic analysis technique to discover patterns throughout the data (Blaikie, 2018; Schmiede et al., 2018). This technique were occurrences and exchanges in ordinary classes. As a result, we codified instructors' overt actions with respect to specific students that seemed to favorably affect certain students' educational prospects while negatively impacting others'. At its core, thematic analysis is a methodical six-step procedure that begins with familiarization with the information, while keeping the study goal and questions in mind at all times (Havik & Westergård, 2020; Rautamo et al., 2020; Rezaii et al., 2019). Evidence and the analytical approach were used to prove the study's credibility and rigor. This extensive data on behavior was also analyzed in order to remain faithful to the evidence. A thematic analysis is a clearly outlined, open, and sequential method of data analysis (Gruber et al., 2018; Rose & Johnson, 2020). Every step of the way, from the early phase of getting to know the material to the last phase of synthesizing the themes into a unified narrative and writing the report, we referred back to the original data to make sure our analysis was suitable.

### 3. RESULT AND DISCUSSION

#### Result

There were three major themes that emerged from our analysis of educators' varying approaches to their pupils. In the classroom, instructors showed "variable verbal and nonverbal behaviors," "variable academic exchanges," and "variable re-actions" even when put in identical situations. There was clear evidence of instructors' varying approaches in every class, and these three overarching themes reflected those variations. All 20 students saw examples of the first two themes, expressed via a variety of behaviors, in their classrooms, whereas more than half of the students recognized the third theme. All of the citations below come straight from the eavesdropper's raw data records. All of the instructors' quotations are introduced with information on the instructor's pseudonym, grade level, teacher age, race/ethnicity, and gender distribution. Thematic analysis result is show in [Figure 1](#).



**Figure 1.** A Thematic Analysis of the Results

Nonverbal communication with pupils was a common thread across the data set. This study found that teachers' nonverbal behaviors, including their facial expressions, vocal inflections, and eye contact, varied depending on the audience. These kids' actions hinted to the frequency and nature of the nonverbal signals they received, with some students receiving Positive reinforcement is rare, if ever, whereas negative reinforcement is common frequently. The data set developed a substantial subtheme centered on teachers' eye contact. During instruction or classroom management, every teacher looks at their pupils, yet the great majority of them don't get the same amount of attention. Making direct eye contact with pupils served as a visual behavior that either prompted more conversation or signaled the teacher's continued interest in a select few of the class's members.

According to research on the effects of eye contact in social interactions, the recipient has a favorable emotional response when they are the center of another person's gaze ([Niedźwiecka, 2020](#); [Rosati-Peterson et al., 2021](#)). Nonetheless, in several teachers, teachers did not make sufficient, if any, eye contact with a few of the audience members. Therefore, the teacher may have produced unequal response possibilities in her classroom by glancing at certain pupils more than others during teaching. Teachers' nonverbal immediacy behaviors include things like Communication using nonverbal cues. All of students looked to be on the same page in terms of their nonverbal signs and behaviors. Teacher responses appeared to convey to various students varied urgency cues about how the teacher felt about them and their colleagues. The observer had the general impression that these biased actions were routine for teachers. There was always a wide range of responses from pupils to teachers' use of nonverbal cues including body language, vocal inflection, and eye contact. We discovered implicit bias in i teachers' nonverbal cues, which gave the impression of favoritism.

According to this theme, teachers' implicit prejudices against certain students were made manifest by their conduct during academic exchanges. No one was able to avoid showing favoritism toward certain pupils over others while working on schoolwork. Some students were favored by having more one-on-one time with teachers, having their needs and progress closely monitored (e.g., asking them multiple times if they were ready to move on to the next topic, letting them answer questions first), and

receiving more positive reinforcement in the form of compliments and affirmations. Teachers were keeping an eye on pupils' development in every class. Nevertheless, they did not provide the same level of attention to each pupil.

In all classes, student monitoring was conducted in full view of the class. The first was to show the kid being singled out that their instructor had recognized them. Furthermore, it served as an open declaration of the school's priorities. So, most educators would probably manufacture attention for certain pupils academically even if those students weren't actively seeking it (Bonefeld & Dickhäuser, 2018; Sukhera et al., 2018). Their urgent educational requirements were sometimes identified by their teachers. In a similar vein, some teachers may have paid closer attention to the development of particular students than to that of others in the same class. A teacher's public announcement of a student's progress is more likely to include criticism or praise if the student is one for whom the teacher seems favourably disposed.

Since the teacher in the above case did reply instantly to both pupils, the signs of unequal treatment were typically rather subtle. However, the instructor started the conversation by complimenting students' performance, which may have helped to hold the student up as an example for the rest of the class. Perhaps as a result of the teacher's approving remark (Starck et al., 2020; Ukrop et al., 2019). The teacher's divergent response in a forceful vocal inflection indicating mild displeasure of attempt to get the teacher's attention seems to be the crucial signal that operates as bias in this situation. In addition, it was clear that instructors were giving preferential treatment to certain pupils in other classes. Moreover students was showing favoritism toward two mediocre performers. Overall, teachers' varying instructional behaviors toward students related to varying degrees of Academic progress and requirements are being closely watched. Interactions were varied in terms of how often they occurred, how long students had to respond, how often students were praised, and how often they were interrupted while they were working.

This third and final central issue is closely related to the previous two, and it sheds light on the prompt judgments made by educators in response to pupils who were either favored or disfavored. More over half of the educators were found to be guilty of this behavior. In other words, these educators' responses varied depending on the identity of the performer, even while the situation remained same. This incident prompted the hypothesis that some educators' decision-making may be governed by unconscious biases that have persisted over time. Teachers' implicit biases may be strengthened by the actions they do on autopilot in response to the presence of certain pupils (Gershenson & Papageorge, 2018; Hobbiss et al., 2021). Students' impressions of their professors' expectations for them and their own confidence in their own academic abilities are shaped in part by these seemingly insignificant occurrences. Furthermore, these signals of unequal treatment may have a far-reaching impact on the whole classroom environment as opposed to simply individual student-teacher relationships (Chory & Offstein, 2018; W. Hong et al., 2020). The third overarching issue was the manner in which teachers' biases manifested themselves in the same circumstance but with different pupils. The recurring idea here was that some educators seemed to tailor their methods to the specific children they were working with, rather than treating everyone the same.

## Discussion

It has been established via studies that teachers' self-reported classroom behaviors and students' learning results are connected to teachers' implicit and explicit biases (Lauermann & Berger, 2021; Puspaningtyas & Ulfa, 2020). This research attempted to carefully analyze how teacher prejudice was portrayed in ordinary classes. Differential nonverbal behaviors, academic interactions, and responses to identical stimuli were the three overarching patterns found. Next, in detail the findings associated with each subject, and then discuss the implications for theory and practice in teacher training and development in light of these results on bias in the classroom. We also address the study's limitations and provide recommendations for further research.

This research showed that in ordinary classroom settings, teachers' communication via tone of voice, smiles, and eye contact noticeable nonverbal signs indicating bias. That is, all the educators in our research exhibited prejudice via nonverbal actions, regardless of their propensity to show bias in the classroom. Therefore, it is reasonable to assume that students' student participation, achievement, and emotional health in the classroom, were influenced by the different the nonverbal exchanges seen in our data, which mediated the students' access to chances to respond. Teachers' emotions toward their pupils may be conveyed via nonverbal signals that can be readily picked up on, even by someone from a different cultural (Sutiyatno, 2018; van Prooijen & Van Vugt, 2018).

Social and emotional settings in the classroom may be different for kids who are more and less advantaged. In other words, students may infer whether their professors see them favorably or unfavorably based on the teachers' nonverbal treatment of them in the classroom. The favored students



seemed to get both intellectual and emotional help, whereas the less favored students received less emotional support than their more privileged peers. Positive nonverbal cues (such as eye contact) are more likely to elicit a positive emotional response because they are interpreted as a sign of emotional support, which in turn immediately stimulates the affective systems (Hajal & Paley, 2020; Yang & Treadway, 2018). People have reported feeling more alone when they have less chances for direct eye contact. Whether the effects of social exclusion are brief or long lasting, they are detrimental to the mental and physical health of the people who experience them (J. Hong et al., 2020; Williams & Nida, 2022). As a result, they are primed to look for re-affiliating signals and pick up on happy expressions in others. But previous study have shown that making eye contact when smiling is more effective than avoiding eye contact while smiling (Pi et al., 2022). It follows that throughout the observation period, pupils who had more chances to make eye contact with their teachers also experienced a warmer environment in the classroom than those who were not given such opportunities. The second group may have been coping with unpleasant emotions in addition to the academic assignment, while the first group may have been set up to concentrate just on the subject at hand.

The second major topic showed that prejudice on the part of teachers was shown not just in overt behaviors but also in the form of unequal academic exchanges. Certain students were more likely to have extended, in-depth scholastic conversations with their teachers, during which they could better assess those kids' needs and progress, give them more opportunity to respond, and provide more praise. Teachers were more likely to focus on a small group of students, often using the same individuals as "anchors" to slow down the speed of teaching and interrupting their interactions with other students. According to previous study students learn more when they are actively involved in class discussions and activities rather than just sitting on the sidelines and taking notes (Chin et al., 2020; Yashima et al., 2018). We found evidence supporting the idea that instructors are not providing their students with an equal number of learning opportunities and reaction times. In response to what they perceive to be an inequitable instructional and social environment in the classroom, students adjust their own academic behaviors and beliefs (Uscianowski et al., 2020; Yerdelen & Sungur, 2019). Other research has shown that students' motivation is significantly impacted if they believe their professors are prejudiced (Gentrup & Rjosk, 2018; Wang et al., 2020). If they don't feel like they're doing well in school, they may lose interest in and place less value on that part of the curriculum.

The MODE model is a theory regarding the possibility of automated processes occurring under high cognitive load. Teachers in high-pressure situations, such deciding how to evaluate students' work, may be less inclined to engage in the kind of deliberate deliberation that might benefit their students and their own learning. Thus, we may assume that the educators in question were blissfully unaware of the racial bias in their classrooms. We found that certain students were less likely to be requested to participate, get feedback, or be praised, even when they were in the "activity zone," a region of increased participation and frequent academic engagement in classrooms (Kaufmann, 2018; Ritchie, 2018). Even while teachers appeared oblivious to the fact that they were treating them differently, they were less likely to begin academic dialogue with them, and when they did, it was typically delayed, shorter, and vulnerable to interruption. Differential choices in the classroom have been justified by teachers in previous research as necessary to address the academic or social-emotional requirements of individual students (Castaño-Muñoz et al., 2018; Leacock, 2019). This research suggests, however, that automated judgments based on implicit bias may overcome teachers' conscious goals given the hectic nature of the classroom environment, where instructors are liable to less opportunity to react thoughtfully in every case (Harrison & Lakin, 2018; Yerdelen & Sungur, 2019).

Finally, this study uncovered examples of instructors' varying responses to identically situated pupils. This topic demonstrated how educators seemed to modify their replies depending on whether the student was more or less privileged. As opposed to responding to the behavior, teachers were responding to the individual exhibiting it. In contrast to our findings, other research (Huang, 2018; Yerdelen & Sungur, 2019) has found that teachers use the same behavioral intervention strategies for all students, regardless of their ethnicity, or that the vast majority of educators do not use a distinct grading scale for pupils of various races when evaluating their performance on the same assignment. It has been shown, however, that instructors' negative implicit prejudice is visible when judging the identical work of students from ethnic minorities (Copur-Gencturk et al., 2020; Watchravesringkan, 2011). By comparing the two, it seems that our claim that the theme of "differential reactions under the same situations" represents the diverse and dynamic nature of typical classrooms provides much potential for the development of unconscious prejudice. The case study by previous study showed similar evidence of a teacher's bias in track suggestions and disciplinary choices, recorded as the teacher's differing responses depending on who the student (Copur-Gencturk et al., 2020; Domen et al., 2020). As a consequence, we may deduce that this issue needs greater study and may be examined as a good signal for unconscious bias in classrooms given

that these two qualitative studies have produced convergent results, research done in educational settings.

Implication of this study results lent credence to the MODE model and offered evidence for the ubiquitous presence of automatic processing in teachers' interactions with students. A lot of the routine actions of teachers might be read in their nonverbal cues. Additionally, our data revealed that the MODE model's proposed deliberate thinking and automatic route were being used collaboratively by teachers in the classroom setting (Bevacqua & Colasante, 2019). Insightful for the field of teacher education and development is provided by the results as well. Enhancing teachers' reflexive thinking and self-regulation abilities, as well as increasing their awareness of possible bias in the classroom. Because of its exploratory character, this research only looked at teachers' actions in typical classrooms, when a wide variety of unpredictable factors are at play all at once. This meant that the quality of the anecdotal field notes depended on how well the observer paid attention (Kozol, 2018; Stoet & Geary, 2018). Even while we received data from certain secondary school instructors across classes, there wasn't enough information to draw any firm conclusions. We recognize that filling out a questionnaire about It's possible that teachers' pre-observation thoughts and actions toward students were impacted by the students' qualities. However, if the approach did have an effect on teachers' behavior in the classroom, it may have reduced the prevalence of biased behavior in the classroom.

#### 4. CONCLUSION

Every classroom had teachers that were biased toward certain kids over others. How teachers' actions affect their students. Some pupils' already low socioeconomic status worsens when they have less chances to learn from and connect with their teachers. It's possible that these students come from poor backgrounds. The existing disparities in students' educational outcomes may be exacerbated by teachers' decision to treat students differently. Because bias was found among teachers in every classroom in this study, it is imperative that future studies thoroughly examine potential solutions. It might perhaps motivate educators to provide equal treatment to their kids with kindness, fairness, and positivity.

#### 5. REFERENCES

- Bakken, L., Brown, N., & Downing, B. (2017). Early Childhood Education: The Long-Term Benefits. *Journal of Research in Childhood Education*, 31(2), 255–269. <https://doi.org/10.1080/02568543.2016.1273285>.
- Bevacqua, J., & Colasante, M. (2019). No lines: Observations from a pilot project to re-imagine, design and implement a flexible student-centred approach to study mode selection. *Journal of University Teaching & Learning Practice*, 16(1), 2. <https://doi.org/10.53761/1.16.1.2>.
- Blaikie, N. (2018). Confounding issues related to determining sample size in qualitative research. *International Journal of Social Research Methodology*, 21(5), 635–641. <https://doi.org/10.1080/13645579.2018.1454644>.
- Bonefeld, M., & Dickhäuser, O. (2018). (Biased) grading of students' performance: Students' names, performance level, and implicit attitudes. *Frontiers in Psychology*, 9, 481. <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.00481/full>.
- Budiarti, N. D., & Sugito, S. (2018). Implementation of Inclusive Education of Elementary Schools: a Case Study in Karangmojo Sub-District, Gunungkidul Regency. *Journal of Education and Learning (EduLearn)*, 12(2), 214–223. <https://doi.org/10.11591/edulearn.v12i2.8727>.
- Caneiro, J. P., Bunzli, S., & O'Sullivan, P. (2021). Beliefs about the body and pain: the critical role in musculoskeletal pain management. *Brazilian Journal of Physical Therapy*, 25(1), 17–29. <https://doi.org/10.1016/j.bjpt.2020.06.003>.
- Castaño-Muñoz, J., Kalz, M., Kreijns, K., & Punie, Y. (2018). Who is taking MOOCs for teachers' professional development on the use of ICT? A cross-sectional study from Spain. *Technology, Pedagogy and Education*, 27(5), 607–624. <https://doi.org/10.1080/1475939X.2018.1528997>.
- Castronovo, F., Stepanik, N., Van Meter, P. N., & Messner, J. I. (2022). Problem-solving processes in an educational construction simulation game. *Advanced Engineering Informatics*, 52(February), 101574. <https://doi.org/10.1016/j.aei.2022.101574>.
- Chin, M. J., Quinn, D. M., Dhaliwal, T. K., & Lovison, V. S. (2020). Bias in the air: A nationwide exploration of teachers' implicit racial attitudes, aggregate bias, and student outcomes. *Educational Researcher*, 49(8), 566–578. <https://doi.org/10.3102/0013189X20937240>.
- Chory, R. M., & Offstein, E. H. (2018). Too close for comfort? Faculty–student multiple relationships and their impact on student classroom conduct. *Ethics & Behavior*, 28(1), 23–44.

- <https://doi.org/10.1080/10508422.2016.1206475>.
- Copur-Gençturk, Y., Cimpian, J. R., Lubienski, S. T., & Thacker, I. (2020). Teachers' bias against the mathematical ability of female, Black, and Hispanic students. *Educational Researcher*, 49(1), 30–43. <https://doi.org/10.3102/0013189X19890577>.
- Domen, J., Hornstra, L., Weijers, D., van der Veen, I., & Peetsma, T. (2020). Differentiated need support by teachers: Student-specific provision of autonomy and structure and relations with student motivation. *British Journal of Educational Psychology*, 90(2), 403–423. <https://doi.org/10.1111/bjep.12302>.
- Fell, M. J., Pagel, L., Chen, C., Goldberg, M. H., Herberz, M., Huebner, G. M., Sareen, S., & Hahnel, U. J. J. (2020). Validity of energy social research during and after COVID-19: challenges, considerations, and responses. *Energy Research & Social Science*, 68, 101646. <https://doi.org/10.1016/j.erss.2020.101646>.
- FitzPatrick, B. (2019). Validity in qualitative health education research. *Currents in Pharmacy Teaching and Learning*, 11(2), 211–217. <https://doi.org/10.1016/j.cptl.2018.11.014>.
- Gentrup, S., & Rjosk, C. (2018). Pygmalion and the gender gap: Do teacher expectations contribute to differences in achievement between boys and girls at the beginning of schooling? *Educational Research and Evaluation*, 24(3–5), 295–323. <https://doi.org/10.1080/13803611.2018.1550840>.
- Gershenson, S., & Papageorge, N. (2018). The power of teacher expectations: How racial bias hinders student attainment. *Education Next*, 18(1), 64–71. <https://go.gale.com/ps/i.do?id=GALE%7CA520581893&sid=googleScholar&v=2.1&it=r&linkacss=abs&issn=15399664&p=AONE&sw=w>.
- Gruber, R. P., Smith, R. P., & Block, R. A. (2018). The illusory flow and passage of time within consciousness: A multidisciplinary analysis. *Timing & Time Perception*, 6(2), 125–153. [https://brill.com/view/journals/time/6/2/article-p125\\_125.xml](https://brill.com/view/journals/time/6/2/article-p125_125.xml).
- Hajal, N. J., & Paley, B. (2020). Parental emotion and emotion regulation: A critical target of study for research and intervention to promote child emotion socialization. *Developmental Psychology*, 56(3), 403. <https://doi.org/10.1037/dev0000864>.
- Harrison, J., & Lakin, J. (2018). Mainstream teachers' implicit beliefs about English language learners: An implicit association test study of teacher beliefs. *Journal of Language, Identity & Education*, 17(2), 85–102. <https://doi.org/10.1080/15348458.2017.1397520>.
- Havik, T., & Westergård, E. (2020). Do teachers matter? Students' perceptions of classroom interactions and student engagement. *Scandinavian Journal of Educational Research*, 64(4), 488–507. <https://doi.org/10.1080/00313831.2019.1577754>.
- Hobbiss, M., Sims, S., & Allen, R. (2021). Habit formation limits growth in teacher effectiveness: A review of converging evidence from neuroscience and social science. *Review of Education*, 9(1), 3–23. <https://doi.org/10.1002/rev3.3226>.
- Hong, J., Thakuriah, P. (Vonu), Mason, P., & Lido, C. (2020). The role of numeracy and financial literacy skills in the relationship between information and communication technology use and travel behaviour. *Travel Behaviour and Society*, 21(October 2019), 257–264. <https://doi.org/10.1016/j.tbs.2020.07.007>.
- Hong, W., Bernacki, M. L., & Perera, H. N. (2020). A latent profile analysis of undergraduates' achievement motivations and metacognitive behaviors, and their relations to achievement in science. *Journal of Educational Psychology*, 112(7), 1409. <https://doi.org/10.1037/edu0000445>.
- Huang, F. L. (2018). Do Black students misbehave more? Investigating the differential involvement hypothesis and out-of-school suspensions. *The Journal of Educational Research*, 111(3), 284–294. <https://doi.org/10.1080/00220671.2016.1253538>.
- Kaufmann, D. (2018). Reflection: Benefits of Gamification in Online Higher Education. *Journal of Instructional Research*, 7(1), 125–132. <https://doi.org/10.9743/jir.2018.12>.
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>.
- Kozol, J. (2018). Still separate, still unequal: America's educational apartheid. In *Thinking about schools* (pp. 445–464). Routledge.
- Kurdi, B., Ratliff, K. A., & Cunningham, W. A. (2021). Can the Implicit Association Test serve as a valid measure of automatic cognition? A response to Schimmack (2021). *Perspectives on Psychological Science*, 16(2), 422–434. <https://doi.org/10.1177/17456916209040>.
- Lauermann, F., & Berger, J.-L. (2021). Linking teacher self-efficacy and responsibility with teachers' self-reported and student-reported motivating styles and student engagement. *Learning and Instruction*, 76, 101441. <https://doi.org/10.1016/j.learninstruc.2020.101441>.

- Leacock, E. (2019). The influence of teacher attitudes on children's classroom performance: Case studies. In *The social life of children in a changing society* (pp. 47–64). Psychology Press.
- Niedźwiecka, A. (2020). Look me in the eyes: Mechanisms underlying the eye contact effect. *Child Development Perspectives*, 14(2), 78–82. <https://doi.org/10.1111/cdep.12361>.
- Pi, Z., Chen, M., Zhu, F., Yang, J., & Hu, W. (2022). Modulation of instructor's eye gaze by facial expression in video lectures. *Innovations in Education and Teaching International*, 59(1), 15–23. <https://doi.org/10.1080/14703297.2020.1788410>.
- Pit-ten Cate, I. M., & Glock, S. (2018). Teacher expectations concerning students with immigrant backgrounds or special educational needs. *Educational Research and Evaluation*, 24(3–5), 277–294. <https://doi.org/10.1080/13803611.2018.1550839>.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (85 C.E.). Common method biases in behavioural research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 5(879–903), 2003. <https://psycnet.apa.org/buy/2003-08045-010>.
- Puspaningtyas, N. D., & Ulfa, M. (2020). Improving Students Learning Outcomes In Blended Learning Through The Use Of Animated Video. *Kalamatika: Jurnal Pendidikan Matematika*, 5(2), 133–142. <https://doi.org/10.22236/KALAMATIKA.vol5no2.2020pp133-142>.
- Rautamo, M., Kvarnström, K., Sivén, M., Airaksinen, M., Lahdenne, P., & Sandler, N. (2020). Benefits and prerequisites associated with the adoption of oral 3D-printed medicines for pediatric patients: a focus group study among healthcare professionals. *Pharmaceutics*, 12(3), 229. <https://doi.org/10.3390/pharmaceutics12030229>.
- Rezaii, N., Walker, E., & Wolff, P. (2019). A machine learning approach to predicting psychosis using semantic density and latent content analysis. *NPJ Schizophrenia*, 5(1), 1–12. <https://www.nature.com/articles/s41537-019-0077-9?13571>.
- Ritchie, G. M. (2018). *The impact of academic co-curricular activity participation on academic achievement: a study of catholic high school seniors*. Seton Hall University.
- Rosati-Peterson, G. L., Piro, J. S., Straub, C., & O'Callaghan, C. (2021). A nonverbal immediacy treatment with pre-service teachers using mixed reality simulations. *Cogent Education*, 8(1), 1882114. <https://doi.org/10.1080/2331186X.2021.1882114>.
- Rose, J., & Johnson, C. W. (2020). Contextualizing reliability and validity in qualitative research: toward more rigorous and trustworthy qualitative social science in leisure research. *Journal of Leisure Research*, 51(4), 432–451. <https://doi.org/10.1080/00222216.2020.1722042>.
- Schirmmeister, E., Göhring, A., & Warnke, P. (2020). Psychological biases and heuristics in the context of foresight and scenario processes. *Futures & Foresight Science*, 2(2), e31. <https://doi.org/10.1002/ffo2.31>.
- Schmiege, S. J., Masyn, K. E., & Bryan, A. D. (2018). Confirmatory latent class analysis: Illustrations of empirically driven and theoretically driven model constraints. *Organizational Research Methods*, 21(4), 983–1001. <https://doi.org/10.1177/109442811774768>.
- Starck, J. G., Riddle, T., Sinclair, S., & Warikoo, N. (2020). Teachers are people too: Examining the racial bias of teachers compared to other American adults. *Educational Researcher*, 49(4), 273–284. <https://doi.org/10.3102/0013189X20912758>.
- Stoet, G., & Geary, D. C. (2018). The gender-equality paradox in science, technology, engineering, and mathematics education. *Psychological Science*, 29(4), 581–593. <https://doi.org/10.1177/0956797617741719>.
- Sukhera, J., Wodzinski, M., Teunissen, P. W., Lingard, L., & Watling, C. (2018). Striving while accepting: exploring the relationship between identity and implicit bias recognition and management. *Academic Medicine*, 93(11S), S82–S88. <https://doi.org/10.1097/ACM.0000000000002382>.
- Sutiyatno, S. (2018). The effect of teacher's verbal communication and non-verbal communication on students' English achievement. *Journal of Language Teaching and Research*, 9(2), 430–437. <https://core.ac.uk/download/pdf/266996140.pdf>.
- Ukrop, M., Švábenský, V., & Nehyba, J. (2019). Reflective diary for professional development of novice teachers. *Proceedings of the 50th ACM Technical Symposium on Computer Science Education*, 1088–1094. <https://doi.org/10.1145/3287324.3287448>.
- Uscianowski, C., Almeda, M. V., & Ginsburg, H. P. (2020). Differences in the complexity of math and literacy questions parents pose during storybook reading. *Early Childhood Research Quarterly*, 50, 40–50. <https://doi.org/10.1016/j.ecresq.2018.07.003>.
- van Prooijen, J.-W., & Van Vugt, M. (2018). Conspiracy theories: Evolved functions and psychological mechanisms. *Perspectives on Psychological Science*, 13(6), 770–788. <https://doi.org/10.1177/1745691618774270>.
- Wang, S., Rubie-Davies, C. M., & Meissel, K. (2020). The stability and trajectories of teacher expectations:



- Student achievement level as a moderator. *Learning and Individual Differences*, 78, 101819. <https://doi.org/10.1016/j.lindif.2019.101819>.
- Watchravesringkan, K. T. (2011). Exploring antecedents and consequences of consumer ethnocentrism: Evidence from Asian immigrants in the US. *International Journal of Consumer Studies*, 35(4), 383–390. <https://doi.org/10.1111/j.1470-6431.2010.00951.x>.
- Williams, K. D., & Nida, S. A. (2022). Ostracism and Social Exclusion: Implications for Separation, Social Isolation, and Loss. *Current Opinion in Psychology*, 101353. <https://doi.org/10.1016/j.copsyc.2022.101353>.
- Yang, J., & Treadway, D. C. (2018). A social influence interpretation of workplace ostracism and counterproductive work behavior. *Journal of Business Ethics*, 148(4), 879–891. <https://doi.org/10.1007/s10551-015-2912-x>.
- Yashima, T., MacIntyre, P. D., & Ikeda, M. (2018). Situated willingness to communicate in an L2: Interplay of individual characteristics and context. *Language Teaching Research*, 22(1), 115–137. <https://doi.org/10.1177/1362168816657851>.
- Yerdelen, S., & Sungur, S. (2019). Multilevel investigation of students' self-regulation processes in learning science: Classroom learning environment and teacher effectiveness. *International Journal of Science and Mathematics Education*, 17(1), 89–110. <https://doi.org/10.1007/s10763-018-9921-z>.