

LEARNING WITH OTHERS

A Study Exploring the Relationship Between Collaboration, Personalization, and Equity

Executive Summary

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Study Rationale

What does it mean to personalize learning? Does personalized learning look the same for all students? A personalized learning approach aims to offer “learning experiences that customize education to an individual’s personal needs and interests as well as connect the individual to adults and peers in a larger community of learners.”ⁱ Although an important hallmark of personalized learning is addressing the full range of students’ learning needs, emerging trends suggest that personalization is often equated with individual learning. This approach to personalization often relies heavily on the use of technology to enable students to learn independently and progress at their own pace. For many students, however, learning on their own in social isolation may not be an effective strategy for meeting their personalized learning needs. To truly personalize, we must recognize that students vary in their needs for social support and exchange. Providing collaborative learning opportunities is one



educational strategy that could help meet a wider range of student learning needs, and has been associated with a range of benefits for students, from enhanced motivationⁱⁱ to a deeper understanding of core concepts.ⁱⁱⁱ

Educational approaches that emphasize personalization, but limit students’ opportunities for learning with others, also may have implications for equity. Research suggests that collaboration may be especially important for addressing cultural learning differences and in meeting the needs of traditionally underserved students.^{iv} The provision of rich social learning opportunities may be particularly important for Black students who have been shown to thrive when they have access to meaningful, challenging social learning experiences.^v If the current trend in personalized learning continues to emphasize individual learning, will we inadvertently be shortchanging the learning needs of those students who are already at a disadvantage?

Our Approach

The aim of this study was to examine how collaboration is linked to personalization and explore racial/ethnic differences in experiences and benefits associated with collaboration. The study posed three research questions (see box).

Research Questions

- What are the relationships among opportunities for collaboration, classroom experiences, and outcomes, particularly for students who identify as Black?
 - To what extent do students have opportunities to participate in high-quality collaborative learning experiences?
 - What contextual, school-level factors do teachers identify as helping or hindering their ability to provide opportunities for high-quality collaboration in diverse, student-centered classrooms?
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We designed a descriptive and correlational study that took place within four high schools that had an explicit focus on personalization, offered regular opportunities for collaboration, and served a diverse student body. We collected data from six different sources during spring 2017: teacher and student surveys, teacher interviews, student focus groups, classroom observations, and student demographic and academic data. Our sample included 892 students, 138 teachers, and 30 classrooms within our four schools.

We identified and measured a set of structural and dynamic elements associated with high-quality collaboration. By *structural quality*, we mean those aspects of collaborative opportunities that are planned in advance by educators, such as in the design of activities or the intentional composition of collaborative groups. We use the term *dynamic quality* to refer to those aspects of collaborative opportunities that are realized in real-time as students engage in a collaborative task, interact with their peers, and respond to teacher facilitation strategies.

Elements of High-Quality Collaboration

Structural Quality Elements

- Student-centered, culturally responsive activities
- Activity requires group interdependence
- Balanced group composition
- Group norms and task clarity

Dynamic Quality Elements

- Responsive, respectful, and inclusive interactions
 - Constructive exchange
 - Shared leadership and decision making
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Our analyses of interview and focus group data included the identification of emergent themes from teachers and students. Our quantitative analyses focused on student and teacher survey responses as well as classroom observation ratings. Using teacher survey data, we examined overall responses and tested for differences between math and English language arts (ELA) teachers.^{vi} Using student survey data, we studied overall associations between our three factors of interest: opportunities for collaboration, classroom experiences, and outcomes. We also tested whether these associations differed between Black students and White students.^{vii} Relationships between factors were then classified as “weak” (below 0.3), “moderate” (between 0.3 and 0.5), or “strong” (greater than 0.5) depending on the strength of the association.^{viii}

We shared our initial findings with teachers, administrators, and other school staff at each of our four participating sites during half-day data forums. The nature of the questions posed, and the reflections and meaning derived from the results we shared, enabled us to identify areas for future research, broaden our interpretation of findings, and improve our communication of these results to maximize understanding of and use by school practitioners.

Our Findings

Our study offers further evidence of the benefits of collaboration for student learning. In addition, our study reveals some of the distinct ways in which collaboration is linked to students' perceptions of personalization in the classroom, and how Black students benefit from and experience collaboration differently from White and other non-Black students. Our top 10 takeaways from the study are listed below.

Key Study Findings Relevant for All Students

1. Student reports of having opportunities for high-quality collaboration were strongly associated with positive classroom experiences and higher engagement, motivation, and self-efficacy.
 2. Student reports of high-quality collaborative experiences were positively and strongly associated with students' perceptions of personalization—and personalization, in turn, was strongly associated with outcomes. Students' perceptions of personalization therefore served as a link between high-quality collaboration and outcomes.
 3. High-quality collaborative experiences were weakly and positively linked to grades. However, the relationship with grades was largely dependent on students' mindsets and dispositions, such as engagement, self-efficacy, and intrinsic motivation.
 4. Within classrooms, opportunities for constructive exchange among students (i.e., frequent and substantive discussion where students build off one another's ideas and explore areas of disagreement), were low overall, but were higher during collaborative groups than during other classroom activities.
 5. Students and teachers in our study reported more opportunities for high-quality collaboration in ELA than in math classrooms. In addition, ELA teachers perceived more benefits and greater available support for collaboration than did math teachers.
 6. Teachers struggled to balance their interest in offering collaboration with the perceived challenges of meeting the varying needs of their students during group work.
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Key Study Findings for Black Students

7. Black students assigned higher ratings on surveys for many aspects of their collaborative experiences than did White students.
8. Student reports of high-quality collaboration were positively associated with grades for Black students, regardless of their prior academic performance. For White students, high-quality collaboration was no longer related to grades after accounting for prior academic performance.
9. High-quality collaboration was positively linked to mindset and dispositional outcomes for both White and Black students. However, the ways in which high-quality collaboration, classroom experiences, and outcomes were linked differed between Black and White students. For instance, for White students, teacher expectations strongly and positively influenced the relationship between high-quality collaboration and a range of outcomes. For Black students, teacher expectations had far less of an influence on the positive relationship between high-quality collaboration and outcomes.
10. Students in the all-Black focus groups reported lower perceived relevance of collaborative activities, more frequent experiences of exclusion, stereotyping and marginalization, and lower perceived support from teachers for collaborative group work than did students participating in mixed-race focus groups.

Implications for Schools and Educators

- **Opportunities for high-quality collaboration could be among the factors that help contribute to positive changes in the academic trajectory of Black students.** We have new evidence that collaboration is linked to higher grades for Black students, even when we accounted for prior grades. We did not find this same result for White students. These findings suggest that for Black students, having the chance to engage in high-quality collaborative activities may help boost academic success. Schools and educators interested in addressing equity issues should consider increasing opportunities for high-quality collaboration as a potential strategy for maximizing success for students from varying backgrounds.
- **Collaboration is strongly linked to personalization.** We have new evidence to suggest that student reports of collaboration are strongly linked to students' perceptions of personalization. Together, collaborative experiences and perceptions of personalization are both positively related to students' mindsets and dispositions. Schools and educators interested in meeting the personalized learning needs of students as a strategy for enhancing learning outcomes should adopt a definition of personalization that includes social learning opportunities, and recognize that opportunities for collaboration are strongly linked to students' mindsets and dispositions, such as engagement, intrinsic motivation, and self-efficacy.

- **Collaboration and personalization are not mutually exclusive strategies.** Teachers in our study perceived challenges with trying to meet the varying needs of individual students through group work and, to a large extent, felt that collaboration was not always conducive to personalizing learning for students. For instance, some teachers felt that grouping struggling students with higher ability students might not allow students to receive sufficient academic support. Schools and educators may need to find different and more effective strategies for designing and facilitating group work so that teachers feel more confident that they can meet a wider array of student needs through collaborative group work.



- **Caution: Not all collaborative learning is high quality.** Our study found that the elements that compose high-quality collaboration are strongly interrelated, but that some aspects of high-quality collaboration were less prevalent than others. To ensure that students can benefit from collaborative opportunities, schools and educators should be mindful of the core dynamic and structural elements of collaboration, and be aware that offering student-centered, culturally responsive activities and promoting constructive exchange might be particularly challenging to achieve.
- **Lean in a bit more.** Students reported receiving insufficient support from teachers during collaborative group time. This perception was especially true for Black students. Educators and school leaders should reexamine how teachers support collaborative group work, and how they convey access to that support. Teachers also should recognize that Black students may associate teacher efforts to promote autonomy with lower available support from teachers—and could be more reluctant to ask for help or direction when they need it.
- **Black students' classroom experiences differ from those of non-Black students.** In our study, Black students were more likely to experience exclusion and more subtle forms of microaggression during group work than non-Black students, even in schools that were racially diverse and emphasized a learner-centered philosophy. Schools and educators should recognize that Black students may experience collaboration and the classroom environment differently from non-Black students—and should take extra steps to gather feedback directly from Black students to ensure that their collaborative and classroom experiences are positive and reflect desired quality elements.
- **Math teachers need more support for offering collaboration.** Math teachers in our study reported lower support from their school leaders and were more likely to believe that covering course content made it difficult to find time for collaboration. Schools and educators should recognize that teachers may perceive more challenges implementing collaboration in math courses; therefore, they may need to see evidence of success and have a set of strategies they can use to cover content through group work.

Implications for Researchers

- **Interpret student data with care.** Our study found that survey measures, even those that are carefully designed and tested ahead of time, did not accurately capture the experiences of varying student groups equally well in all areas. For example, responses to the item “I feel as if I am not given anything important to do to help our group” were more strongly associated with items addressing exclusion based on race and gender for Black students than for White students. This suggests important limitations in our survey instruments for accurately and consistently capturing perceptions of perceived exclusion for different groups of students. Researchers should invest more time in developing appropriate measures in partnership with students and should double check that survey measures are truly equivalent across racial/ethnic groups before making comparisons across groups.
- **Race and data collection methods matter.** Our study found that Black students responded differently across data sources. For example, Black students reported experiences of marginalization and microaggression related to collaborative group work more often when participating in a racially homogenous, all-Black focus group—rather than in a mixed-race focus group. As noted above, we also found that Black students and White students interpreted survey items related to microaggression and exclusion differently. The measurement shortcomings, and inconsistencies in Black student responses by data source, suggest that researchers interested in studying racial/ethnic differences should consider how the data source may influence student responses—particularly when the topic is focused on race. Researchers also may want to employ a study team that matches the student sample of interest and be sure to use a range of data collection methods when gathering information about student experiences from marginalized student groups.

Where Do We Go From Here?

This study confirmed many of our initial hypotheses, but it included a few surprises as well. In particular, our study findings highlighted differences in the perspectives and reports of collaborative experiences of Black students, indicating how classroom experiences are perceived differently by these two groups of students. However, the strength of the relationship between high-quality collaboration, classroom experiences, and outcomes was not consistently stronger for Black students than for White students, as had been initially predicted. Our results suggest that more research is needed to better understand the pathway through which collaboration positively influences student outcomes for Black students.

Interested in learning more? A full report of the Learning With Others study can be found [here](#).

Endnotes

- ⁱ Yonezawa, S. (2013). *Personalization in schools: Annotated bibliography* (p. 1). Students at the Center Series. Boston, MA: Jobs for the Future. Retrieved from <https://studentsatthecenterhub.org/resource/personalization-in-schools-annotated-bibliography/>
- ⁱⁱ Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, 72, 1135–1150.
- ⁱⁱⁱ Wentzel, K. R., & Watkins, D. E. (2011). Peer relationship and learning: Implications for instruction. In R. Mayer & P. Alexander (Eds.), *Handbook of research on learning and instruction* (pp. 322–343). New York, NY: Routledge.
- ^{iv} Noguera, P., Darling-Hammond, L., & Friedlaender, D. (2015). *Equal opportunity for deeper learning*. Students at the Center Series. Boston, MA: Jobs for the Future.
- ^v Tatum, A. (2012). *Literacy practices for African-American male adolescents*. Students at the Center Series. Boston, MA: Jobs for the Future.
- ^{vi} We performed *t*-tests to identify significant differences between math and English language arts teachers. Differences were considered statistically significant if the *p*-value was less than 0.05.
- ^{vii} We performed structural equation modeling to estimate relationships between the three factors of interest. To determine whether relationships differed between Black and White students, we performed these analyses with two sets of models: In one set, relationships were allowed to differ by race/ethnicity; in the other set, relationships were constrained to be the same across racial/ethnic groups. We compared the chi-square model fit statistics of these models to determine whether the pattern of relationships significantly differed between groups (with a *p*-value of less than 0.1).
- ^{viii} We used Cohen, 1988, as a guide: Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.