Survey Findings for 2018–19 Implementation of The Modern Classrooms Project

Rebecca Wolf, Ph.D.

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JOHNS HOPKINS
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Contents

EXECUTIVE SUMMARY:
Survey Findings for the 2018–19 Implementation of The Modern Classrooms Project

The Modern Classrooms Project is an innovative approach designed by teachers to meet students' academic needs by incorporating blended, self-paced, mastery-based principles into instruction. This approach also works to develop students' abilities to engage in self-directed learning. The Modern Classrooms Project contracted with the Center for Research and Reform in Education (CRRE) at Johns Hopkins University to analyze survey data collected during the implementation of The Modern Classrooms Project model during the 2018–19 school year. CRRE has ample expertise in a wide range of educational research services.

Sample & Data Source

Eight teachers participated in The Modern Classrooms Project training prior to the 2018–19 school year, and seven teachers implemented the model throughout the school year. Modern Classrooms teachers were surveyed prior to training (May/June 2018), after one semester of implementation of the Modern Classrooms approach (December/January), and then again at the end of the school year after one year of implementation (May/June 2019). Two-hundred and thirty students of Modern Classrooms teachers were also surveyed three times, at the start, middle, and end of the 2018–19 school year. This report summarizes findings from the analysis of the survey data.

Findings

This study provides preliminary empirical support for The Modern Classrooms Project. Students reported statistically significant increases over time in their perceived ability to engage in self-directed learning. Students also reported statistically significantly improved classroom behavior and increased personal and academic supports from their teachers at the end of the school year relative to the beginning of the school year. There were no statistically significant differences over time in survey responses regarding student engagement in learning or school or other academic behaviors.

Because the study sample included only seven teachers, the study was limited in being able to detect statistically significant changes over time in teacher survey responses. Despite this small sample limitation, we found statistically significant changes over time in teacher self-reports of engaging in effective classroom practices, providing academic supports, and feeling like they were able to effectively serve all students and prepare their students for the future. Survey items regarding teacher self-efficacy and well-being showed positive trends but did not show statistically significant changes over time. However, the vast majority of Modern Classrooms teachers indicated at the end of the

school year that they believed their job was sustainable, they were doing the best that they could, and that they believed they were growing professionally.

Conclusion

In conclusion, this study yields positive results for The Modern Classrooms Project from the perspective of both students and teachers who were exposed to the program during the 2018–19 school year. Given that this study is descriptive in nature, however, it cannot conclude that participation in The Modern Classrooms Project caused the positive changes identified in this report. More research is needed to replicate these findings in other contexts, as well as to better understand the relationship between teacher participation in The Modern Classrooms Project and expected changes in teacher and student outcomes over time.

Survey Findings for the 2018–19 Implementation of The Modern Classrooms Project

The Modern Classrooms Project is an innovative approach designed by teachers to meet students' academic needs by incorporating blended, self-paced, mastery-based principles into instruction. This approach also works to develop students' abilities to engage in self-directed learning. The Modern Classrooms Project contracted with the Center for Research and Reform in Education (CRRE) at Johns Hopkins University to analyze survey data collected during the implementation of The Modern Classrooms Project model during the 2018–19 school year. CRRE has ample expertise in a wide range of educational research services.

Eight teachers participated in The Modern Classrooms Project training prior to the 2018–19 school year, and seven teachers implemented the model throughout the school year. Modern Classrooms teachers were surveyed prior to training (May/June 2018), after one semester of implementation of the Modern Classrooms approach (December/January), and then again at the end of the school year after one year of implementation (May/June 2019). Students of Modern Classrooms teachers were also surveyed three times, at the start, middle, and end of the 2018–19 school year. This report summarizes findings from the analysis of the survey data. The following sections provide more details about the survey analysis and findings.

Method

Instruments

The student survey was developed by The Modern Classrooms Project and included items gauging:

- Student classroom behaviors and academic habits
- Student capacity to engage in self-directed learning
- Personal and academic support from their teachers
- Student engagement in learning and school

The teacher survey was also developed by The Modern Classrooms Project and included items relating to:

- Effective classroom practices
- Differentiation of instruction
- Provision of academic supports
- Preparation of students for the future
- Teacher self-efficacy, happiness, and well-being

Participants

Survey data were analyzed for the seven teachers who implemented The Modern Classrooms Project during the 2018–19 school year. These teachers taught at 3 public middle and high schools in the mid-Atlantic. Survey data were also analyzed for 230 students taught by Modern Classrooms teachers.[1] Table 1 below outlines the grade levels and course subjects for the student sample.

Table 1: Grade levels and course subjects for the student sample.

	N	Percent (%)
Grade		
6th	37	16.1
9th	38	16.5
10th	99	43.0
11th	52	22.6
12th	4	1.7
Subject		
Elective	15	6.5
English	36	15.7
Mathematics	85	37.0
Science	38	16.5
Social Studies	56	24.4
Student N	230	

Analytic Approach

For both the student and teacher surveys, the survey scale was a 5-point, Likert scale. Survey responses were recoded to combine "strongly agree" with "agree" responses and "strongly disagree" with "disagree" responses. Then, the percentages of participants who "agreed" or "strongly agreed" with items were descriptively examined across two time points, the beginning and end of the school year.

To assess changes over time, the percentages of agreement were also statistically compared from the beginning to the end of the school year using z-tests of proportions. This analysis determined whether there appeared to be changes over time, while limiting the possibility that observed changes over time were due to chance alone. To ensure that findings reflected changes over time, as opposed to different student and teacher samples at each time point, we analyzed only students and teachers who took the survey at both time points (beginning and end of the year). Not all survey items showed statistically significant increases over time, yet the small sample size for the teacher sample (N=7) was a limiting factor.

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[1] Note that 34 students were taught by more than one Modern Classrooms teacher and were therefore included in the survey analysis more than once. The total sample size for the student survey analysis was 264.

Results

Student Survey

Students reported statistically significant increases from the beginning to the end of the school year in self-directed learning, classroom behavior, and academic and personal supports from their teacher. There were no statistically significant differences over time in survey responses regarding student engagement in learning or school or other academic behaviors. Findings in this report are organized on the basis of which survey items related to one another either conceptually or using factor analysis.

   Self-directed learning. One potential benefit of The Modern Classrooms Project approach is that students are exposed to self-directed learning. Survey findings support that students increased in their ability to engage in self-directed learning over the course of the school year. For example, students reported that they:

- Learned how to use technology (57% at beginning to 77% at end)
- Can teach themselves new things (51% at beginning to 62% at end)
- Can catch up if they missed class (67% at beginning to 78% at end)
- Were responsible for their own learning (68% at beginning to 82% at end)
- Can learn at their own pace (65% at beginning to 82% at end)
- Always had something challenging to do (69% at beginning to 79% at end)

The following Figures 1 and 2 present these findings in graphical form. Responses to survey items with asterisks showed statistically significant changes over time, from the beginning to the end of the school year, while responses to items without asterisks did not significantly change over time.

Figure 1: Student self-reported self-directed learning over time.
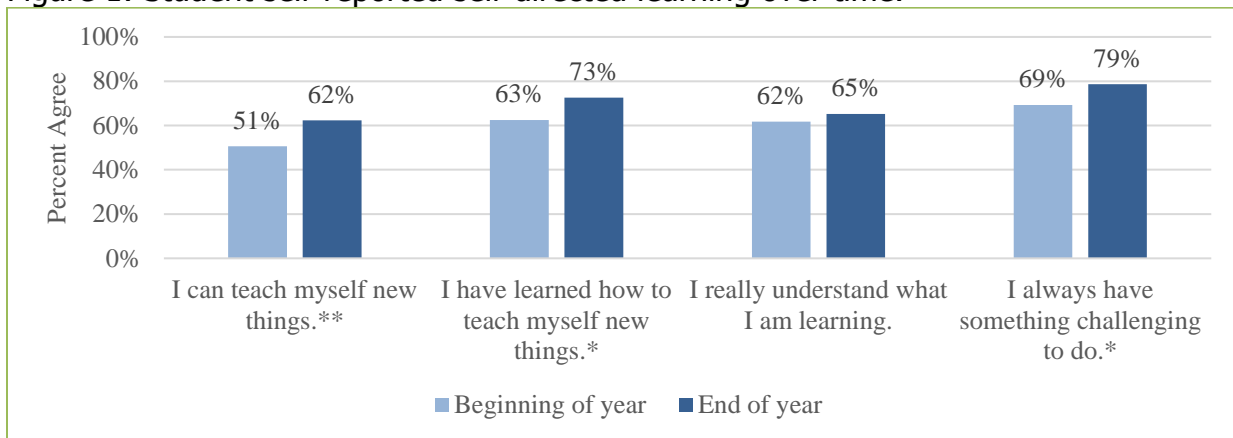
NOTE—* p<.05, **p<.01.

Figure 2: Student self-reported self-directed learning over time (continued).
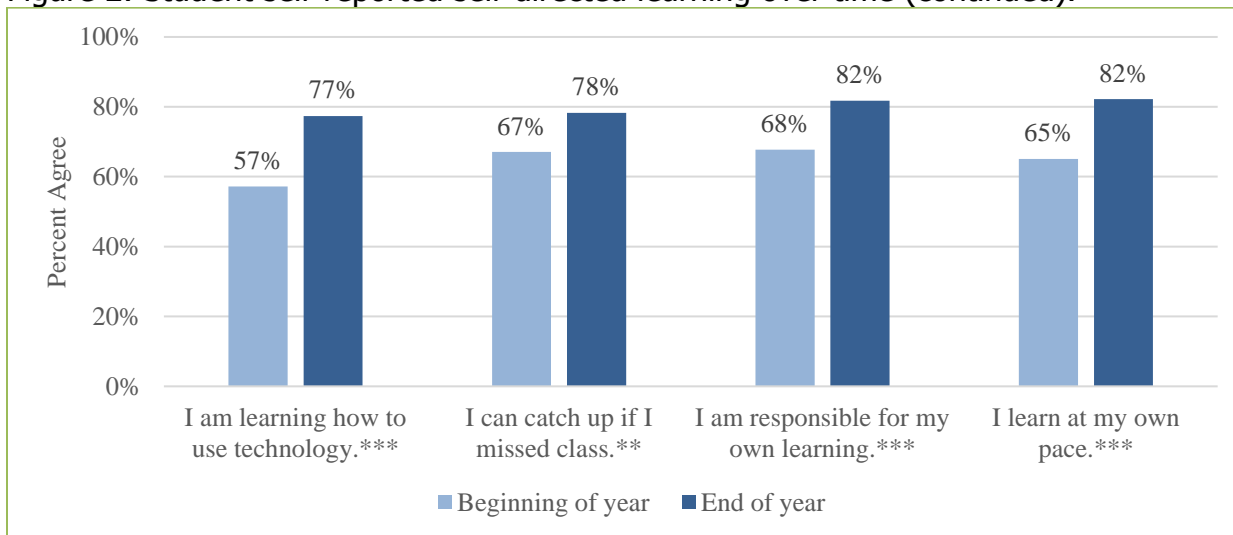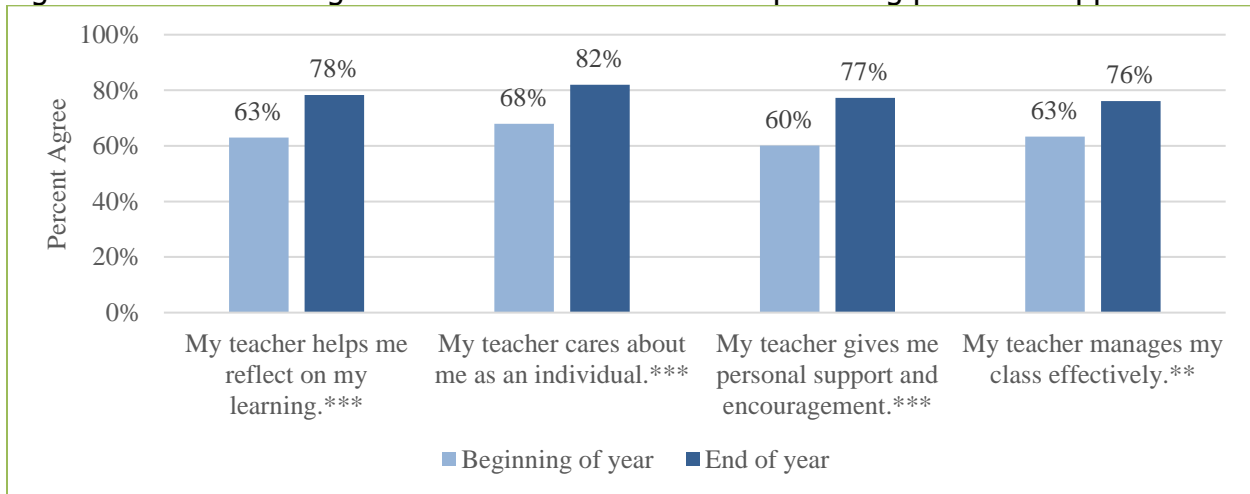

NOTE—**p<.01, ***p<.001.

Academic and personal supports from teachers. The student survey included items gauging how well teachers supported students, both academically and personally. Student survey responses over time showed statistically significant increases in the degree to which students felt supported by their teachers:

- My teacher cares about me as an individual (68% at beginning to 82% at end)
- My teacher gives me personal support and encouragement (60% at beginning to 77% at end)
- My teacher helps me reflect on my learning (63% at beginning to 78% at end)
- My teacher challenges me to learn (71% at beginning to 83% at end)
- My teacher lets me control how I learn (48% at beginning to 78% at end)

Relatedly, students reported improvements in their teachers' classroom management over time. Sixty-three percent of students agreed with, "My teacher manages my class effectively," at the beginning of the year compared with 76% of students at the end of the year. Figure 3 shows how students rated their teachers in terms of personal supports, and Figure 4 shows how students rated their teachers in terms of academic supports.

Figure 3: Student ratings of their teachers in terms of providing personal supports.


NOTE—**p<.01, ***p<.001.

Figure 4: Student ratings of their teachers in terms of providing academic supports.
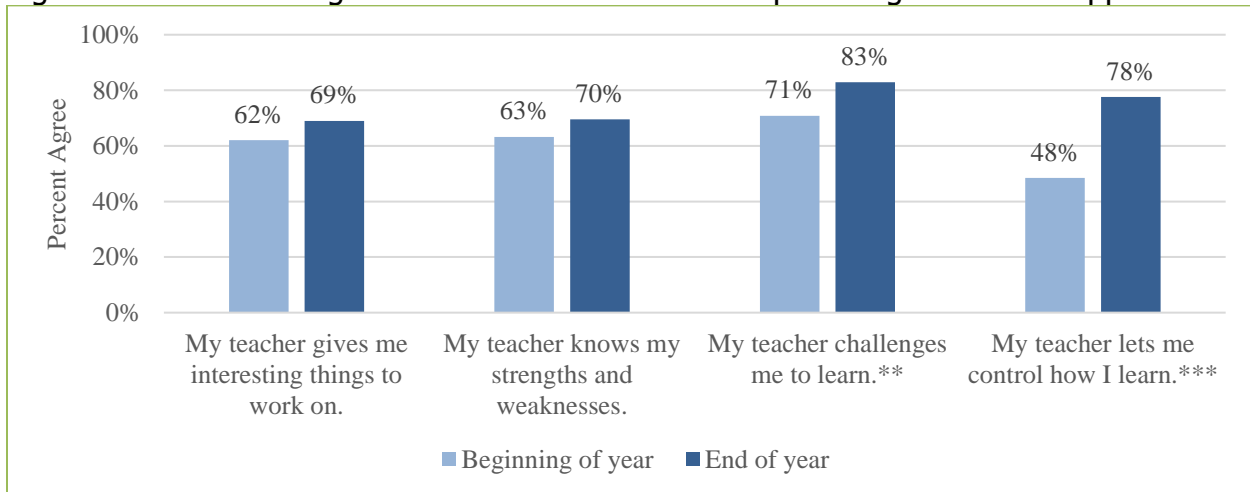
NOTE—**p<.01, ***p<.001.

Academic behaviors. Student survey responses showed increases over time in the extent to which students believed that they behaved well during class (77% at the beginning of the year to 85% at the end of the year). Changes over time in other academic behaviors—effective use of time, good study habits, reflecting on learning—were not statistically significantly different than zero. Figure 5 outlines these results.

Figure 5: Student self-reported academic behaviors over time.
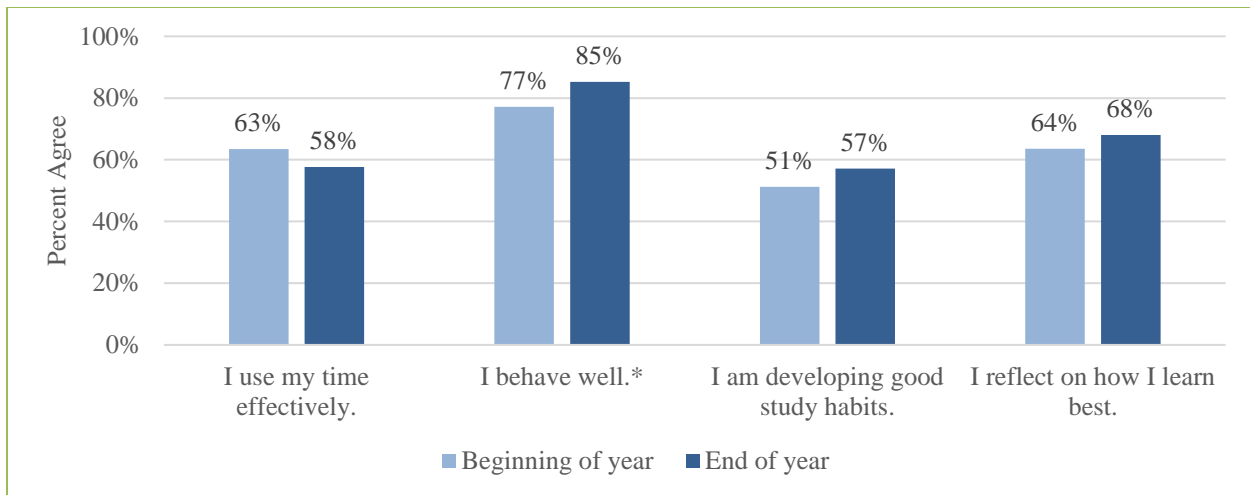
NOTE—*p<.05.

Student engagement in learning and school. Exposure to The Modern Classrooms approach in at least one classroom did not yield statistically significant changes over time in student self-reported levels of engagement in school or learning. This finding is not entirely unsurprising, however, as exposure to The Modern Classrooms Project in one classroom may have not been enough to change student outlooks on school. Future research is needed to assess whether prolonged exposure or exposure to multiple Modern Classrooms may change levels of student engagement over time. Figures 6 and 7 show findings regarding student engagement in school and learning over time, respectively. Figure 8 shows student responses to self-efficacy items over time.

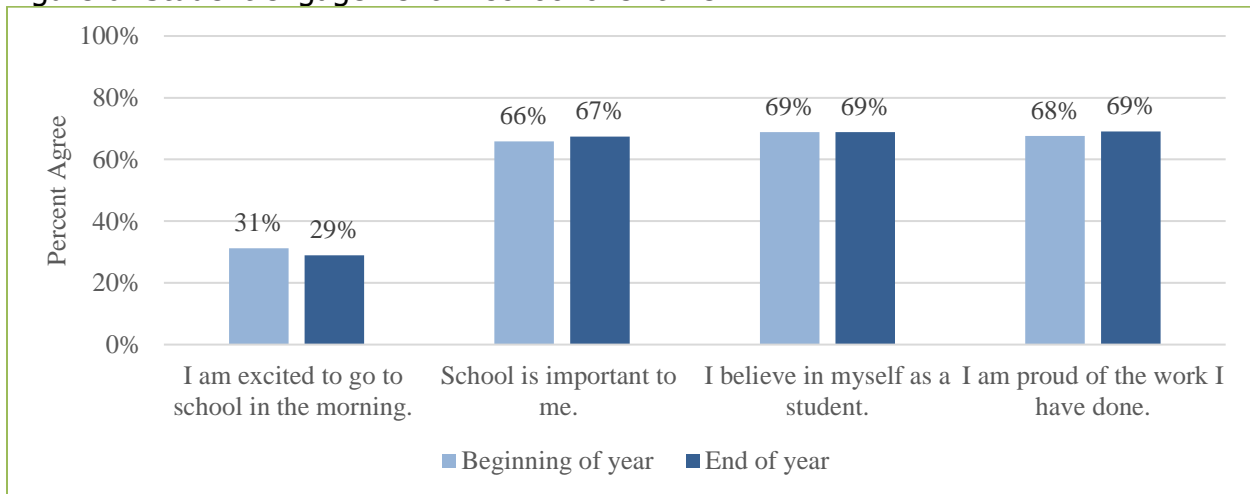Figure 6: Student engagement in school over time.

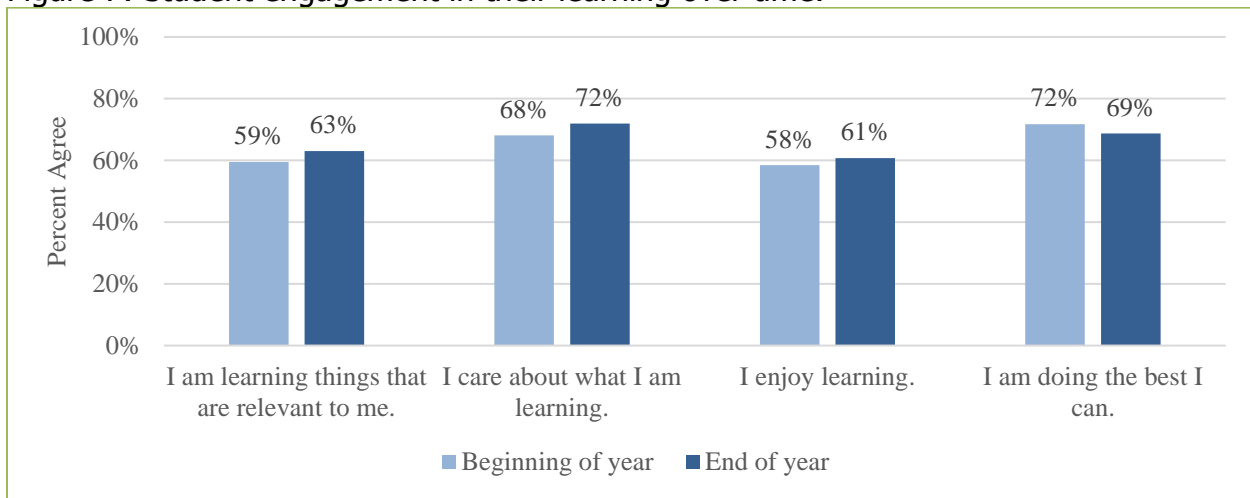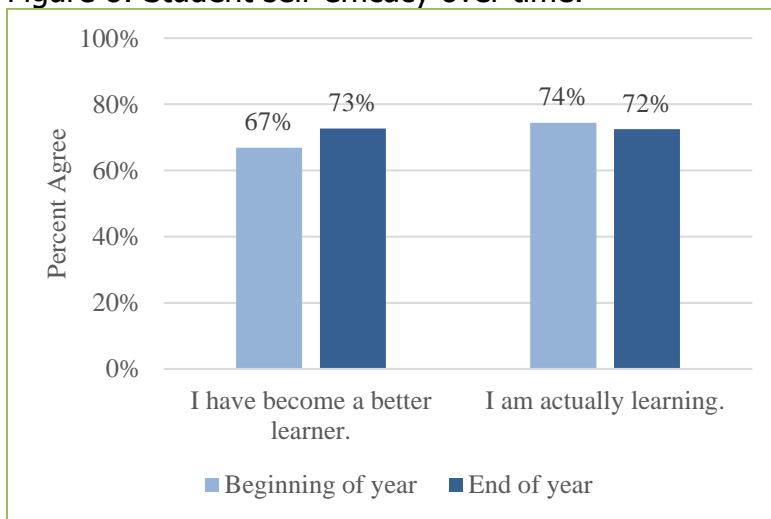Figure 7: Student engagement in their learning over time.

Figure 8: Student self-efficacy over time.

Teacher Survey

Because the study sample included only seven teachers, the study was limited in being able to detect statistically significant changes over time in teacher survey responses. Despite this small sample limitation, we found statistically significant changes over time in teacher self-reports of engaging in effective classroom practices, providing academic supports, and feeling like they were able to effectively serve all students and prepare their students for the future. Survey items regarding teacher self-efficacy and well-being showed positive trends but did not show statistically significant changes over time.

Effective classroom practices. Teachers reported using their time and technology more effectively after one year of implementing the Modern Classrooms approach:

- I use my time effectively (43% at beginning and 100% at end)
- I use technology effectively (43% at beginning and 100% at end)

There was also a positive trend in the percentage of teachers reporting that they could effectively manage student behavior, but the changes over time were not statistically significant (57% at beginning versus 86% at end). Figure 9 outlines these findings.

Figure 9: Teacher classroom practices over time.
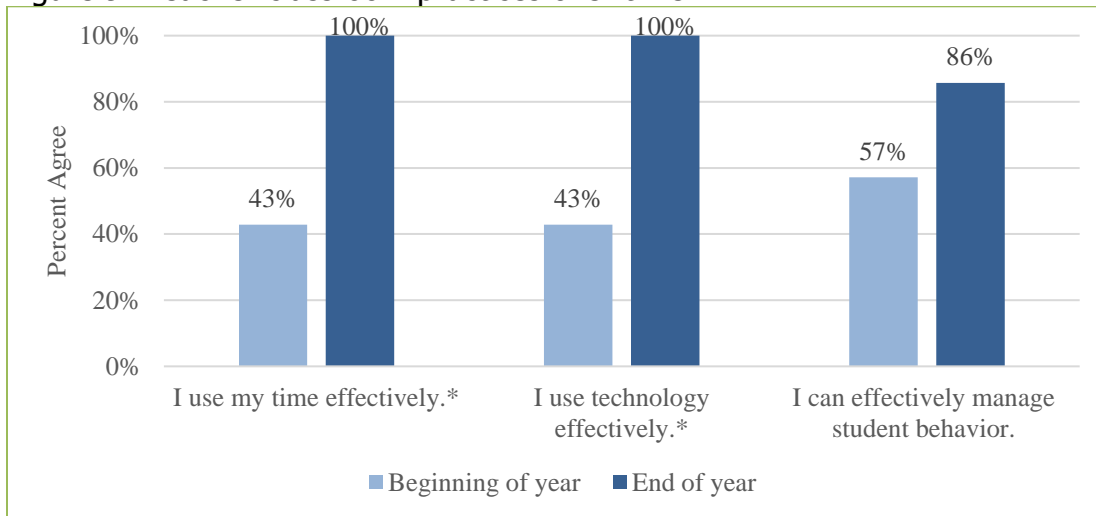
NOTE—*p<.05.

Academic supports. Teachers reported providing academic supports to a greater extent at the end of the school year compared with the beginning:

- I teach my students effective study skills (14% at beginning and 100% at end)
- I help my students reflect on their learning (29% at beginning and 100% at end)
- I provide students with adequate time to revise their work (29% at beginning and 86% at end)
- I can easily help students who have missed class catch up (14% at beginning and 86% at end)
- I feel I am able to effectively serve students at all levels (0% at beginning and 71% at end)

Along these lines, teachers increasingly felt over the course of the school year that they were preparing students for the real world (29% at beginning versus 86% at end). Figure 10 shows the results for the teacher self-reported ratings of their academic supports over time. Figure 11 shows the results relating to differentiation of instruction over time. And Figure 12 shows to what extent teachers believed that they were preparing their students for the future.

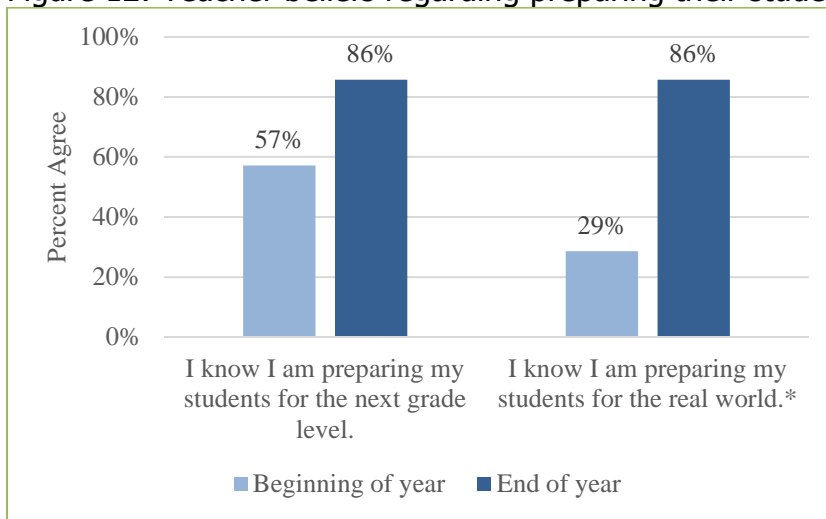Figure 10: Teacher provision of academic supports over time.
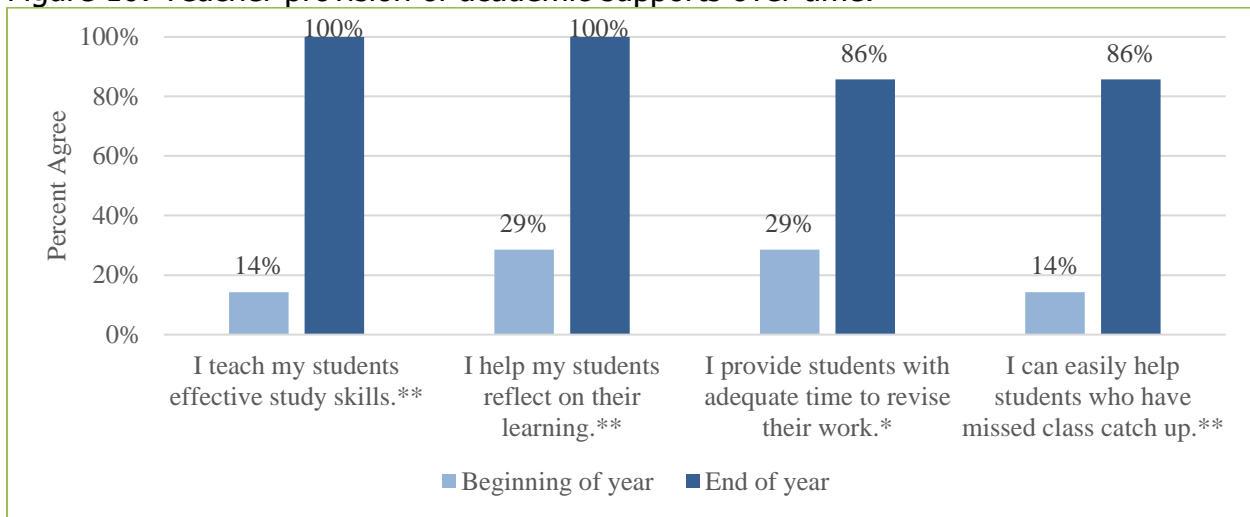
NOTE—*p<.05, **p<.01.

Figure 11: Teacher differentiation of instruction over time.
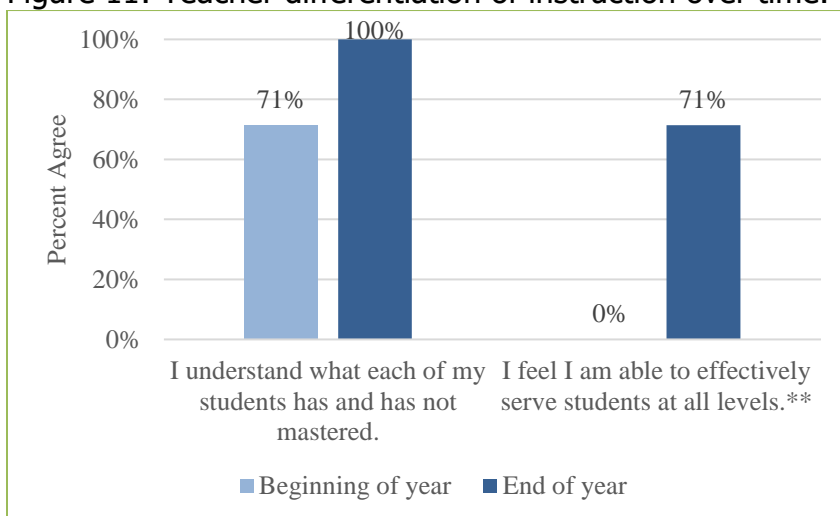
NOTE—**p<.01.

Figure 12: Teacher beliefs regarding preparing their students for the future over time.

NOTE—*p<.05.

Teacher self-efficacy and well-being. Survey data descriptively indicated positive changes over time in teacher self-efficacy and well-being, but changes over time were not statistically significant. Notably, regarding teacher self-efficacy, 43% of teachers reported "doing the best that they could" at the beginning of the school year compared with 86% of teachers at the end of the school year. In addition, 43% of teachers found "class time to be stressful" at the beginning of the year, compared with only 29% at the end of the school year. Finally, only 29% of teachers believed that their job was sustainable at the beginning of the year compared with 71% at the end. Figure 13 shows the changes over time in how teachers responded to survey items that related to self-efficacy, and Figure 14 shows the results for survey items related to teacher well-being.

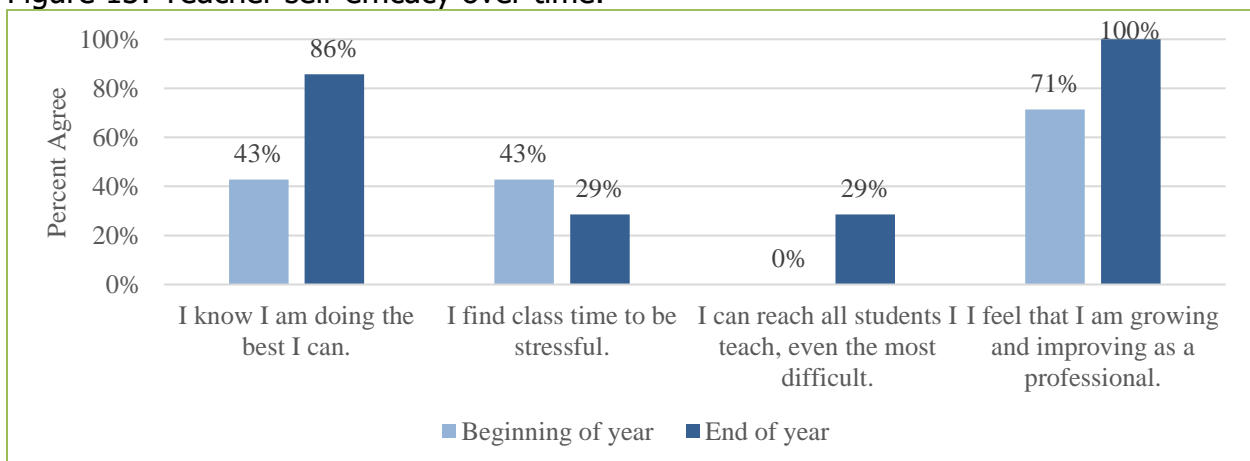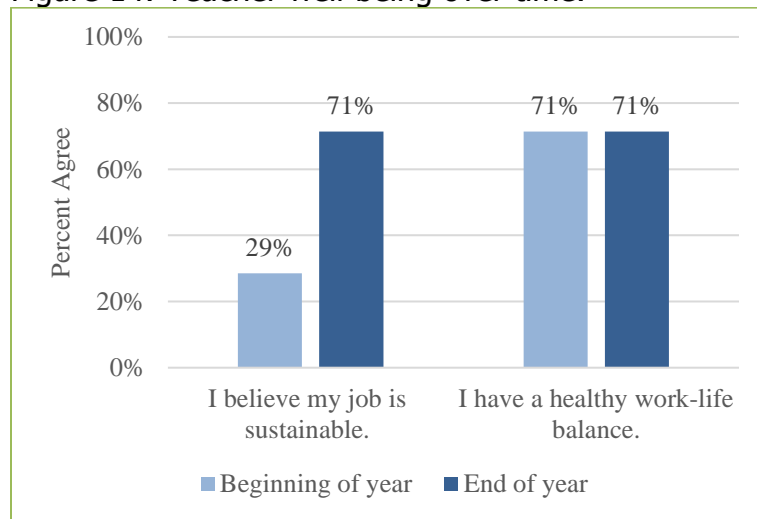Figure 13: Teacher self-efficacy over time.

Figure 14: Teacher well-being over time.

Discussion

This study provides preliminary empirical support for The Modern Classrooms Project. Students reported statistically significant increases over time in their perceived ability to engage in self-directed learning. Students also reported statistically significantly improved classroom behavior and increased personal and academic supports from their teachers at the end of the school year relative to the beginning of the school year. One limitation of this study, however, is that it is descriptive in nature. Without additional research, we cannot rule out the possibility that students would have rated their teachers higher at the end of the school year than at the beginning in the absence of Modern Classrooms implementation. That said, the alignment between the survey items and the focus of The Modern Classrooms Project yields credibility that these changes over time were the result of the program.

Teacher survey data also yielded positive findings. Over the course of the school year, teachers increasingly reported engaging in effective classroom practices, providing academic supports, and feeling like they were able to effectively serve all students and prepare their students for the future. Other survey items relating to teacher self-efficacy and well-being did not indicate statistically significant differences over time, but the small sample size of seven teachers was a limiting factor in this study. Moreover, the vast majority of Modern Classrooms teachers indicated at the end of the school year that they believed their job was sustainable, they were doing the best that they could, and that they believed they were growing professionally.

In conclusion, this study yields positive results for The Modern Classrooms Project from the perspective of both students and teachers who were exposed to the program during the 2018–19 school year. Given that this study is descriptive, however, it cannot conclude that participation in The Modern Classrooms Project caused the positive changes

identified in this report. More research is needed to replicate these findings in other contexts, as well as to better understand the relationship between teacher participation in The Modern Classrooms Project and expected changes in teacher and student outcomes over time.