Most students spend half or more of their in-school time engaged with digital learning, replacing a portion of excellent, in-person teachers’ whole-group instruction and other types of teaching. Excellent teachers pull out students in frequently changing, flexible groupings for project-based learning, seminars, small-group instruction, and tutoring. The amount and type of face-to-face instruction varies by day and student. Teachers differentiate pull-out instruction based on individual student needs, which they assess through reviewing both student work and data generated from digital assessments. Teachers may be assisted by tutors and digital lab monitors. Teachers collaborate with other teachers, tutors, and other teammates across classes, subjects, and grades. This model may be most useful at the secondary level, when more students are self-directed, and more screen time is developmentally appropriate. Estimated Reach Extension Effects: 50%–100% more students reached per excellent teacher; far more if combined with subject specialization.

Schools using this model are able to make the best use of excellent teachers’ valuable time and personalized digital instruction to give students highly differentiated learning experiences. This model is designed to tailor both digital and face-to-face instruction to each student's needs. Schools with diverse student populations, such as a wide range of current achievement levels, may find this model a good fit.

Schools may implement this model across whole schools or in some subjects but not others, with attention to scheduling compatibility. Schools may choose to have all teachers swap a portion of their time with digital instruction regardless of prior effectiveness, to free all teachers’ time for collaboration and planning and/or to free funds to pay teachers more.

In this model, each student has an excellent teacher accountable for his or her learning outcomes in every prioritized subject. Teachers are able to work with widely varying group sizes, because students can learn in a digital lab or work station any time they are not with the teacher. This gives motivated students flexibility to pursue learning at their own pace, while also giving teachers flexibility to meet differing students’ needs during face-to-face instruction.

Teachers use information they have about each student’s learning to determine what kinds of face-to-face instruction each student needs and to group students for this instruction. The excellent teacher also ensures that each student’s digital instruction is appropriate for the student’s level of mastery.

The number of students reached, group size, and the amounts of face-to-face and digital instruction can vary widely under the Flex model (see tables below). During digital learning, students may be in a digital lab or in a large classroom in which both digital and face-to-face instruction occur. This model differs from a Rotation, because in Rotations students alternate in whole-class groups between digital and face-to-face instruction on a fixed schedule.

Role and Schedule Changes for Excellent Teachers: Excellent teachers shift from routine to flexible roles. Digital instruction provides basic knowledge and skill development, allowing excellent
teachers to spend their time with students building deeper knowledge, developing higher-order thinking skills, and reinforcing and applying these skills and knowledge to solve real-world problems. Teachers can focus on enriched and personalized instruction with smaller groups of students.

✱ Excellent teachers can rely on student work, as well as frequent digital reports about students’ learning progress during digital instruction, to determine what each student needs.

✱ Teachers group their students for projects, seminars, small-group instruction, and individual follow-up based on each student’s needs. Excellent teachers then provide this instruction, obtaining assistance from tutors when available.

✱ Face-to-face time with students lets excellent teachers continue to provide the motivational, behavioral, time-and-task management, and social and emotional development crucial to students’ overall success.

✱ Excellent teachers collaborate with other teachers, tutors, and paraprofessional teammates. They direct tutoring content and make or recommend changes in digital instruction to school leadership.

New Roles for Other Staff:

✱ If students participate in digital instruction in a lab instead of classrooms, lab monitors supervise students. They also may supervise students who are working with tutors or on projects in the same room.

✱ Schools may reduce the number of non-classroom instructional specialists who provide remedial and advanced instruction, freeing funds that might be used to pay excellent teachers more. Some instructional specialists may be candidates for reach-extended teaching roles.

✱ Optional positions may increase the number of students excellent teachers can reach effectively. Tutors and teaching assistants may contribute to excellence, by following the lead of excellent teachers and playing supporting roles.
  • Tutors may provide small-group and individual instruction at the direction of teachers.
  • Teaching assistants may relieve teachers of administrative work.

Impact on Students: Students who would not otherwise have excellent teachers benefit directly with higher learning progress and other improved outcomes. Students receive a personalized learning experience under the Flex model. Teachers can vary the quantity, level, and nature of both digital and face-to-face instruction to meet differing students’ needs. Teachers can also vary group sizes and student groupings for face-to-face instruction.

✱ Motivated students are empowered to learn at a faster pace using digital instruction, with progress based on demonstrated mastery of each learning unit. Face-to-face time with teachers can be enriched by, for example, focusing on advanced concepts and applying knowledge to solve real-world problems.

✱ Students of average performance might spend more time learning face-to-face with excellent teachers, who can use this time to reinforce skills and knowledge and to motivate students with engaging, enriched instruction.

✱ Students who are struggling with one or more subjects, or a discrete unit, could spend more face-to-face learning time with excellent teachers, who work with them to reinforce basic skills and knowledge.

Most students will need a schedule with clear time blocks to ensure that they are obtaining instruction in all their courses, taking appropriate breaks, and incorporating lunch and subjects that are not taught using digital instruction (e.g., fine arts, physical education).

Scheduling Changes: The school day may be organized into discrete class periods, during which students work on designated subjects, whether digitally or face-to-face with a teacher. Flex schools may operate without designated class periods, however, increasing flexibility but also the complexity of scheduling pull-outs. In all Flex schools, scheduling must be built to allow use of multiple spaces where students can have digital and/or face-to-face instruction, and to allow flexible student grouping and methods of face-to-face instruction.

Pay Changes: Teachers who teach more students can be paid more, because digital lab monitors (or possibly teaching assistants in large classrooms) are paid less and can supervise several (e.g., two to four) classes’ worth of students at once. Schools can pay even more to those who both reach more students and achieve excellent outcomes for those students. Reduction of non-classroom instructional specialists may also enable higher pay for teachers who extend their reach.

Cost Savings To Be Shared by Excellent Teachers and School: This model can be budget neutral. Schools can save money by paying less for digital lab monitors than classroom teachers, having more
than one class of students in digital labs simultaneously, and by reducing the number of non-classroom instructional specialists. Digital lab monitors can supervise multiple classrooms of students if the school has lab rooms large enough to accommodate two or more classes of students. They can then share that financial benefit through higher salaries for teachers who successfully reach more students. Additional costs may include investments in new technology and pay for new tutor positions or other optional roles. New schools may save construction costs by building facilities with fewer, larger classrooms. These rooms may be digital labs serving multiple classrooms of students at a time, or combined digital and face-to-face classrooms.

**Changes to Class/Group Size:** Class and group sizes will vary widely under the Flex model. Because whole-group instruction time is reduced, a portion of face-to-face learning time with excellent teachers will be in groups smaller than today’s typical class size.

**Facilities Changes:** To take full advantage of the Flex model, schools need to dedicate significant space for digital learning. This may be done in digital learning labs or in large classrooms that combine digital work stations and face-to-face learning space. Whether in dedicated or shared space, digital instruction requires facilities with electrical and Internet connectivity for the maximum student load.

Face-to-face instructional groups vary in size and purpose, so physical space will ideally lend itself to flexible use with larger, flexible spaces. Mobile dividers to create smaller spaces within larger rooms, movable tables for small or large groups, and acoustics to limit noise are ideal.

**Technology Needs:** For schools to implement this model, students must have Internet access and individual student access to computers. Digital instruction may be purchased as discrete programs from external providers or developed by the school, such as by digitizing lessons by the most outstanding teacher on a particular topic. Software that tracks student progress and aids in identifying instructional needs is particularly important to the Flex school model. The more time students spend with digital instruction, the more important the quality of digital instruction becomes. Schools in which teachers record their own instruction need recording and playback equipment.

**Estimated Reach Effect Calculation Assumptions:** At the secondary level, although students may learn online for two-thirds of the time or more, we assume for estimating purposes that students spend an average of half of their in-school instructional time learning digitally. Some secondary schools may have student populations for whom more digital time is possible. Teachers may extend their reach in one, some, or all class periods. Teachers also may use freed time to do additional planning and review student work, rather than to further extend their reach. For example, to extend excellent teachers’ reach to 50% more students, each teacher can teach additional classes of students for half of his or her class periods (if any), while leaving the freed time in the other half of class periods for additional planning. Or, in Flex schools with a less-scheduled structure, schools may cap teacher reach to ensure that each teacher has enough time to spend on face-to-face instruction, planning, and collaboration with other teachers and staff. Excellent teachers may increase reach up to 100% more students if technology and help from other staff members reduce non-instructional planning and grading time enough that teachers can successfully double their student load.

**Critical Implementation Decisions, Among Others, Include:**

- Which teachers will extend their reach? Consider past learning results and efficiency in monitoring learning and in planning instruction.
- What roles will remain for other teachers whose reach is not extended? How will new teachers enter teaching roles in the school?
- Will teachers need training or additional tools to integrate classroom learning with digital instruction?
- How many classes of what size will each extended teacher teach? At first? Later goal?
- What instructional content will teachers cover, and what will be addressed with digital instruction? Will this be uniform or semi-structured, or may teachers decide?
- Will extended teachers specialize in subjects (if so: see In-Person Rotation + Subject Specialization version of this model at opportunityculture.org/reach/school-models/)? Will some non-instructional time also be reallocated (if so, what)?
Will teachers teach in teams, covering differing roles in the same subjects, in order to allow the desired quantity of digital instruction?

How much time will students spend in digital instruction? Consider age-appropriate percentages for students that also work for scheduling teachers, digital materials, and facilities.

How many students will be in the digital learning lab at one time? Will tutors be scheduled during this time? By whom?

Will all digital learning occur at school, or will homework time be included? Consider current homework completion rates and students’ home access to hardware and high-speed Internet.

How will student scheduling changes be integrated with other classes and activities?

When will teachers have time to monitor student learning and plan instruction?

Which students will be included? Consider which students will benefit most, as well as the student mix across classrooms, appropriateness of available digital instruction for students with different needs, and the demonstrated strengths of available teachers with differing students.

How will the allocation of teacher aides and non-classroom specialists change? Will an aide be needed to help teachers replace noninstructional time with more instructional planning? Can some non-classroom instructional specialist roles be eliminated? Might some specialists shift to classrooms?

How will pay change for teachers who reach more classes? Digital lab monitors? What, if any, portion of pay will be contingent on student outcomes?

What scale of change is needed to fund digital labs and reduction in non-classroom specialists?

For existing schools changing to time-technology swaps (rather than new schools), consider options for transitioning positions that are eventually eliminated. Voluntary attrition, early retirement, voluntary shifting of current teachers into alternative positions, or (where warranted) dismissal of ineffective teacher(s) are some options.

What, if any, changes in facilities are necessary? Are larger rooms for digital labs possible in existing buildings?

How will the change be communicated to convey the value to teachers and students?

What changes in policies and practices related to hiring, retention, dismissal, professional development, leadership, and teacher evaluation are needed?

Secondary Flex: Students Learn Digitally an Average of 1/2 of School Time*

<table>
<thead>
<tr>
<th>Class Period</th>
<th># of Students Per Class</th>
<th>Cumulative Student Load for Each Additional Period Under the Flex Model (Average 1/2 Digital Learning)</th>
<th>Cumulative Additional % of Students Reached By Extending Reach Each Class Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cohort A</td>
<td>Cohort B</td>
<td></td>
</tr>
<tr>
<td>Initial Load: 144 Students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24</td>
<td>24</td>
<td>168</td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>6</td>
<td>24</td>
<td>24</td>
<td>288</td>
</tr>
</tbody>
</table>

*Students are supervised by digital lab monitors or, if in large classrooms, by teaching assistants when not learning face-to-face with teachers. For estimating purposes, we assume that students in each cohort spend an average of half of their school time learning digitally and half learning in-person with an excellent teacher, though this may vary widely by student, school, and subject. Some students will need far more face-to-face time and some less.
At the elementary level, a teacher who replaces an average of half of student learning time with digital learning would be able to reach two times the number of students in a typical class (a 100% increase). On average, this would give excellent teachers a student load of 48. Lower percentages of digital learning are also possible, as illustrated in the following table; see the In-Person Rotation (Elementary) model for additional alternatives at opportunityculture.org/reach/school-models/.

### Elementary Flex: Additional Students Reached with Differing Time on Digital Learning and Staffing Changes

<table>
<thead>
<tr>
<th>BEFORE</th>
<th>AFTER</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Teachers</td>
<td># of Teachers*</td>
</tr>
<tr>
<td>1</td>
<td>NA</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
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<td>2</td>
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<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

*Students are supervised by digital lab monitors or teaching assistants when not with teachers. **Teachers must team-teach to make all except 100% reach extension work at elementary level.

Schools can increase excellent teachers’ reach without adding more digital learning time if teachers specialize in their best subjects:

### Elementary Flex + Subject Specialization: Additional Students Reached with Differing Time on Digital Learning and Staffing Changes

<table>
<thead>
<tr>
<th>Student Time on Digital Learning</th>
<th>Class Size*</th>
<th>Maximum # of Classes Per Day Per Teacher**</th>
<th>Maximum Additional % of Students Reached When Adding Subject Specialization***</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>24</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>1/3</td>
<td>24</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>1/4</td>
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<td>5</td>
</tr>
<tr>
<td>1/5</td>
<td>24</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

*Class size is current U.S. average. Students are with digital lab monitors or teaching assistants when not with teachers. **Assumes in-school learning time on math/science (8 hours/week) and language arts/social studies (14 hours/week) stays near national averages, including digital learning. ***These figures show the maximum additional percentage of students each subject-specializing teacher can teach beyond one classroom.

See In-Person Rotation (Elementary) and In-Person Rotation + Subject Specialization (Elementary) for elementary examples and schedules at opportunityculture.org/reach/school-models/.
EXAMPLES OF PULLOUTS: ELEMENTARY OR SECONDARY

In both elementary and secondary schools, teachers may use class time in varying ways and may combine students from different “classes” for differing types of instruction. For example, a teacher may be responsible for 48 students (two “classes” of 24 students) for a given block of time in a Flex school. Options for face-to-face time with groups of students of varying sizes include:

✱ Facilitating project teams of six students each, while other students work in the digital lab. The next day, facilitating other project teams.
✱ Meeting with five students to hear a special project report for 30 minutes.
✱ Meeting individually for 20 minutes with a student whose learning has suddenly stalled.
✱ Rotating groups of eight students for 20 minutes each of targeted instruction.
✱ Spending half the available time with 12 students and the other half with 12 other students, while 24 students spend their entire time on digital instruction. The next day, meeting with additional groups of 12, which may or may not include students from the first day’s small groups.
✱ Having 18 students listen to and peer-grade project team presentations.
✱ Pulling out 15 students for a group discussion, while the rest stay in the lab.
✱ Keeping all students in the digital lab every other Friday so that the teacher may plan instruction and review student work.

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