In this model, excellent, remotely located teachers interact directly with students, though not in person, and are fully responsible for student learning in designated subjects. Students alternate between learning with the remotely located teachers and digital learning, either on a prescribed schedule (Rotation) or a varying schedule according to the needs of each student (Flex). Remote teachers may teach students located down the hall or across the nation. Schools can use these models for single courses, subjects, grades, or whole schools. Specific uses may differ in elementary and secondary schools. Estimated Reach Extension Effect: 17%–700% increase in students reached by excellent teachers. For more on this model, see opportunityculture.org/reach/remote-time-tech-swaps/. Note: Based on early experience and data, we recommend using Time Swaps in combination with Multi-Classroom Leadership at the elementary and secondary levels.

**More Detail:**

When schools face severe shortages of qualified teachers, this model lets remotely located teachers who have proven their excellence connect with students personally, motivate them, help them when they face barriers, and develop their higher-order thinking. Even though these teachers are remotely located, they can be selected for their ability to connect with students via webcam, online whiteboards, email, and phone.

Remotely located excellent teachers can teach more students without increasing group sizes, both because they are freed from on-site administrative duties and other noninstructional tasks, and because students spend a portion of their day learning basic knowledge and skill development through digital instruction (swapping some teaching time with technology-based instruction equals a “Time-Technology Swap”). This allows excellent teachers to spend their time with students building deeper knowledge, developing higher-order thinking skills, and reinforcing and applying skills. Excellent remote teachers also may teach across multiple time zones, enabling them to reach students during the school day in any location.

Remote teachers can teach synchronously (i.e., working at the same time as students) using webcams and online whiteboards. Like excellent in-person teachers, they can also interact with students and colleagues asynchronously during and outside of school hours, using email and other technologies. For example, teachers can provide detailed written feedback to a class using email, with personalized follow-up for each student at any time of day.

Schools using these models are able to bring excellent teachers to students who otherwise would not have access to excellent instruction. This model may be an important alternative in schools that otherwise would have less-qualified teachers or that might use digital-only instruction without having excellent teachers responsible for student outcomes.

Combining digital instruction with remote-but-live instruction leverages these teachers’ time to reach more students, making the best use of teachers who are able to achieve excellent results teaching remotely. Schools that may find this model a good fit include rural schools, urban high-poverty schools, and schools that have extreme shortages of excellent teachers but wish to offer specialized instruction (e.g., some Advanced Placement courses, courses normally beyond a school’s grade levels, and special-needs courses).

Digital instruction may include smart software or videos of the best teachers in a district, state, or the nation. Digital instruction ideally is tailored to the current mastery of each student, and includes frequent assessments that are reported to the excellent remote teachers. Teachers use these reports as well as their own reviews of student work to determine how to spend instructional time with students.
Teamwork is essential to these school models. The remotely located teachers must collaborate with the on-site learning coaches, digital lab monitors, teachers of other subjects (remote or on-site), and other adults who take care of students. The collaboration between learning coaches and teachers must be very strong to develop students’ full range of academic, social, emotional, and time-management skills.

Students have highly personalized learning experiences, because both digital instruction and teacher-led instruction can vary according to students’ individual needs. This kind of differentiation is a hallmark of excellent teachers, and both the Rotation and Flex varieties of this model enable them to deliver this to more students, without increasing class sizes.

Remote Rotation: When schools do not have enough excellent teachers available in person (either in general or for particular subjects), excellent, remotely located teachers provide instruction to students, who may be in one school or various schools. Students spend about 25%-50% of their instructional time learning through personalized digital instruction, enabling fewer, more-effective remote teachers to reach a greater number of students with personalized and enriched portions of their instruction. Students in a Rotation model alternate between remote teachers and digital learning on a fixed schedule. (Where permitted by district policy, secondary schools may allow students to work from home, a community center, or other off-campus locations instead of a digital learning lab, while also providing such a lab for students who need it.) Excellent teachers design their live lessons based on student needs determined in part by using data generated from digital assessments. Remotely located teachers are accountable for learning outcomes in designated subjects.

Remote Flex: When schools do not have enough excellent teachers available in person (either in general or for specific subjects), excellent, remotely located teachers provide instruction to students, who may be in one school or various schools. Most students spend 50% or more of their instructional time learning through personalized digital instruction, enabling fewer, more-effective remote teachers to reach a greater number of students with personalized and enriched portions of their instruction. In contrast to the Rotation model, in the Flex model the remotely located teachers vary the amount and type of digital and remote face-to-face instruction by day and by student. Teachers also vary student groupings for teacher-led instruction—such as seminars, whole-group, small-group, or individual instruction, and project facilitation—based on individual student needs determined in part by using data generated from digital assessments. Remotely located teachers are accountable for learning outcomes in designated subjects.

The number of students reached, group size, and the amounts of time students spend with remotely located teachers and digital instruction can vary widely. See the In-Person Flex and In-Person Rotation models at opportunityculture.org/reach/school-models/ for more detail about how teachers can organize student time to provide personalized and enriched instruction. Remotely located teachers can use many of the same approaches.

Role and Schedule Changes for Excellent Teachers: In these models, excellent teachers are remotely located, and can work from home, from another school, or from an office where they work with other teachers who teach remotely.

✱ Teachers teach classes no bigger than today’s (unless combined with class-size changes), and in some cases smaller groups.
✱ Digital instruction provides basic knowledge and skill development, allowing excellent teachers to spend much of their time with students building deeper knowledge, developing higher-order thinking skills, and reinforcing and applying skills.
✱ Frequent digital reports about student learning progress while receiving digital instruction, along with their own review of student work, helps teachers determine what each student needs.
✱ Excellent remote teachers group students for projects, seminars, small-group instruction, and individual follow-up, and the teachers provide this instruction, obtaining assistance from on-site learning coaches and tutors when available.
✱ Teacher-led instructional time using webcams and online whiteboards lets excellent remote teachers continue the engaging, motivational role that excellent in-person teachers play.
✱ Teachers collaborate with their teaching and paraprofessional teammates. They collaborate with the learning coaches, direct and manage tutors, and make or recommend changes in digital instruction to school leadership.

Several career benefits accrue to excellent teachers under these models. Extending their reach to more students enables excellent teachers to earn higher pay. Remote time-technology swaps are

In an Opportunity Culture, all teachers have career opportunities dependent upon their excellence, leadership, and student impact. Advancement allows more pay and greater reach.
also conducive to flexible and part-time work schedules. Teachers may work fewer hours without proportionally reducing pay or the number of students they reach, because they can work with larger numbers of students in the same amount of instructional time. This may increase the retention of some excellent teachers. Work hours can also be flexible under some remote models, as teachers may work across time zones.

**New Roles for Other Staff:**

- On-site learning coaches manage student time and behavior, supervise recess and lunch, and perform in-person supervisory and administrative duties. They also provide vital information to remotely located teachers about students’ social, emotional, and behavioral development. Excellence in these roles will depend on the learning coach’s skills in these areas and their ability to work with remote teachers to teach the whole student.
- Digital lab monitors supervise students while they are engaged in digital instruction, and they may supervise students who are working with tutors or on projects in the same room. Alternatively, learning coaches rather than lab monitors may supervise digital learning time.
- When excellent remote teachers reach more students successfully, schools may reduce the number of instructional specialists for remedial and advanced instruction. Some of these specialists may be candidates for reach-extended teaching (in-person or remote).
- Tutors provide small-group and individual instruction at the direction of teachers, freeing excellent teachers to increase the number of students they reach.
- Learning coaches may relieve teachers of administrative work; in some cases, teaching assistants may play these roles.

**Impact on Students:** Students at all levels receive a more personalized and successful learning experience under these models than they would with less-capable in-person teachers. Excellent, remotely located teachers are able to focus on personalized instruction and higher-order thinking skills. Digital instruction increasingly offers personalized pacing on basic skills and knowledge according to each student’s mastery. Meanwhile, excellent teachers ensure that differentiated digital and face-to-face instruction works for students, just as they do in traditional classrooms. Students can continue to have personal relationships with teachers; at the same time, far more will have teachers fully accountable for their learning.

**Scheduling Changes:** In Rotation schools, students alternate between digital and remote-teacher-led instruction on a fixed schedule. In Flex schools, the school day may be organized into discrete class periods, but teachers pull students out of digital instruction for varying amounts of and types of face-to-face instruction according to each student’s needs. Some Flex schools may not operate with designated class periods, increasing flexibility but also the complexity of scheduling time with remotely located teachers.

In all schools, scheduling must allow the use of multiple spaces where students can have digital and/or remotely delivered instruction and/or face-to-face tutoring.

**Pay Changes:** Excellent teachers can be paid more by teaching students for a larger portion of their work time than in a traditional school. Teachers can reach more students for more pay by working with schools across time zones, with schools that have staggered schedules, and with multiple schools in one time zone. Reallocating some funds from non-classroom instructional specialist positions that are no longer needed also enables higher pay for excellent, remotely located teachers. Finally, having more than one class of students in digital learning labs at one time (or learning digitally within classrooms) frees additional funds to attract and keep excellent teachers.

Both learning coaches and digital lab monitors earn less than excellent teachers but also have shorter work hours.

**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, and by reducing the number of remedial/advanced instructional specialist positions. Digital lab monitors can supervise multiple classrooms of students, if facilities permit this. Schools can then share the financial benefit of these models through higher salaries for teachers who successfully reach more students. Additional costs may include new technology and ongoing upgrades.

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, face-to-face and remote-teacher-led classrooms.

The efficiencies in these models are less than those of In-Person Rotation and Flex models, because schools must pay learning coaches to supervise students when they are learning with remotely located teachers. While schools can recognize cost savings by paying digital lab monitors less than teachers, these savings are likely to be absorbed by the increased pay for excellent remote teachers and the learning coaches’ salaries.
Changes to Class/Group Size: Class and group sizes will vary widely under these models. In many cases, time for whole-group instruction may be reduced so that remote face-to-face learning occurs in group sizes smaller than today’s typical classes.

Facilities Changes: Digital learning labs must have an Internet connection and ideally are in rooms large enough to hold several classes of students simultaneously working at computers. New facilities may save funds by building fewer, larger rooms for digital learning labs or for combined digital/remote/face-to-face learning.

Face-to-face instructional groups vary in size and purpose, so physical space will ideally lend itself to flexible use with larger 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 access to computers (with 1:1 computer access required in some cases). Remotely located teachers and students will require means of two-way communications (e.g., Skype, video or audio conferencing, and/or email). Digital instruction may be purchased as discrete programs or developed by the school, such as by making video recordings of the most outstanding teacher on a particular topic. Schools in which on-site or remotely located teachers record their own instruction will need recording and playback equipment.

Estimated Reach Extension Effects: Potential reach effects at the secondary level are similar to Rotation and Flex models and, at the elementary level, to Specialization. At the secondary level, although students may learn online for more than half of their school time (in Flex models), 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 reach in one, some, or all class periods. Teachers also may use freed time in some class periods to do additional planning and to 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 in half of his or her class periods, while leaving the freed time in the other half of class periods for additional planning. Excellent teachers may increase reach up to 100% more students if technology and help from other staff members reduce noninstructional planning and grading time enough that teachers can successfully teach additional classes during all periods of the school day.

Secondary Flex or Rotation with Remotely Located Teachers: 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:</td>
<td>144 Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24</td>
<td>24</td>
<td>168</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
<td>24</td>
<td>192</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>24</td>
<td>216</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>24</td>
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</tr>
<tr>
<td>5</td>
<td>24</td>
<td>24</td>
<td>264</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>24</td>
<td>288</td>
</tr>
</tbody>
</table>

*Students are with digital lab monitors when not with teachers, and with learning coaches when learning with remotely located teachers.

Excellent remotely located teachers may add additional class periods if they teach across time zones.
At the elementary level, a teacher who replaces an average of half of students’ 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 http://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></th>
<th></th>
<th>AFTER</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td># of Teachers</td>
<td># of Students</td>
<td>Class Size*</td>
<td># of Teachers*</td>
<td># of Students</td>
<td>Class Size</td>
<td># of Students Per Teacher Overall</td>
<td>Additional % of Students Reached Per Teacher**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24</td>
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<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2</td>
<td>48</td>
<td>24</td>
<td>1</td>
<td>48</td>
<td>24</td>
<td>48</td>
<td>100%</td>
</tr>
<tr>
<td>3</td>
<td>72</td>
<td>24</td>
<td>2</td>
<td>72</td>
<td>24</td>
<td>36</td>
<td>50%</td>
</tr>
<tr>
<td>4</td>
<td>96</td>
<td>24</td>
<td>3</td>
<td>96</td>
<td>24</td>
<td>32</td>
<td>33%</td>
</tr>
<tr>
<td>5</td>
<td>120</td>
<td>24</td>
<td>4</td>
<td>120</td>
<td>24</td>
<td>30</td>
<td>25%</td>
</tr>
</tbody>
</table>

*Students are with digital lab monitors when not with teachers, and with learning coaches when learning with remotely located teachers.
**Teachers must team-teach to make all except 100% reach extension work at elementary level.

In elementary schools, increased reach of excellent, remotely located teachers without adding even more digital learning time is possible by having teachers specialize in their best subjects.

Elementary Flex + Subject Specialization with Remotely Located Teachers:
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></td>
<td>L. Arts/ Soc. Studies</td>
<td>Math/Science</td>
<td>L. Arts/ Soc. Studies</td>
</tr>
<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>
<td>24</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>1/5</td>
<td>24</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

May reach more in other time zones

*Students are with digital lab monitor when not with teachers, and with learning coaches when with remotely located 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. Class size is current U.S. average.

See In-Person Rotation (Elementary) and In-Person Rotation + Subject Specialization (Elementary) for elementary examples and schedules at opportunityculture.org/reach/school-models/.
CRITICAL IMPLEMENTATION DECISIONS, AMONG OTHERS, INCLUDE:

- Which grades, subjects, and/or courses will have remotely located teachers?
- What sources of excellent, remotely located teachers might the school use (consider other teachers in the school or district/charter organization, or a state or national teaching talent pool)? Consider past learning results in particular subjects and efficiency in monitoring learning and in planning instruction.
- How many classes of what size will each extended teacher teach? At first? Later goal?
- When (time of day) will these courses be offered in students’ schedules?
- How will in-person monitors’ roles be configured (see detailed model job descriptions at opportunityculture.org/reach/remote-time-tech-swaps/ for some options)?
- Will there be student load maximums applying to all teachers, or will this be determined individually with each teacher?
- Will using remotely located teachers for some grades, subjects, and/or courses change career paths for new and developing teachers in the school?
- Will teachers or on-site monitors need training or additional tools to integrate classroom learning experiences with digital instruction?
- How will data from digital instruction inform classroom learning experiences?
- 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?
- To what extent and in what ways will teachers be empowered to make or recommend changes to digital instruction? Consider teachers’ roles vetting and selecting content and interacting with software to align digital lessons with students’ individual needs.
- How much time will students spend in digital instruction? Consider 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, the 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, if any, 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 be structured for teachers remaining on site and remotely located teachers? Digital lab monitors? Learning coaches/teaching assistants? What, if any, portion of pay will be contingent on student outcomes?
- What scale of change is needed to fund digital labs and to reduce the number of non-classroom specialists?
- For existing schools changing to remotely located teachers and time-technology swaps (rather than new schools), consider options for transitioning positions that are eventually eliminated, if any. 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 children?
- What changes in policies and practices related to hiring, retention, dismissal, professional development, leadership, and teacher evaluation are needed?

EXAMPLES OF REMOTE ROTATION AND FLEX

Schools using these models can be organized in at least three major ways. See the In-Person Rotation (Elementary) and In-Person Rotation + Subject Specialization (Elementary) models; In-Person Rotation (Secondary) model; and In-Person Flex model at opportunityculture.org/reach/school-models/ for more detail and examples, which can be used by substituting remotely located teachers for teachers working in person.

- Single-Classroom Time-Technology Swap. This option resembles traditional elementary schools. Students stay with the same learning coach most of the day (physical education, fine arts, and other on-site classes excepted). Students learn with different excellent, remotely located teachers for each subject, using webcams and online whiteboards.

  Elementary. At the elementary level, students interact with the remote teachers on large screens, in group sizes determined by the teacher in coordination with each learning coach.
Secondary. At the secondary level, students remain at their individual computers, with headphones and microphones, for individualized course selections. Students’ “classmates” are not co-located, for the most part. Students pursue individual learning paths, and co-located students do not necessarily learn together. Students can still work with peers in pairs and small groups, but typically from remote locations.

At both the elementary and secondary levels, when students are not learning with remotely located teachers, they are using digital instruction in the same classroom. The major benefit of this model is the extreme individualization and close connection that students can develop with one learning coach, who can help remotely located subject teachers understand the “whole child.” At the secondary level, a potential drawback of this approach is the large amount of screen time it requires for students.

Course-by-Course Swap. The third option is similar to online courses that many secondary schools are using, but a remote teacher is fully responsible for student learning. Students take one or more (but not all) courses using a combination of digital instruction and remotely located teachers who are responsible for their learning in designated subjects. Students most likely would attend a digital learning lab for both the digital and remote-but-live portions of instruction, where an on-site digital lab monitor supervises their work.

Multiple-Classroom Time-Technology Swap. This option is similar to traditional secondary schools. Every student has a homeroom learning coach. During designated class periods, students may rotate among classrooms in which remotely located teachers appear on large screens, and in-class cameras allow remote teachers to see the students. Alternatively, in a Flex model, remotely located teachers may “pull out” students from digital instruction in varying groups for differing types of work with the teachers. The remotely located teachers work with small groups, supervise project work, lead seminars, and lecture when needed. Students in the room are studying the same subject. Learning coaches are in every classroom to supervise behavior and students not working with the remotely located teacher. When students are not learning with remotely located teachers, they are using digital instruction in the classroom or in a digital learning lab, always with an adult monitor.

Opportunity Culture Principles

Teams of teachers and school leaders must choose and tailor models to:

1. Reach more students with excellent teachers and their teams
2. Pay teachers more for extending their reach
3. Fund pay within regular budgets
4. Provide protected in-school time and clarity about how to use it for planning, collaboration, and development
5. Match authority and accountability to each person’s responsibilities

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