

**Project-based learning** focuses on helping students explore real-world problems and challenges in a dynamic, engaged, active way. The intent is to inspire students to obtain a deeper understanding of the subjects they are studying.<sup>35</sup> Many blended-learning programs pair online learning with project-based learning to help students demonstrate that they can apply their knowledge and connect their understanding across disciplines. Project-based learning can take place online and offline.

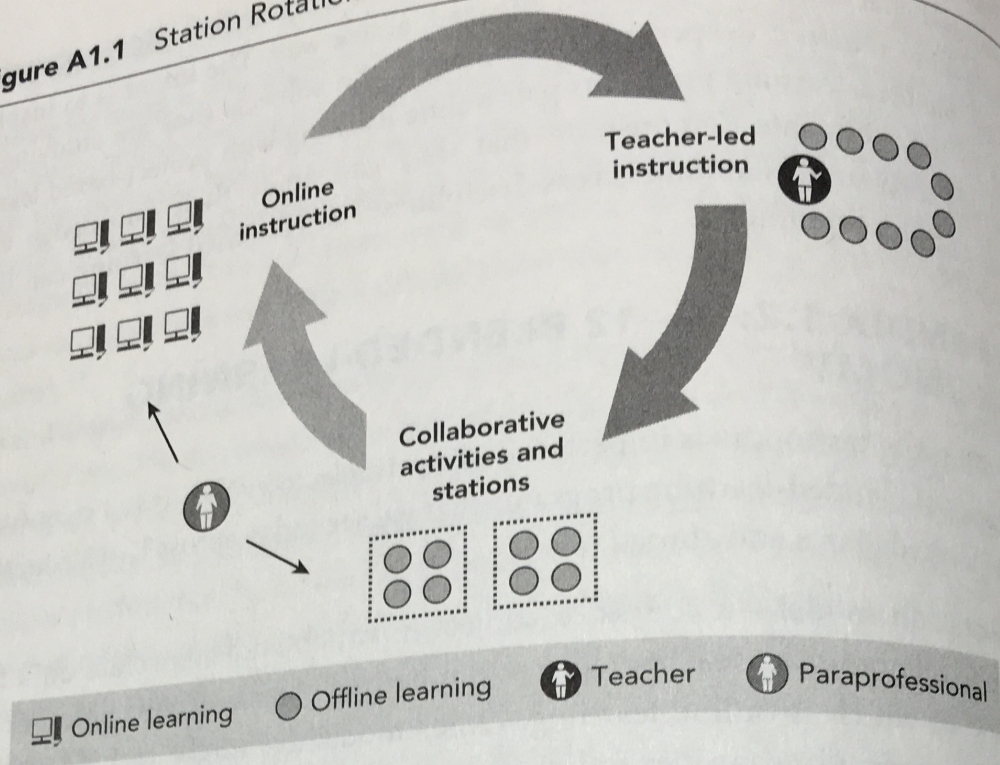
## APPENDIX 1.2: K–12 BLENDED-LEARNING TAXONOMY

The following taxonomy is imperfect and continues to evolve. It is a snapshot of the types of blended-learning programs that we see today across K–12 education in the United States and abroad.

1. **Rotation model**—a course or subject in which students rotate on a fixed schedule or at the teacher's discretion between learning modalities, at least one of which is online learning. Other modalities might include activities such as small-group or full-class instruction, group projects, individual tutoring, and pencil-and-paper assignments. Students learn mostly on the brick-and-mortar campus, except for any homework assignments.
  - a. **Station Rotation**—a course or subject in which students experience the Rotation model within a contained classroom or group of classrooms. The Station Rotation model differs from the Individual Rotation model because students rotate through all of the stations, not only those on their custom schedules. (See Figure A1.1.)
  - b. **Lab Rotation**—a course or subject in which students rotate to a computer lab for the online-learning station. (See Figure A1.2.)
  - c. **Flipped Classroom**—a course or subject in which students participate in online learning off-site in place of traditional homework and then attend the brick-and-mortar school for face-to-face, teacher-guided practice or projects. The primary delivery of content and instruction is online, which differentiates a Flipped Classroom from students who are merely doing homework practice online at night. (See Figure A1.3.)
  - d. **Individual Rotation**—a course or subject in which each student has an individualized playlist and does not necessarily rotate to each available



**Figure A1.1** Station Rotation

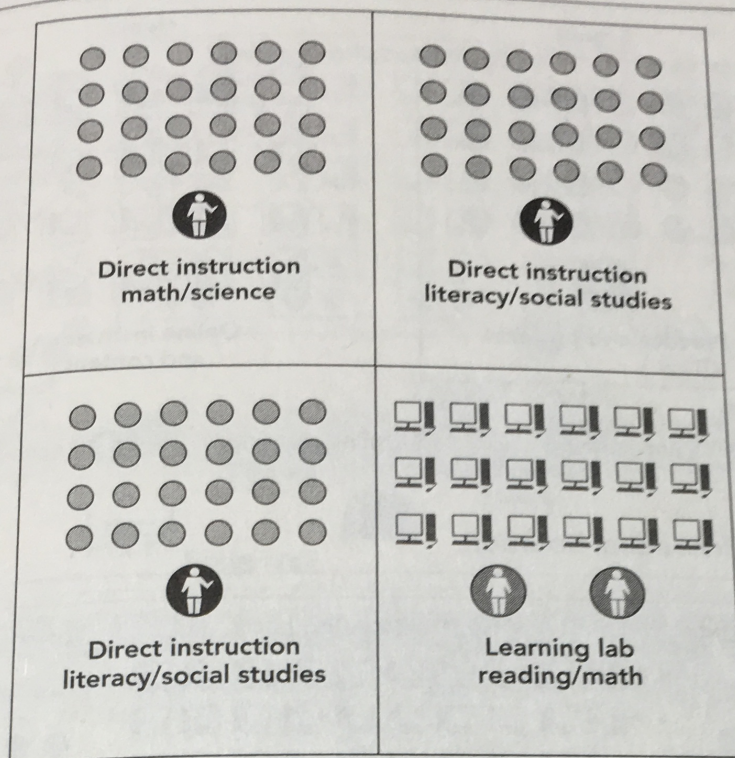


station or modality. An algorithm or teacher(s) sets individual student schedules. (See Figure A1.4.)

2. **Flex model**—a course or subject in which online learning is the backbone of student learning, even if it directs students to offline activities at times. Students move on an individually customized, fluid schedule among learning modalities. The teacher of record is on-site, and students learn mostly on the brick-and-mortar campus, except for any homework assignments. The teacher of record or other adults provide face-to-face support on a flexible and adaptive as-needed basis through activities such as small-group instruction, group projects, and individual tutoring. Some implementations have substantial face-to-face support, whereas others have minimal support. For example, some Flex models may have face-to-face certified teachers who supplement the online learning on a daily basis, whereas others may provide little face-to-face enrichment. Still others may have different staffing combinations. These variations are useful modifiers to describe a particular Flex model. (See Figure A1.5.)



Figure A1.2 Lab Rotation

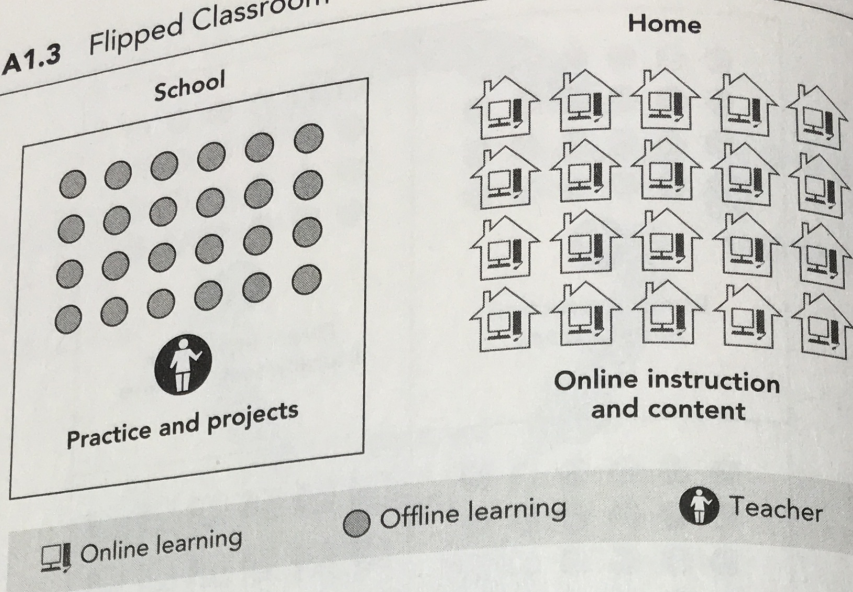


Online learning    
 Offline learning    
 Teacher    
 Paraprofessional

3. **A La Carte model**—a course that a student takes entirely online to accompany other experiences that the student is having at a brick-and-mortar school or learning center. The teacher of record for the A La Carte course is the online teacher. Students may take the A La Carte course either on the brick-and-mortar campus or off-site. This differs from full-time online learning because it is not a whole-school experience. Students take some courses A La Carte and others face-to-face at a brick-and-mortar campus. (See Figure A1.6.)
4. **Enriched Virtual model**—a course or subject in which students have required face-to-face learning sessions with their teacher of record and then are free to complete their remaining coursework remote from the face-to-face teacher. Online learning is the backbone of student learning when the



**Figure A1.3** Flipped Classroom



**Figure A1.4** Individual Rotation

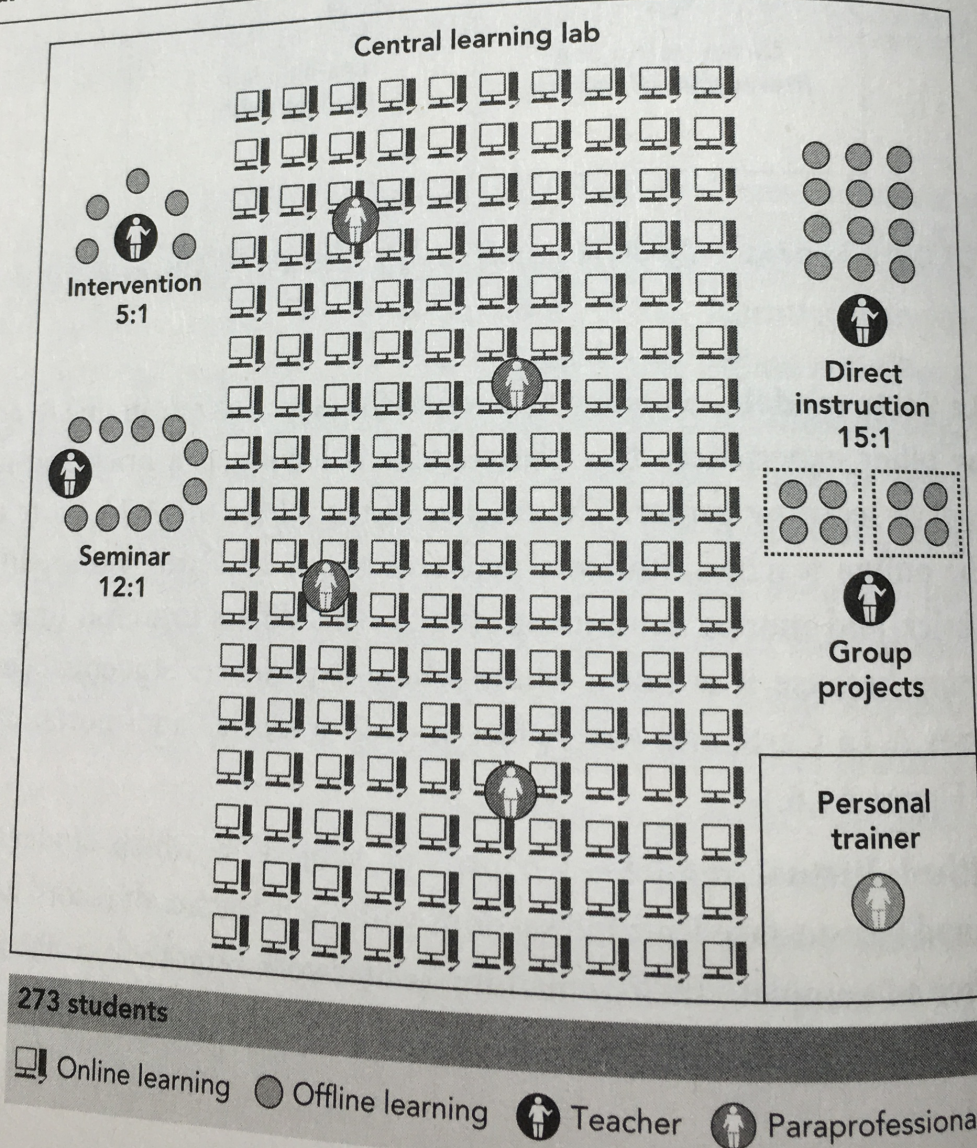




Figure A1.5 Flex Model

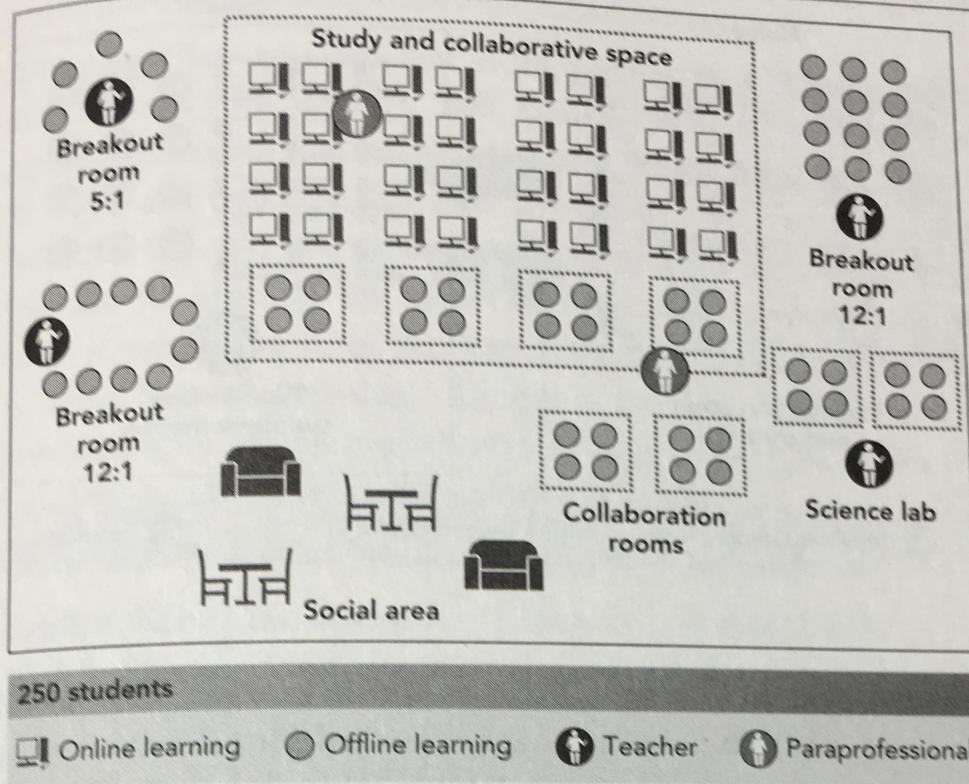
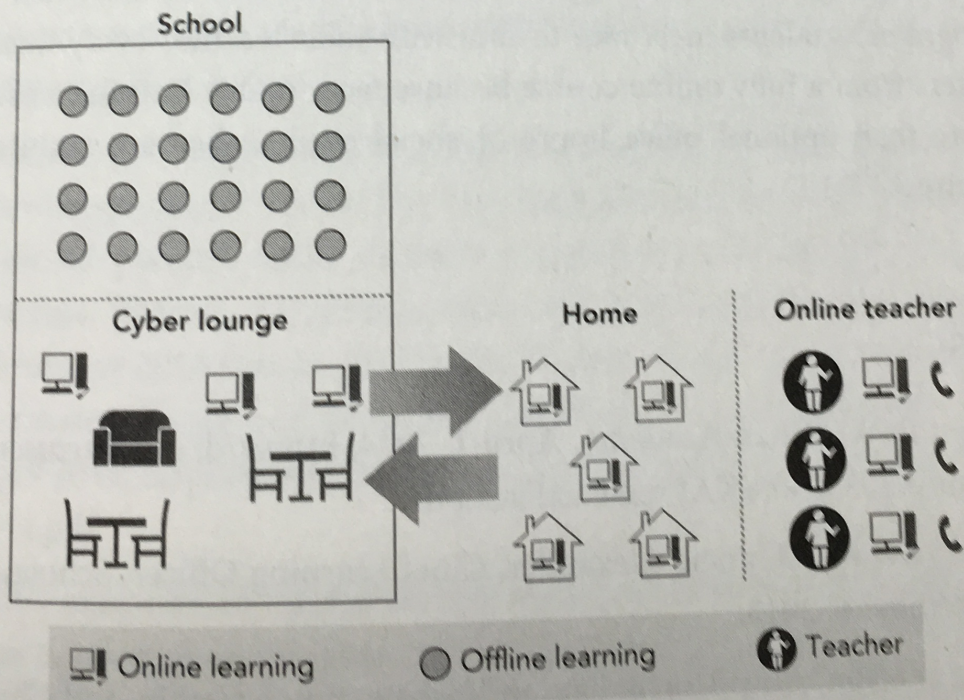
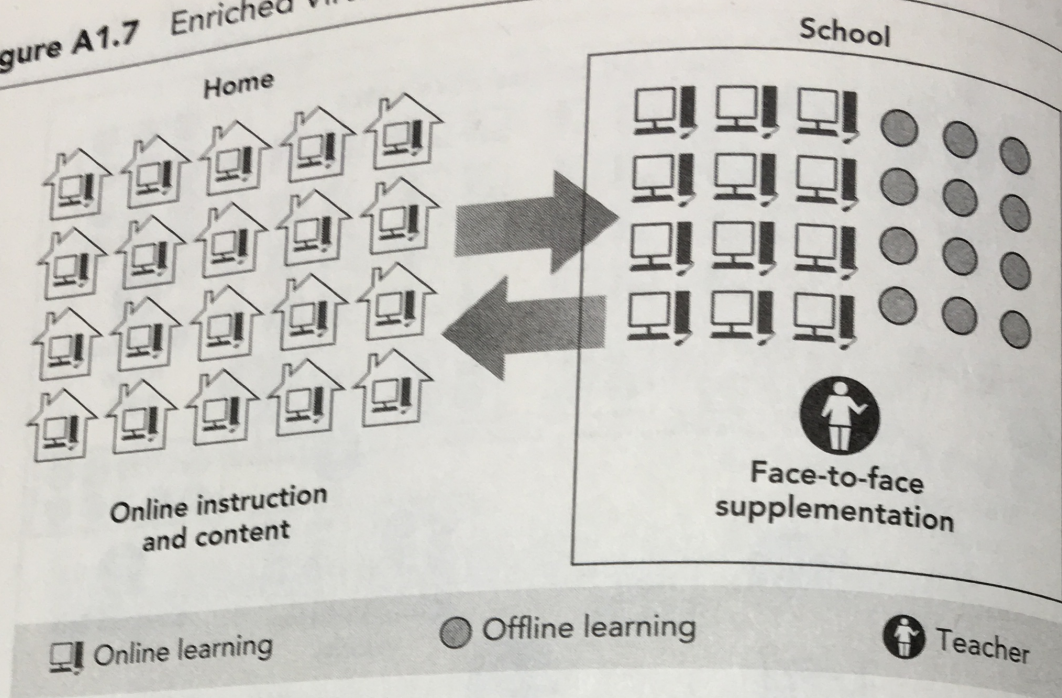


Figure A1.6 A La Carte Model





**Figure A1.7** Enriched Virtual Model



students are located remotely. The same person generally serves as both the online and face-to-face teacher. Many Enriched Virtual programs began as full-time online schools and then developed blended programs to provide students with brick-and-mortar school experiences. The Enriched Virtual model differs from the Flipped Classroom because in Enriched Virtual programs, students meet face-to-face with their teachers every weekday. It differs from a fully online course because face-to-face learning sessions are more than optional office hours or social events; they are required. (See Figure A1.7.)

## NOTES

1. "Fact Pack," Khan Academy, April 1, 2014, <https://dl.dropboxusercontent.com/u/33330500/KAPressFactPack.pdf>
2. Interview with Francie Alexander, Chief Learning Officer, Scholastic, Inc., September 6, 2013.
3. John Watson, Amy Murin, Lauren Vashaw, Butch Gemin, and Chris Rapp, *Keeping Pace with K-12 Online & Blended Learning: An Annual Review*