What's Happening

March 2015

Online course use in New York high schools: Results from a survey in the Greater Capital Region

Margaret Clements
Angela M. Pazzaglia
Jacqueline Zweig
Education Development Center, Inc.
In collaboration with the Northeast Rural Districts Research Alliance

Key findings

Fifty-nine percent of responding high schools in the New York Greater Capital Region reported using online courses for their students during the 2012/13 school year. Schools used online courses mainly to provide students with credit recovery courses. Schools enrolled students in online courses spanning the core academic subjects, including math, English language arts, history and social studies, and science. Even though schools enrolled students in online courses, they noted concerns about the educational experiences these courses provide.

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REL 2015–075

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March 2015

This report was prepared for the Institute of Education Sciences (IES) under Contract ED IES-12-C-0009 by Regional Educational Laboratory Northeast & Islands administered by Education Development Center, Inc. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

Clements, M., Pazzaglia, A. M., & Zweig, J. (2015). *Online course use in New York high schools: Results from a survey in the Greater Capital Region* (REL 2015–075). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast & Islands. Retrieved from http://ies.ed.gov/ncee/edlabs.

This report is available on the Regional Educational Laboratory website at http://ies.ed.gov/ncee/edlabs.

Summary

Developing regulations to support the use of online learning for students attending state high schools was one of the first steps the New York State Education Department undertook to implement the State Learning Technology Plan approved by the New York State Board of Regents in 2010. That year the Board of Regents approved changes in state regulations to allow students to participate in online learning under two circumstances: to make up incomplete or failed courses or to earn credit for elective courses through independent study. The following year the board approved an additional regulation that allowed students to earn any type of course credit by successfully completing an online course.

With the recent introduction of online courses in New York, the Northeast Rural Districts Research Alliance at Regional Educational Laboratory Northeast & Islands and the Capital Area School Development Association (CASDA) collaborated to:

- Create a survey tool capable of collecting information about how and why schools in New York are using online learning, as well as the factors that hinder the use of online courses.
- Provide information about how and why high schools in the Greater Capital Region of the state are using online courses for their students.

Sixty percent of CASDA member high schools responded to the survey. Key findings include:

- Fifty-nine percent of CASDA high schools that responded to the survey used online courses during the 2012/13 school year. On average, these high schools enrolled 6 percent of their students in at least one online course.
- Among the 59 percent of respondent high schools that used online courses for students during the 2012/13 school year:
  - Seventy-seven percent enrolled students in online courses to recover credit for courses students had failed or not completed.
  - Eighty-two percent reported that providing opportunities for students to recover course credits was a "very important" reason for using online courses.
  - More than half enrolled students in each of the four core academic subjects: history and social studies (72 percent), math (68 percent), English language arts (64 percent), and science (52 percent).
  - When asked whether they had faced any challenges implementing their online learning program during the 2012/13 school year, most schools identified three challenges related to their students' educational experiences in online courses: course quality, the academic integrity of online learning, and the lack of student and teacher face-to-face interaction.
- Even though schools that enrolled students in online courses reported encountering challenges, 61 percent thought that increasing their use of online courses would benefit students' learning outcomes.
- Among the schools that did not use online courses, the most frequently cited reasons for not using online courses fell into two categories:
  - Concerns about students' educational experiences in online courses.
  - Limited school resources, including funding and access to technology.

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Why this study?

In 2010 the New York State Board of Regents approved changes to state regulations allowing students to take online courses, with the expectation that up to 20,000 students would enroll in free online public school courses by 2014 (New York State Education Department, 2010; see box 1 for additional details and box 2 for definitions of key terms). Because New York does not have a state protocol for collecting data about schools' objectives or methods for offering online courses, as is also the case for most states throughout the country (Watson, Murin, Vashaw, Gemin, & Rapp, 2013), the Northeast Rural Districts Research Alliance at Regional Educational Laboratory Northeast & Islands collaborated with the Capital Area School Development Association (CASDA) to adapt a survey tool[1] to collect information about how and why schools use online learning and what factors impede their use of online courses. CASDA administered the survey to its member public high schools, which include rural, suburban, and urban communities surrounding the state capital, Albany.

The results of the survey provide information for the Capital Area School Development Association and its members about how and why schools in the Greater Capital Region use online courses, as well as the challenges they encounter in doing so

The results of the survey provide information for CASDA and its members about how and why schools in the Greater Capital Region use online courses, as well as the challenges they encounter in doing so. The findings may also prove useful to a broader population of education stakeholders and policymakers as they consider online learning policies and practices in their regions. For example, districts and states can use the information in the report as a framework to examine why their schools turn to online courses and what challenges they encounter. They can also use it for learning about the obstacles that prevent

Box 1. New York state regulations

Prior to 2010 the New York State Education Department had not established state policies regulating schools' use of online courses for their students. At that time, opportunities for schools to enroll students in online courses were limited to a few programs offered by local education agencies (Watson, Gemin, Ryan, & Wicks, 2009; Watson et al., 2010). As part of its Race to the Top Phase II application, the department indicated that it would implement new online learning policies (New York State Education Department, 2010). That year the Board of Regents approved changes to state regulations to allow students to participate in online learning under two circumstances: to make up credits for incomplete or failed courses[1] or to earn credit for elective courses through independent study.[2] The following year the Board of Regents approved an additional state regulation that allowed students to earn any type of course credit by successfully completing an online course.[3] The New York State regulations that permit students to earn course credits through online courses include language designed to ensure that students have high-quality educational experiences in these courses. The regulations require certified teachers to provide, direct, or supervise instruction. They also specify that the scope and quality of online instruction should be comparable to that of traditional face-to-face instruction and include "regular and substantive" interaction between students and teachers.

Notes

1. Official Compilation of Codes, Rules, and Regulations of the State of New York, Title 8, Section 100.5 [8 CRR-NY §100.5(d)(8)].

2. 8 CRR-NY §100.5(d)(9).

3. 8 CRR-NY §100.5(d)(10).

Box 2. Key terms

Advanced Placement. A program of the College Board to offer college-level courses to high school students.

Board of Regents. A 17-person board that supervises all education activities in New York State and presides over the State University of New York and the New York State Education Department.

Capital Area School Development Association (CASDA). A study council affiliated with the School of Education at the University at Albany, State University of New York. The organization's mission is to raise awareness of education challenges and to promote renewal and improvement in area schools and postsecondary institutions. It convenes educators to analyze and respond to current education challenges. CASDA serves schools in the counties surrounding the state capital, Albany.

Credit recovery courses. Courses that allow students to obtain course credits for classes they have failed.

Dual credit/college courses. College-level courses taken by students for which they receive both high school and college credits.

Online learning. Education in which instruction and content are delivered primarily over the Internet. The term does not include print-based correspondence education, broadcast television or radio, CDs or videocassettes, or standalone educational software programs that do not have a significant Internet-based instructional component.

Regents diploma. All students in New York State must complete at least 22 credits to earn a high school diploma, which is called a Regents diploma in New York State. The 22 credits must include courses in English language arts; social studies; math, science, and technology; the arts (including visual arts, music, dance, and theater); languages other than English; health, physical education, and family and consumer sciences; and career development and occupational studies.

Supplemental program. A program that provides online courses to students who are enrolled in a brick-and-mortar school separate from the online learning program itself.

Source: The College Board website (http://apcentral.collegeboard.com); the New York State Department of Education website (http://www.regents.nysed.gov); the CASDA website (http://casdany.org); the National Center for Education Statistics; the Official Compilation of Codes, Rules and Regulations of the State of New York, Title 8, Section 100.5 (8 CRR-NY §100.5).

schools from using online courses, as well as schools' objectives for wanting to increase their students' access to online learning opportunities. Similarly, schools considering the adoption of online course options for their students can use this information to help clarify the academic objectives for enrolling students in online courses and the challenges they may encounter. These kinds of information can guide the development of policies and programs to promote the use of online courses to improve students' academic options and outcomes.

What the study examined

The following research questions guided the study:

- How did CASDA member high schools use online courses to supplement the face-to-face courses students in these schools took during the 2012/13 school year?
- Why did these high schools use online courses for their students?
- What challenges did these high schools encounter in their use of online courses?

- For responding high schools that did not use online courses, what factors influenced their decision not to do so?

CASDA distributed an electronic version of an online course use survey (appendix A) to its 99 member public high schools. At the start of the 2013/14 school year, it asked principals to forward an email containing a survey link to the staff person in the school who was the most familiar with the school's online learning program. The survey was designed to gather information about schools' online course use during the previous school year (2012/13). The study team analyzed survey data collected from 59 responding schools (60 percent) to produce estimates of online course use in CASDA schools (see appendix B for a detailed description of the data and methodology).

What the study found

On average, schools enrolled 6 percent of their students in online courses, and their most common reason for doing so was to provide students with the opportunity to recover course credit for a failed or incomplete course

Fifty-nine percent of responding CASDA high schools enrolled between one and several hundred students in online courses in 2012/13. On average, schools enrolled 6 percent of their students in online courses, and their most common reason for doing so was to provide students with the opportunity to recover course credit for a failed or incomplete course.

At the same time that CASDA high schools were using online courses and, in some cases, believed that increasing their use would benefit students' learning outcomes, schools also reported concerns about online learning. In particular, over 50 percent of responding high schools that reported using online courses in 2012/13 had concerns about online course quality, the academic integrity of online courses, or the lack of face-to-face interaction between students and teachers. Furthermore, CASDA high schools that did not use online courses for their students cited these concerns among the reasons they did not enroll students in online courses.

Fifty-nine percent of respondent high schools used online courses for 6 percent of their students on average

Of the 59 high schools that responded to the survey, 35 (59 percent) reported that they used online courses for their students during the 2012/13 school year. The number of students per school who enrolled in at least one online course ranged from one to several hundred. On average, the number of students enrolled in at least one online course represented 6 percent of a school's student population in grades 9–12, which was the target grade level for the study. (Additional information on these and all subsequent statistics presented in the report is in the tables in appendix C.)

Respondent high schools enrolled students in online courses to recover course credit, as well as to complete core graduation requirements. The types of online courses that schools use can be categorized in two ways. One way is by the academic objective the course is intended to fulfill, such as a core graduation requirement, an elective, or an Advanced Placement course. Credit recovery was the most common academic objective among CASDA high schools that reported enrolling students in online courses. Seventy-seven percent of these schools reported that at least one student had taken a course for credit recovery purposes during the 2012/13 school year. Students were also enrolled in core courses required for high school graduation, elective courses, and Advanced Placement courses (table 1 and table C3 in appendix C).

Table 1. Percentage of CASDA respondent high schools that used online courses to address each academic objective, 2012/13

Course academic objective	Percent
Credit recovery courses	77
Core courses required for a Regents diploma[a]	42
Elective courses[b]	35
Advanced Placement courses	27
Dual credit/college courses	8
Other types of courses	4

CASDA is Capital Area School Development Association.

a. Excludes core courses taken for credit recovery.

b. Excludes courses required for a Regents diploma, Advanced Placement courses, credit recovery courses, and dual credit/college courses.

Note: The table displays the percentages of the 26 high schools that reported at least one online course enrollment for an academic objective in 2012/13. Nine schools that reported using online courses did not complete this question. Percentages sum to more than 100 because some schools enrolled students in online courses to meet more than one academic objective. See table C3 for additional statistical information.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Eighty-two percent of respondent schools reported that providing opportunities for students to recover course credits was a "very important" reason for using online courses

Respondent high schools enrolled students in online courses for all core academic subjects. A second way to categorize online courses is by academic subject, such as math, science, and history. Among CASDA schools that reported using online courses in 2012/13, more than half used online courses for each of the four core academic subjects: history and social studies, math, English language arts, and science (table 2 and table C4 in appendix C). In addition, 40 percent enrolled students in health or physical education courses.

Respondent high schools used online courses to provide students with credit recovery opportunities and to provide access to an alternative learning environment

Two of the most commonly cited reasons that CASDA high schools used online learning during the 2012/13 school year were to provide students with specific types of educational experiences. In line with schools' reports that students took online courses most often for credit recovery, 82 percent of respondent schools reported that providing opportunities for students to recover course credits was a "very important" reason for using online courses. Seventy-two percent reported that providing students with access to an alternative learning environment was either "somewhat important" or "very important" (figure 1 and table C5 in appendix C).

Logistical reasons also factored into why CASDA high schools used online courses. These included increasing students' access to courses they might not have been able to take otherwise. Some 63 percent of schools that reported enrolling students in online courses used those courses to address scheduling conflicts for students and 54 percent used them for students who could not attend school for medical or correctional reasons.

Respondent high schools using online courses reported concern about students' educational experiences in online courses

When CASDA high schools using online courses were asked whether they had encountered challenges related to their online course use, concerns about students' learning

Table 2. Percentage of CASDA respondent high schools that used online courses in each academic domain, 2012/13

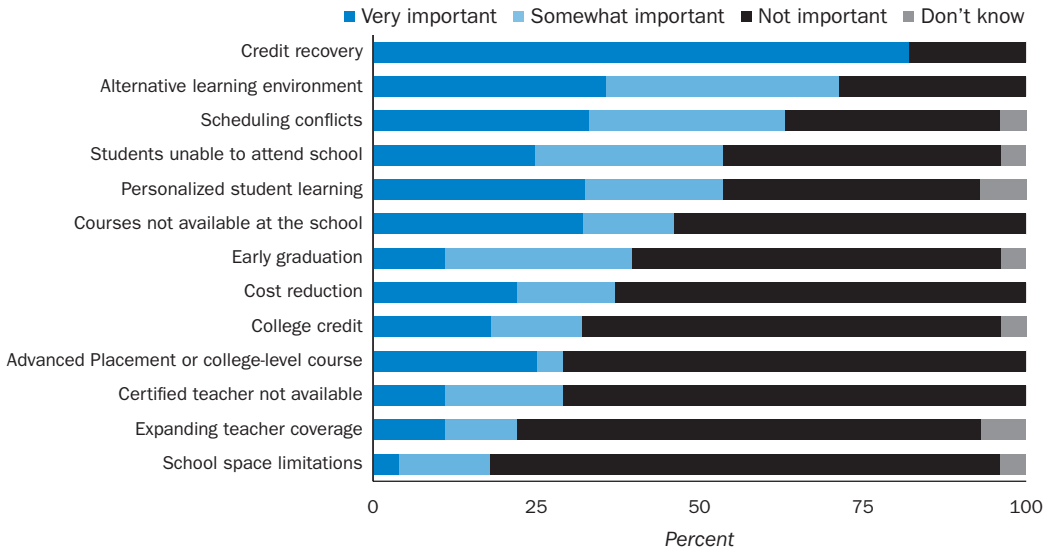
Online course academic domain	Percent
History and social studies	72
Math	68
English language arts	64
Science	52
Health or physical education	40
Fine arts	20
Languages other than English/world languages	12
Vocational or technical	4
Other	12

CASDA is Capital Area School Development Association.

Note: The table displays the percentages of the 25 high schools that reported at least one online course enrollment for an academic subject in 2012/13. Ten schools that reported using online courses did not complete this question. Percentages sum to more than 100 because some schools enrolled students in online courses for more than one academic subject. See table C4 for additional statistical information.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Figure 1. CASDA respondent high schools used online courses to provide educational opportunities for students and to address logistical challenges, 2012/13

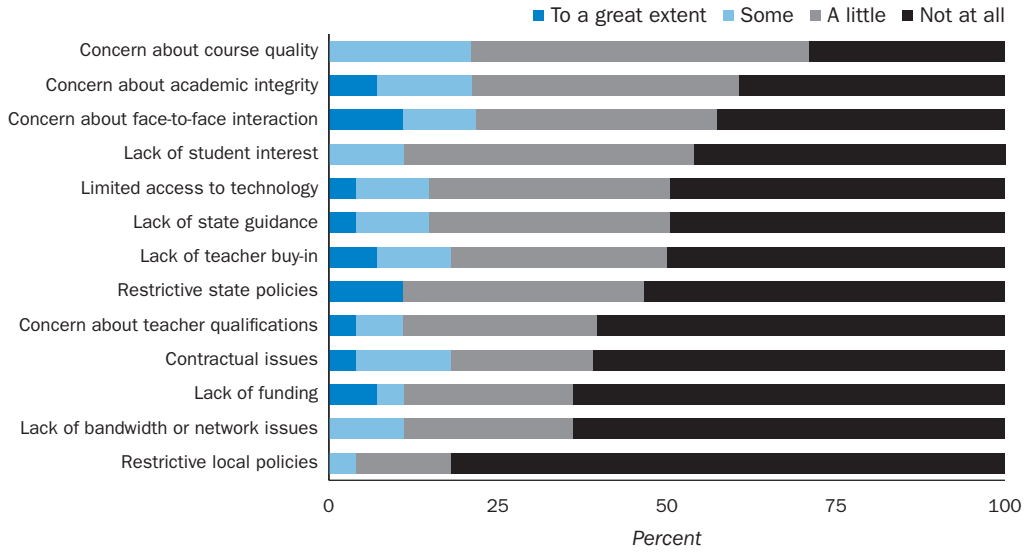


CASDA is Capital Area School Development Association.

Note: The figure displays the percentages of the 28 high schools that answered "not important," "somewhat important," "very important," or "don't know" for the question, "How important were the following reasons for having online courses in your school in 2012/13?" Seven schools that reported using online courses did not complete this question. See table C5 for additional statistical information.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Figure 2. Concerns about students' academic experiences in online courses were among the challenges CASDA respondent high schools faced in providing online learning, 2012/13



CASDA is Capital Area School Development Association.

Note: The figure displays the percentages of the 28 high schools that answered "not at all," "a little," "some," or "to a great extent" for the question, "In school year 2012/13, to what extent did your school encounter the following challenges related to your online course use?" Seven schools that reported using online courses did not complete this question. See table C6 for additional statistical information.

Source: Authors' analysis based on Capital Area School Development Association survey data for 2012/13, as described in the text.

Schools that reported using online courses had at least "a little" concern regarding course quality (71 percent), the academic integrity of online learning (60 percent), and the lack of face-to-face interaction between students and teachers (58 percent)

experiences in online courses figured in three of the most common challenges cited (figure 2 and table C6 in appendix C). Specifically, schools that reported using online courses had at least "a little" concern regarding course quality (71 percent), the academic integrity of online learning (60 percent), and the lack of face-to-face interaction between students and teachers (58 percent).

CASDA high schools also named challenges unrelated to students' educational experiences. More than half of the schools that enrolled students in online courses reported that lack of student interest (54 percent), limited access to technology (51 percent), lack of state guidance (51 percent), and lack of teacher buy-in (50 percent) presented at least "a little" challenge to their use of online courses.

Sixty-one percent of respondent schools that reported using online courses thought students would benefit from increased use of online courses. Even though schools reported concerns about their online learning programs, 61 percent of schools that used online courses replied that they thought increasing their school's use of online courses would benefit students' learning outcomes. These 17 schools believed their students would benefit from increased access to online credit recovery courses (94 percent), elective courses (82 percent), dual credit/college courses (71 percent), and Advanced Placement courses (65 percent; table 3 and table C8 in appendix C). However, 32 percent of schools said that they did not know if increasing their school's use of online courses would benefit learning outcomes for students, and 7 percent said they did not believe their students would benefit from an increased use of online courses.

Table 3. Percentage of CASDA respondent high schools that wanted to increase their use of online courses by course academic objective, 2012/13

Course academic objective	Percent
Credit recovery courses	94
Elective courses[a]	82
Dual credit/college courses	71
Advanced Placement courses	65
Core courses required for a Regents diploma[b]	41

CASDA is Capital Area School Development Association.

a. Excludes courses required for a Regents diploma, Advanced Placement courses, credit recovery courses, and dual credit/college courses.

b. Excludes core courses taken for credit recovery.

Note: The table displays the percentages of the 17 high schools that reported online course use in 2012/13 and indicated that they believed increasing their use of online courses for an academic objective would benefit students' learning outcomes. Seven schools that reported using online courses did not complete the question about whether increasing their use of online courses would benefit students' learning outcomes. All of the schools that indicated that it would benefit learning outcomes completed the follow-up question about academic objectives. Percentages sum to more than 100 because schools could indicate more than one academic objective. See table C8 for additional statistical information.

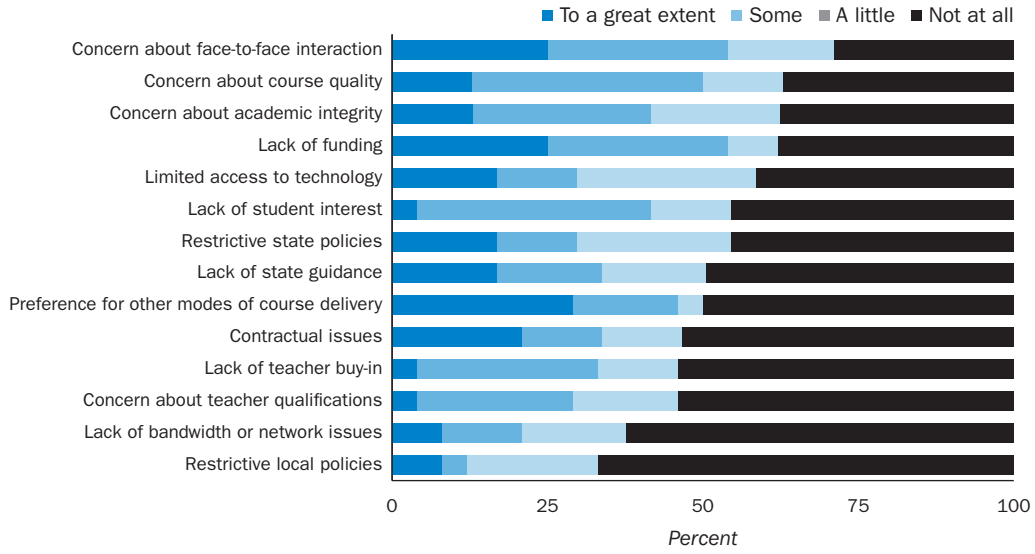
Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Fifty-eight percent of the 24 CASDA schools that reported not using online courses indicated that they thought offering online courses would benefit students' learning outcomes

Respondent schools that reported not using online courses cited concerns about students' educational experiences as factors that influenced their decision not to use online courses

Forty percent (24 schools) of the 59 CASDA high schools that responded to the survey reported that they had not used online courses for their students in 2012/13. The most frequently cited reasons that they had not used online courses fell into two categories

Figure 3. CASDA respondent high schools not using online courses reported concerns about students' educational experiences and lack of resources, 2012/13



CASDA is Capital Area School Development Association.

Note: The figure displays the percentages of the 24 high schools that answered "not at all," "a little," "some," or "to a great extent" for the question, "In school year 2012/13, to what extent did the following factors influence your school's decision not to offer online courses to students?". See table C9 for additional statistical information.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

(figure 3 and table C9 in appendix C). One category relates to the educational experiences of students in online courses. As with schools that used online courses, concerns about students' educational experiences in online courses figured prominently. Specifically, schools mentioned their concerns about the lack of face-to-face interaction between students and teachers (71 percent), the quality of online courses (64 percent), and the academic integrity of online courses (63 percent) as reasons for not using online courses (see figure 3). A second category of reasons concerned school resources, including lack of funding (62 percent) and limited access to technology (59 percent).

Despite these concerns, 58 percent of the 24 CASDA schools that reported not using online courses indicated that they thought offering online courses would benefit students' learning outcomes; 13 percent did not think so, and 29 percent did not know. Of the 14 schools that reported that they thought online courses would benefit learning outcomes, 93 percent thought that elective courses would be beneficial and 79 percent thought that credit recovery and dual credit/college courses would be beneficial.

Implications of the study and suggested directions for future research

The predominant use of online courses for credit recovery combined with schools' concerns about students' educational experiences in online courses suggests the need for additional information about how schools are using online courses and how students are faring academically in these courses

CASDA high schools' use of online learning to provide credit recovery opportunities for students is consistent with national trends (Clements, Stafford, Pazzaglia, & Jacobs, 2015; Queen & Lewis, 2011). The predominant use of online courses for credit recovery combined with schools' concerns about students' educational experiences in online courses suggests the need for additional information about how schools are using online courses and how students are faring academically in these courses. Recent research suggests that online credit recovery course completion rates may be particularly low (Ferdig, 2010) and this population of students may need additional support to successfully complete online credit recovery courses (Jones, 2009; National High School Center, 2011). Recommendations exist about what quality online instruction should encompass, but there is no research evidence demonstrating that some aspects of online teaching or certain online instructional models are more effective in promoting student learning (Council of Chief State School Officers, 2011; International Association for K–12 Online Learning, 2011).

States and districts could undertake a number of research efforts to examine their use of online courses, including:

- How are schools implementing online learning to provide students with credit recovery opportunities?
- What are the academic outcomes of students in online credit recovery courses?
- What supports from the online teacher or brick-and-mortar school staff do students receive in online credit recovery courses?
- Are online credit recovery courses more or less cost effective than face-to-face credit recovery courses?

In the absence of a large body of rigorous research on online learning, states and districts may want to consider research-based strategies to support students. Recent experimental evidence suggests that the provision and training of an onsite monitor[2] are an important component in students' success in an online course, even among high-achieving students (Hannum, Irvin, Lei, & Farmer, 2008). Students who attended schools where the onsite monitor received training to support and guide students as they participated in online courses (in addition to the regular training on administering the online course) were

more likely to complete an Advanced Placement English course than were students in the control group whose onsite monitors did not receive the additional training.

Limitations of the study

Three limitations of the study affect the generalizability of the findings reported here.

- The study targeted the Capital Area Region of the state, and, as a result, the findings should not be generalized to other parts of the state.
- Only 60 percent of the 99 CASDA high schools responded to the survey. Although an analysis found that the characteristics of the schools that responded and those that did not respond to the survey were not statistically different (see last section of appendix B), it is possible that the responding schools differ from the nonresponding schools in other ways on variables that were not included in the nonresponse analysis.
- The study's sample size was small. Of the 59 high schools that responded to the survey, 35 schools reported that they used online courses. Sample sizes were smaller on some items due to item nonresponse; however, the characteristics of the schools that responded and did not respond to each individual item were not statistically different. Additional information can be found in appendix B.

Appendix A. Online course use survey

This appendix includes the consent form, instructions, and survey items from the Capital Area School Development Association (CASDA) online course use survey analyzed for this report. The full survey is available from the authors upon request.

Consent form

The Capital Area School Development Association (CASDA) is conducting a survey to gather information about how online courses are being used in high schools in the Greater Capital Region of New York. Your participation in the study will provide CASDA with important information that it can use to better understand how and why schools use online and distance learning courses as part of their educational programs.

CASDA is conducting this study in collaboration with Regional Educational Laboratory Northeast & Islands, which is funded by the U.S. Department of Education (US DoE). The results of this study will also be published by the US DoE. Neither CASDA nor the US DoE will penalize or reward you or your school based on your responses to this survey.

- The survey asks about the use of online courses and distance learning courses in your school during the 2012/13 school year and will take approximately 15 minutes to complete.
- Any information you provide will be maintained in a secure manner. Your responses will be collected through a secure survey delivery system, and only authorized project staff will have access to the study data.
- Reports about the survey will not include any information about individuals or individual schools; the data will be combined with data from other schools in the Capital Region of New York to describe the overall profile of how schools use online and distance learning courses.
- As with any online activity, there is a slight risk that your answers could be accessed by someone. To minimize this possibility, data will be stored on encrypted and password-protected drives that will be kept in a locked cabinet when not in use.
- Completing the survey is voluntary. You may skip any questions you do not want to answer or stop at any time.

If you have questions about this project, you may contact CASDA's collaborator, Peggy Clements, via phone or email.

Please enter your full name below:

By clicking "I agree" below, you are indicating that you have read and understood this consent form and agree to participate in this research study. You may print a copy of this page for your records.

- I agree.
- I do not agree.

If "I do not agree" is selected, then skip to end of survey.

The purpose of this survey is to gather information about online and distance learning in public high schools in the Greater Capital Region of New York. While participation in this survey is voluntary, your cooperation is critical to making the results of this survey comprehensive, accurate, and timely.

Your answers will be used only for statistical purposes and will not be disclosed or used in identifiable form for any other purpose. It will take approximately 15 minutes to complete.

Please complete the following information.

- School Name: _____
- School District: _____
- Your Title/Position at the School: _____

Instructions

This survey will ask questions about two different types of courses: online courses and distance learning courses.

Definition of online courses. Education in which instruction and content are delivered primarily over the Internet and participants may communicate in real time or delayed time, such as through email or online discussion forums. Online courses may or may not include an online teacher.

Definition of distance learning courses. Education in which instruction and content are delivered primarily via interactive video-conferencing technology, and participants communicate in real time.

1. Please report information for students enrolled in your school only.

2. You will be asked about numbers of student enrollments and numbers of online courses and distance learning courses. You may have to work with other staff members at your school to ensure a complete report of online learning and distance learning in your school.

3. The timeframe for this survey is the 12-month 2012/13 school year. This includes courses taken during the summer of 2012 or the summer of 2013, depending on how records are kept at your school. References to "2012/13" in the survey questions refer to this 12-month school year.

4. Please do not include print-based correspondence education, broadcast television or radio, CDs or videocassettes, or standalone educational software programs that do not have a significant Internet- or videoconference-based instructional component.

For the purposes of this survey, exclude:

- Test preparation courses that are not credit-granting.
- Supplemental course materials, virtual field trips, online homework.
- Technology-assisted courses that are primarily taught by a classroom-based instructor (that is, blended learning or hybrid learning).
- Courses conducted mainly via written correspondence.

For the purposes of this survey, include any of the following if they meet the online course or distance learning course definitions and are credit-granting courses that:

- Have a teacher/assistant in the room who monitors but gives little or no instruction to the students (for example, a course taken entirely on a computer or via videoconference in a lab supervised by a teacher who does not provide instruction).
- Include occasional face-to-face interactions between the course instructor and the students (for example, a teacher teaching a course at several schools via computer technology who rotates between schools, or instructor and students who are in the same location for orientation or occasional lab work or tests).
- Originate from your district or from other entities (for example, a state virtual school or a postsecondary institution).

Include online courses and distance learning courses that meet the above criteria and that:

- Are taken by students in school, at home, or in some other location.
- Are taken by students to continue coursework while temporarily unable to attend school (for example, while on home or hospital instruction or while on extended travel for personal or family reasons)
- Are taken for credit or grade recovery.
- Are taken for Advanced Placement credit or for college-level or dual credit; dual credit college-level courses are those for which students receive both high school and college credits.

1a. In school year 2012/13, were any students in your school enrolled in credit-granting online courses?

- Yes.
- No.

If Yes is selected, then skip to Q4.

If No is selected, then skip to Q1b.

1b. In school year 2012/13, to what extent did the following factors influence your school's decision not to offer online courses to students? (Check one on each line.)

	Not at all	A little	Some	To a great extent
Preference for other modes of course delivery				
Lack of funding				
Concern about course quality				
Concern about academic integrity				
Concern about teacher qualifications				
Concern about lack of student/teacher face-to-face interaction				
Limited access to technology				
Lack of bandwidth or network issues				
Lack of teacher buy-in				
Lack of student interest				
Contractual issues				
Lack of state guidance				
Restrictive state policies				
Restrictive local policies				
Other, please specify: _____				

1c. Do you think offering online courses would benefit learning outcomes for students in your school?
- Yes.
- No.
- Don't know.

If Yes is selected, then skip to Q1d.

If No is selected, then skip to end of survey.

If Don't know is selected, then skip to end of survey.

1d. For which course categories do you think students in your school could benefit from the use of online courses? (Check all that apply)
- Core courses required for a Regents diploma (not taken for credit recovery).
- Advanced Placement (AP) courses.
- Credit recovery courses.
- Dual credit/college courses.
- Elective courses (exclude core, AP, credit recovery, and dual credit/college courses).
- Other types of courses, please specify: _____.

2. For school year 2012/13, report the number of online courses taken by students in your school (for example, English 9, Biology II, Advanced Placement Statistics).
- Only include credit-granting courses.
- Do not include information for supplemental course materials, virtual field trips, online homework, technology-assisted or blended courses, or courses conducted mainly via written correspondence or videoconferencing technology.

3. For school year 2012/13, report the number of students in your school who were enrolled in online courses.
- An unduplicated count in which each student is counted only once, regardless of the number of courses in which he/she was enrolled.
- Include all students who enrolled whether or not the student completed the course.

4. For school year 2012/13, report the number of enrollments in online courses for your school.
- The number of enrollments may include duplicated counts of students. A student should be counted for each course in which he/she was enrolled.
- Include all enrollments whether or not the student completed the course.

5. For each box, report the number of online course enrollments in school year 2012/13 in each of the following course categories.
- Core courses required for a Regents diploma (not taken for credit recovery).
- Advanced Placement (AP) courses.
- Credit recovery courses.
- Dual credit/college courses.
- Elective courses (exclude core, AP, credit recovery, and dual credit/college courses).
- Other types of courses, please specify: _____.

6. For each box, report the number of online course enrollments in school year 2012/13 in each of the following academic areas:
   - Math.
   - Science.
   - English/language arts.
   - History/social studies.
   - Vocational/technical.
   - Languages other than English/world languages.
   - Health/physical education.
   - Fine arts.
   - Other academic areas, please specify: _____.

7. How important were the following reasons for having online courses in your school in 2012/13? (Check one on each line.)

	Not Important	Somewhat Important	Very Important	Don t Know
To provide courses not available at the school				
To offer Advanced Placement (AP) or college-level courses				
To reduce scheduling conflicts for students				
To provide opportunities for students to recover course credits from classes they missed or failed				
To provide opportunities for students to accelerate credit accumulation for early graduation				
To address school space limitations				
To provide courses to students who were unable to attend due to medical or correctional reasons				
To provide students with access to an alternative learning environment				
To provide course options where certified teachers were not available for face-to-face instruction				
To provide students the opportunity to earn college credits while in high school				
To personalize student learning				
To reduce the cost of course delivery				
To retain teachers by expanding coverage options				
Other, please specify: _____				

8. In school year 2012/13, to what extent did your school encounter the following challenges related to your online course use? (Check one on each line.)

	Not at all	A little	Some	To a great extent
Lack of funding				
Concern about course quality				
Concern about academic integrity				
Concern about teacher qualifications				
Concern about lack of student/teacher face-to-face interaction				
Limited access to technology				
Lack of bandwidth or network issues				
Lack of teacher buy-in				
Lack of student interest				
Contractual issues				
Lack of state guidance				
Restrictive state policies				
Restrictive local policies				
Other, please specify: _____				

9. Do you think increasing your school's use of online courses would benefit learning outcomes for students in your school?
   - Yes.
   - No.
   - Don't know.

If Yes is selected, then skip to Q10.

If No is selected, then skip to end of survey.

If Don't know is selected, then skip to end of survey.

10. For which course categories do you think students in your school could benefit from increased use of online courses? (Check all that apply)
    - Core courses required for a Regents diploma (not taken for credit recovery).
    - Advanced Placement (AP) courses.
    - Credit recovery courses.
    - Dual credit/college courses.
    - Elective courses (exclude core, AP, credit recovery, and dual credit/college courses).
    - Other types of courses, please specify: _____.

Appendix B. Data and methodology

This appendix describes the data sources and details the study methodology.

Sampling strategy

The Capital Area School Development Association (CASDA) administered the survey to all of its 99 member public high schools. The target population consisted of schools with students in grades 9, 10, 11, or 12, regardless of school structure (whether 7–9, 9–12, or some other configuration). Fifty-seven percent of CASDA schools are located in rural areas, 17 percent are located in town areas, and 26 percent are located in city/suburban areas (table B1). Ninety-one percent of schools are eligible for Title 1 subsidies, and 91 percent of students, on average, are White.

To be included in the analysis, schools had to complete the informed consent form and at least Question 1 on the survey ("In school year 2012/13, were any students in your school enrolled in online courses?").

Data sources, instruments, and collection methods

CASDA administered the online course use survey (appendix A) to its schools to gather information about the 2012/13 school year regarding how schools used online course options for their students, why schools used online course options, what challenges schools faced in using online course options, and why some schools chose not to use online course options. To develop the online course use survey administered for this study, the study team modified a survey they had developed as part of their work with the Virtual Education Research Alliance at Regional Education Laboratory (REL) Midwest to examine online course use in two midwestern states (Clements, Stafford, Pazzaglia, & Jacobs, 2015). The study team modified the items as necessary to reflect the education context in New York and the current landscape of online learning. The study team also developed new items to address topics that were not covered by the original survey. The next section outlines the process by which the study team validated the survey.

Data collection instruments. The survey development process consisted of generating an initial draft of the survey by adapting items, where possible, from the survey created as part of the REL Midwest research discussed above; writing new items when needed; receiving feedback from content experts and representatives from CASDA to make an initial set of revisions; and conducting a series of cognitive interviews with staff members from four high schools in New York to gather additional feedback on the draft survey. The study team made final revisions based on feedback from the cognitive interviews. CASDA approved the final version of the survey.

The study team developed the initial REL Midwest online course use survey items for the first two research questions by drawing on three existing surveys (Queen & Lewis, 2011; Picciano & Seaman, 2009; California Learning Resource Network, 2012) and modifying these items to reflect the state of online learning and the target respondents (that is, school rather than district personnel). The three existing surveys could not be used directly because they did not address all the research questions of interest, were designed to collect district rather than school data, and did not reflect the current state of virtual

Table B1. Population and respondent characteristics

School characteristic	Population				Respondents			
	Number of schools	Percent	Mean	Standard deviation	Number of schools	Percent	Mean	Standard deviation
Locale								
City/suburban[a]	26	26			20	34		
Town[b]	17	17			9	15		
Rural[c]	55	57			30	51		
Grade span								
Pre-K/K–12	16	16			9	15		
7–12	22	22			13	22		
9–12	54	55			34	58		
Other	6	6			3	5		
Title 1 eligibility[d]								
Eligible	88	91			51	88		
Not eligible	9	9			7	12		
Race/ethnicity (percent of students)								
American Indian/Alaskan Native			0	0			0	0
Asian			2	3			2	3
Black			4	8			5	11
White			91	15			88	18
Hawaiian Native/Pacific Islander			0	0			0	0
Hispanic			3	6			3	7
Two or more races			0	1			1	1
Other characteristics								
Percent eligible for free lunch			22	12			21	13
Total enrollment			655	555			751	604
Full-time teachers			52	38			57	39
Pupil–teacher ratio			12	3			13	2

a. Schools classified in the Common Core of Data as city—large, city—midsize, city—small, suburb—large, suburb—midsize, or suburb—small (U.S. Department of Education, 2011).

b. Schools classified as town—fringe, town—distant, or town—remote.

c. Schools classified as rural—fringe, rural—distant, or rural—remote.

d. A school is Title I eligible if at least 30 percent of its students are from low-income households. One school did not have data on Title 1 eligibility.

Note: Percentages may not sum to 100 because of rounding. The total number of schools included in these calculations is 98. For the three schools not included in the U.S. Department of Education's National Center for Education Statistics (NCES) Common Core of Data (CCD), characteristics from another school in the district were included as a proxy, or data from the New York State Report Card were included. One school was not in CCD, did not have a comparable school in the district, and did not appear in the New York State Report Card database.

Source: Authors' calculations based on U.S Department of Education (2011) and New York State Education Department (2011–12).

education since they were administered between four and six years ago. The study team modified these items as necessary to reflect the education context of New York. The study team developed items to address the third and fourth research questions for CASDA by drawing on previous surveys of barriers to distance education (Holstead & Spradlin, 2009; Irvin, Hannum, Farmer, de la Varre, & Keane, 2009) and the academic literature (Moore, 1993; Murphy & Rodriguez-Manzanares, 2008; Rovai, 2002). These items collected information on the challenges faced by schools that currently use online courses, as well as the reasons that schools choose not to the use online courses.

After developing the initial draft of the survey, the study team established the content validity of the survey items through a review of the literature, expert review and feedback, and cognitive interviews. The cognitive interviewing methodology used standardized initial and conditional probes to elicit feedback from educators about the language, comprehensibility, relevance, and comprehensiveness of survey items (Beatty & Willis, 2007). The goal of the cognitive interviews was to reduce potential sources of response error by identifying and correcting potential problems in the survey questions prior to conducting a large-scale survey. Cognitive interviews were conducted with four school staff members in the Greater Capital Region of New York recruited by CASDA. The study team used this information to further refine the survey items and, after obtaining additional feedback from representatives from CASDA, finalized the survey.

Data collection methods. CASDA administered the survey electronically through a secure online survey system over eight weeks at the beginning of the 2013/14 school year (to collect accurate information for the prior year, 2012/13). The intended respondent for the survey was the staff person in the school who was most familiar with the school's online learning program. The role of this staff member varied across schools; principals, guidance counselors, and other staff members responded to the survey. To identify this respondent, CASDA sent an email to principals in the target schools that described the purpose of the study and contained a link to the online survey. CASDA asked the principal to forward the email to the staff member who was responsible for overseeing the online learning program. If several staff members at the same school were responsible for different types of online learning (for example, if one staff member was responsible for credit recovery courses while another was responsible for Advanced Placement courses), CASDA encouraged the person completing the survey to gather information from all other staff members who were responsible for online learning to provide a comprehensive summary of online learning in their school. Eighty percent of the 59 respondents were principals; the remaining respondents were guidance counselors, superintendents, online/distance learning coordinators, and other staff. If a school did not have any students enrolled in online courses during the 2012/13 school year, CASDA asked the principal to respond to a series of questions about why her or his school had chosen not to use online courses, as well as whether she or he thought offering online courses in the future might benefit student learning outcomes.

In alignment with National Center for Education Statistics (2002) statistical standards for surveys administered to the entire population, the target response rate for this survey was 95 percent. The study team worked closely with CASDA representatives to follow up with schools to increase response rates. Further, the study team generated completion reports at regular intervals to help guide follow-up correspondence. CASDA sent reminder emails every two weeks to schools that had not completed the survey; these messages reiterated the purpose of the study and stressed the importance of the survey for understanding online learning in the CASDA region of New York. Each nonresponding school also received two reminder phone calls during the final two weeks of survey administration.

Data processing and analysis

After CASDA collected the survey data, the study team cleaned the data to ensure that only schools that provided informed consent and responded to at least item 1 were included in the analytic sample. Upon identifying the analytic sample, the study team calculated

the unit nonresponse rate, which was 40 percent. Based on National Center for Education Statistics (2002) statistical guidelines, the study team conducted a unit nonresponse bias analysis because the unit nonresponse rate was greater than 10 percent. The study team conducted the unit nonresponse bias analysis by creating a dichotomous variable that indicated response status (1 = response, 0 = nonresponse) and regressing it on school characteristics available in the Common Core of Data: school locale (nonrural, rural), total enrollment, percentage of students in each race/ethnicity category (Black, Hispanic, Asian, White, and other; where "other" included American Indian/Alaskan Native, Hawaiian/Pacific Islander, and two or more races), pupil–teacher ratio, and percentage of students eligible for free lunch.[3] The only significant predictor was the race category "other," yet this was likely due to low variation. Approximately 68 percent of schools had no students who were American Indian/Alaskan Native, Hawaiian/Pacific Islander, or two or more races; for the remaining schools, 0.04–7 percent of students fell into that category. Since there were no other significant predictors of unit nonresponse, unit nonresponse weights were not applied in calculating descriptive statistics.

The study team also calculated nonresponse rates for each survey item. For each item with a nonresponse rate above 15 percent (that is, questions 1c and 2–8), the study team conducted an item nonresponse bias analysis by creating a dichotomous variable that indicates item response status (1 = response, 0 = nonresponse) and regressing it on the school-level characteristics included in the unit nonresponse bias analyses. Because the unit nonresponse rate was above 15 percent, only school characteristics available in the Common Core of Data were included as predictors of nonresponse in the item nonresponse bias analyses, with responses to other items on the survey excluded from the analyses (National Center for Education Statistics Statistical Guideline 4–4-3). The item nonresponse analysis consisted of the 99 schools in the population. Again the only predictor that was significant in some of the regressions was the "other" race category. Thus, item-level nonresponse weights were not created.

The study team summarized the data by calculating totals, means, minimums, maximums, frequencies, and standard errors, as appropriate. Descriptive statistics were calculated using Stata Special Edition 12.1.

Appendix C. Supplemental statistical tables

This appendix includes the results of survey questions about online learning that were administered to Capital Area School Development Association (CASDA) high schools. The tables include the percentage of respondents who selected each option and the associated standard errors. For questions that asked respondents for the number of students, the mean, median, standard error, minimum, and maximum are reported. The total number of respondents is also reported.

The sample for table C1 includes the 59 CASDA schools that responded to the survey. Tables C2–C8 include CASDA high schools that use online courses and that responded to the survey item; sample sizes range from 17 to 29. Tables C9 and C10 include CASDA high schools that did not use online courses and responded to the survey item; sample sizes range from 14 to 24.

Table C1. Percentage of CASDA respondent high schools with students enrolled in credit-granting online courses, 2012/13

	Yes		No		
Item	Percent	Standard error	Percent	Standard error	Number of respondents
Enrolled students in online courses	59	6.4	41	6.4	59

CASDA is Capital Area School Development Association.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C2. Mean number and percentage of students in online courses in CASDA respondent high schools, 2012/13

Item	Number of respondents	Mean	Standard error	Median	Minimum	Maximum
Number of students in online courses	29	45.7	16.9	20.0	1.0	488.0
Percentage of students in online courses[a]	29	5.5	1.1	4.0	0.0	20.2

CASDA is Capital Area School Development Association.

a. Calculated as the number of students enrolled in online courses divided by the number of students in grades 9–12.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text, and U.S. Department of Education (2011).

Table C3. Percentage of CASDA respondent high schools that used online courses to address each academic objective, 2012/13

Academic objective	Percent	Standard error	Number of respondents
Credit recovery courses	77	8.4	26
Core courses required for a Regents diploma (not taken for credit recovery)	42	9.9	26
Elective courses (exclude core, Advanced Placement, credit recovery, and dual credit/college courses)	35	9.5	26
Advanced Placement courses	27	8.9	26
Dual credit/college courses	8	5.3	26
Other types of courses	4	3.9	26

CASDA is Capital Area School Development Association.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C4. Percentage of CASDA respondent high schools that used online courses in each academic domain, 2012/13

Academic domain	Percent	Standard error	Number of respondents
History and social studies	72	9.2	25
Math	68	9.5	25
English language arts	64	9.8	25
Science	52	10.2	25
Health or physical education	40	1.0	25
Fine arts	20	8.2	25
Languages other than English/world languages	12	6.6	25
Vocational or technical	4	4.0	25
Other	12	6.6	25

CASDA is Capital Area School Development Association.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C5. Reported reasons for having online courses in CASDA respondent high schools, 2012/13

Reason	Not important		Somewhat important		Very important		Don t know		Number of respondents
	Percent	Standard error	Percent	Standard error	Percent	Standard error	Percent	Standard error	
To provide opportunities for students to recover course credits from classes they missed or failed	18	7.4	0	na	82	7.4	0	na	28
To provide students with access to an alternative learning environment	29	8.7	36	9.2	36	9.2	0	na	28
To reduce scheduling conflicts for students	33	9.3	30	9.0	33	9.3	4	3.7	27
To provide courses to students who are unable to attend due to medical or correctional reasons	43	9.5	29	8.7	25	8.3	4	3.6	28
To personalize student learning	39	9.4	21	7.9	32	9.0	7	5.0	28
To provide courses not available at the school	54	9.6	14	6.7	32	9.0	0	na	28
To provide opportunities for students to accelerate credit accumulation for early graduation	57	9.5	29	8.7	11	6.0	4	3.6	28
To reduce the cost of course delivery	63	9.5	15	7.0	22	8.2	0	na	27
To provide students the opportunity to earn college credits while in high school	64	9.2	14	6.7	18	7.4	4	3.6	28
To offer Advanced Placement or college-level courses	71	8.7	4	3.6	25	8.3	0	na	28
To provide course options where certified teachers are not available for face-to-face instruction	71	8.7	18	7.4	11	6.0	0	na	28
To retain teachers by expanding coverage options	71	8.7	11	6.0	11	6.0	7	5.0	28
To address school space limitations	79	7.9	14	6.7	4	3.6	4	3.6	28

CASDA is Capital Area School Development Association.

na is not applicable.

Note: Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on Capital Area School Development Association survey data for 2012/13, as described in the text.

Table C6. Percentage of CASDA respondent high schools that reported challenges related to online course use, 2012/13

Challenge	Not at all		A little		Some		To a great extent		Number of respondents
	Percent	Standard error	Percent	Standard error	Percent	Standard error	Percent	Standard error	
Concern about course quality	29	8.7	50	9.6	21	7.9	0	na	28
Concern about academic integrity	39	9.4	39	9.4	14	6.7	7	5.0	28
Concern about lack of student/teacher face-to-face interaction	43	9.5	36	9.2	11	6.0	11	6.0	28
Lack of student interest	46	9.6	43	9.5	11	6.0	0	na	28
Limited access to technology	50	9.6	36	9.2	11	6.0	4	3.6	28
Lack of state guidance	50	9.6	36	9.2	11	6.0	4	3.6	28
Lack of teacher buy-in	50	9.6	32	9.0	11	6.0	7	5.0	28
Restrictive state policies	54	9.6	36	9.2	0	na	11	6.0	28
Concern about teacher qualifications	61	9.4	29	8.7	7	5.0	4	3.6	28
Contractual issues	61	9.4	21	7.9	14	6.7	4	3.6	28
Lack of funding	64	9.2	25	8.3	4	3.6	7	5.0	28
Lack of bandwidth or network issues	64	9.2	25	8.3	11	6.0	0	na	28
Restrictive local policies	82	7.4	14	6.7	4	3.6	0	na	28

CASDA is Capital Area School Development Association.

na is not applicable.

Note: Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C7. Percentage of CASDA respondent high schools that want to increase their use of online courses, 2012/13

Item	Yes		No		Don t know		Number of respondents
	Percent	Standard error	Percent	Standard error	Percent	Standard error	
Online courses would benefit learning outcomes for students	61	9.4	7	5.0	32	9.0	28

CASDA is Capital Area School Development Association.

Note: Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C8. For CASDA respondent high schools offering online courses that want to increase their use of online courses, the academic objectives of courses they think would benefit students' learning outcomes, 2012/13

Academic objective	Percent	Standard error	Number of respondents
Credit recovery courses	94	5.9	17
Elective courses (exclude core, Advanced Placement, credit recovery, and dual credit/college courses)	82	9.5	17
Dual credit/college courses	71	11.4	17
Advanced Placement courses	65	12.0	17
Core courses required for a Regents diploma (not taken for credit recovery)	41	12.3	17
Other types of courses	0	na	17

CASDA is Capital Area School Development Association.

na is not applicable.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C9. Factors influencing CASDA respondent high schools' decisions not to use online courses, 2012/13

	Not at all		A little		Some		To a great extent		
Reason	Percent	Standard error	Percent	Standard error	Percent	Standard error	Percent	Standard error	Number of respondents
Concern about lack of student/teacher face-to-face interaction	29	9.5	17	7.8	29	9.5	25	9.0	24
Concern about course quality	38	10.1	13	6.9	38	10.1	13	6.9	24
Concern about academic integrity	38	10.1	21	8.5	29	9.5	13	6.9	24
Lack of funding	38	10.1	8	5.8	29	9.5	25	9.0	24
Limited access to technology	42	10.3	29	9.5	13	6.9	17	7.8	24
Lack of student interest	46	10.4	13	6.9	38	10.1	4	4.2	24
Restrictive state policies	46	10.4	25	9.0	13	6.9	17	7.8	24
Lack of state guidance	50	10.4	17	7.8	17	7.8	17	7.8	24
Preference for other modes of course delivery	50	10.4	4	4.2	17	7.8	29	9.5	24
Contractual issues	54	10.4	13	6.9	13	6.9	21	8.5	24
Lack of teacher buy-in	54	10.4	13	6.9	29	9.5	4	4.2	24
Concern about teacher qualifications	54	10.4	17	7.8	25	9.0	4	4.2	24
Lack of bandwidth or network issues	63	10.1	17	7.8	13	6.9	8	5.8	24
Restrictive local policies	67	9.8	21	8.5	4	4.2	8	5.8	24

CASDA is Capital Area School Development Association.

Note: Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C10. Percentage of CASDA respondent high schools without online courses that reported that offering online courses would benefit learning outcomes for students, 2012/13

Item	Yes		No		Don t know		
	Percent	Standard error	Percent	Standard error	Percent	Standard error	Number of respondents
Online courses would benefit learning outcomes for students	58	10.3	13	6.9	29	9.5	24

CASDA is Capital Area School Development Association.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Table C11. Academic objectives of online courses that CASDA respondent high schools without online courses reported would benefit learning outcomes, 2012/13

Reason	Percent	Standard error	Number of respondents
Elective courses (exclude core, Advanced Placement, credit recovery, and dual credit/college courses)	93	7.1	14
Credit recovery courses	79	11.4	14
Dual credit/college courses	79	11.4	14
Advanced Placement courses	64	13.3	14
Core courses required for a Regents diploma (not taken for credit recovery)	29	9.5	14
Other types of courses	7	7.1	14

CASDA is Capital Area School Development Association.

Note: Percentages may not sum to 100 because of rounding. The denominator is the number of schools that do not use online learning but reported that they think online learning would benefit students' learning outcomes.

Source: Authors' analysis based on CASDA survey data for 2012/13, as described in the text.

Notes

The authors wish to thank members of the Northeast Rural Districts Research Alliance, especially members of its advisory committee, for this study: Jerry Steele and James Butterworth at the Capital Area School Development Association. The advisory committee members provided contributions to the research design and reports of this study.

1. The original survey was developed by the authors of this report in collaboration with the Virtual Education Research Alliance at Regional Educational Laboratory Midwest.
2. An onsite monitor or online facilitator is a school staff member who is responsible for monitoring and providing support to students in their school who are taking online courses (International Association for K-12 Online Learning, 2011).
3. The total number of schools included in the nonresponse models was 98. One school did not appear in Common Core of Data, did not have a comparable school in the district, and did not appear in the New York State Report Card database, and so it was not included in the nonresponse analysis. Three of the schools in nonresponse analysis were missing Common Core of Data information; characteristics from another school in the district were included as a proxy, or data from the New York State Report Card were included.

References

Beatty, P. C., & Willis, G. B. (2007). Research synthesis: The practice of cognitive interviewing. *Public Opinion Quarterly, 71*(2), 287–311.

California Learning Resource Network. (2012). *California eLearning census* [Unpublished instrument]. Retrieved May 1, 2012, from http://www.clrn.org/census/ca_elearning_census.pdf

Clements, M., Stafford, E., Pazzaglia, A. M., & Jacobs, P. (2015). *Online course use in Iowa and Wisconsin public high schools: Results of two statewide surveys* (REL 2015–065). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. http://ies.ed.gov/ncee/edlabs

Council of Chief State School Officers, Interstate Teacher Assessment and Support Consortium. (2011, April). *Model core teaching standards: A resource for state dialogue*. Washington, DC: Author. Retrieved September 6, 2012, from http://www.ccsso.org/Resources/Publications/InTASC_Model_Core_Teaching_Standards_A_Resource_for_State_Dialogue_%28April_2011%29.html

Ferdig, R. (2010). *Understanding the role and applicability of K–12 online learning to support student dropout recovery efforts*. Lansing, MI: Michigan Virtual University.

Hannum, W. H., Irvin, M. J., Lei, P., & Farmer, T. W. (2008). Effectiveness of using learner-centered principles on student retention in distance education courses in rural schools. *Distance Education, 29*, 211–229. http://eric.ed.gov/?id=EJ812376

Holstead, M. S., & Spradlin, T. E. (2009). *2009 survey of virtual learning in Indiana*. Center for Evaluation and Education Policy, Indiana University. Retrieved January 8, 2013, from http://ceep.indiana.edu/projects/PDF/IVLC_Final_Report.pdf

International Association for K–12 Online Learning (iNACOL). (2011). *The online learning definitions project.* Vienna, VA: Author. Retrieved from http://www.inacol.org/cms/wp-content/uploads/2013/04/iNACOL_DefinitionsProject.pdf

Irvin, M. J., Hannum, W. H., Farmer, T. W., de la Varre, C., & Keane, J. (2009). Supporting online learning for advanced placement students in small rural schools: Conceptual foundations and intervention components of the facilitator preparation program. *The Rural Educator, 31*(1), 29–37. http://eric.ed.gov/?id=EJ876131

Jones, W. (2009). *Eight elements of high school improvement: An annotated bibliography*. Washington, DC: National High School Center at the American Institutes for Research. http://eric.ed.gov/?q=ED521560

Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.), *Theoretical principles of distance education* (pp. 22–38). New York, NY: Routledge.

Murphy, E., & Rodriguez-Manzanares, M. A. (2008). Revisiting transactional distance theory in a context of web-based high-school distance education. *Journal of Distance Education, 22*(2), 1–14. http://eric.ed.gov/?id=EJ805075

National Center for Education Statistics. (2002). *NCES statistical standards*. Retrieved April 1, 2012, from http://nces.ed.gov/statprog/2002/stdtoc.asp

National High School Center. (2011). *Eight elements of high school improvement: A mapping framework* (Rev. ed.). Washington, DC: National High School Center at the American Institutes for Research. http://eric.ed.gov/?q=ED521559

New York State Education Department. (2010). *Race to the Top application: Phase 2*. Retrieved March 28, 2014, from http://usny.nysed.gov/rttt/application/

New York State Education Department. (2011–12). New York State Report Cards, 2010–11. Retrieved November 14, 2013, from https://reportcards.nysed.gov.

Picciano, A., & Seaman, J. (2009). *K–12 online learning: A 2008 follow-up survey of the U.S. school district administrators*. Needham, MA: Sloan Consortium. http://eric.ed.gov/?id=ED530104

Queen, B., & Lewis, L. (2011). *Distance education courses for public elementary and secondary school students: 2009–10* (NCES No. 2012–008). U.S. Department of Education, National Center for Education Statistics. Washington, DC: Government Printing Office. http://eric.ed.gov/?id=ED526879

Rovai, A. P. (2002). Building sense of community at a distance. *International Review of Research in Open and Distance Learning, 3*(1), 1–16. http://eric.ed.gov/?id=EJ646664

U.S. Department of Education, National Center for Education Statistics. (2011). Common Core of Data. Public Elementary/Secondary School Universe Survey, 2010–2011. Retrieved November 14, 2013, from http://nces.ed.gov/ccd/pubschuniv.asp

Watson, J., Gemin, B., Ryan, J., & Wicks, M. (2009). *Keeping pace with K-12 online learning: An annual review of policy and practice*. Evergreen, CO: Evergreen Education Group.

Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2010). *Keeping pace with K-12 online learning: An annual review of policy and practice*. Evergreen, CO: Evergreen Education Group.

Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2013). *Keeping pace with K-12 online and blended learning: An annual review of policy and practice*. Evergreen, CO: Evergreen Education Group.

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