

# Acer: “With iSpring, we are training over 200 high school students to repair Chromebooks.”



*Bekie Wesson,  
Training coordinator,  
Acer Service*

*27 high school students in Minnesota recently became certified Acer Chromebook Repair Techsperts (CRTs). Now these students can perform basic hardware repairs on an Acer Chromebook, such as replacing a battery, mainboard or LCD screen!*

*Acer’s new Student eLearning Repair Program is a big hit at more than 15 schools across the country. Almost 400 students, teachers and technicians have enrolled in the program since it was launched in the fall of 2018. Bekie Wesson, training coordinator with Acer Service, shared how they developed and deployed the program using iSpring.*

## **Chromebook repair eLearning program**

Our training team is part of Acer Service, providing service and support for Acer products in North America, Canada and Latin America.

Many schools purchase Acer Chromebooks for their students. After nine months of backpacks, lockers and school busses, hinges are broken, screens get cracked, and covers or USB ports can be damaged! At the end of the year, when students turn in their devices, schools can ship them to our Service Center in Temple Texas for repair.

However some schools are qualified as self-maintainers. This authorizes school technicians to repair their devices locally. In 2017, with thousands of Chromebooks and only a handful of technicians, one of these schools asked if we could help them train student teams to assist with basic hardware repairs. The school's technical staff provides valuable oversight to these qualified students who are gaining work experience using their new skills helping to maintain their fleet of Acer Chromebooks!

That's how our Chromebook Repair eLearning program started. Today, this model-specific program is available on our iSpring Learn portal for three different Chromebooks, with more models to come.

## How the Chromebook repair program works

To participate, a qualified school submits a list of students and staff to be enrolled in the program. We add these users to our iSpring Learn account. The LMS automatically sends login information to each user's email address, and they are ready to start.

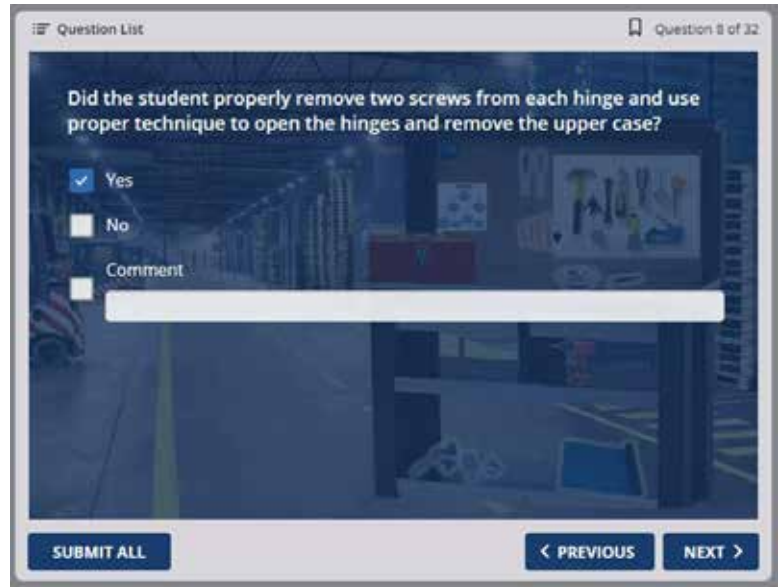
Our course consists of five chapters with over 30 individual lessons. Students explore the components of a Chromebook and watch instructional videos detailing how to replace components. They also learn about QA testing after components are replaced, as well as the importance of reconfiguring the hardware ID. Students must pass each quiz to continue to the next lesson. This self-paced course allows students to work at their own speed, replaying lessons and videos as needed.



***Students earn points for each completed lesson. Throughout the course, they can check the LMS leaderboard in their account to see how they stack up against other learners.***

Once all lessons are completed, the learner schedules the final assessment, during which they perform an actual repair. While observing the student, a staff member completes the online checklist to verify whether or not the student demonstrated the steps in the proper sequence as taught in the course.

The staff member documents the student's technical skills, beginning with opening the unit. From disconnecting cables and components, to installing new components and finally reassembling the unit, the staff member can even provide feedback to that student at every single step.



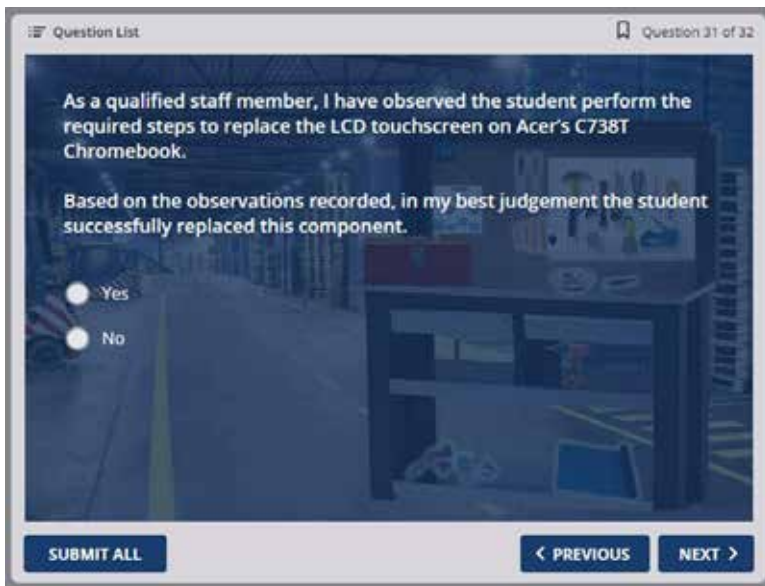
Question List Question 8 of 32

Did the student properly remove two screws from each hinge and use proper technique to open the hinges and remove the upper case?

Yes  
 No  
 Comment

SUBMIT ALL < PREVIOUS    NEXT >

*The staff member documents the student's technical skills as they perform the repair*



Question List Question 31 of 32

As a qualified staff member, I have observed the student perform the required steps to replace the LCD touchscreen on Acer's C738T Chromebook.

Based on the observations recorded, in my best judgement the student successfully replaced this component.

Yes  
 No

SUBMIT ALL < PREVIOUS    NEXT >

*With the final question, the staff member determines if the student successfully replaced the component.*

The final question asks the staff member to determine if the student successfully replaced the component.

If the steps in the online assessment were followed correctly, the LMS issues a customized Chromebook Repair Techspert certificate to the student's account.



*Acer Chromebook Repair Techspert certificate*

## Developing the program content with iSpring

Our training team was responsible for instructional and visual design, content development and deploying the program. However, to create a complete curriculum and then develop the content, we worked with subject matter experts from four departments:

- Members of our **Digital Services team** coordinated resources, providing video and image content
- **Repair depot** technicians provided best practice procedures on repair process
- Acer's **Premier support team** were our customer experts
- Acer's **Service engineering team** were our product experts

With input from our teams, I created the basic content using PowerPoint. Then I turned to iSpring Suite, using templates, characters and interactions to make it more engaging, applying what I've learned through many complimentary iSpring webinars.

*"As soon as I discovered iSpring, I immediately signed up for every webinar offered. I learned something new every time!"*

I made sure to vary the way information is delivered, so the student doesn't just sit and passively look at the screen. With iSpring it was easy to incorporate critical eLearning elements in the Chromebook Repair Course to keep students engaged.

## Choice

Where it makes sense to do so, we let students “drive.” For example, all components on the slide below are clickable. Students have to cover them all, but we let them choose the order in which they explore them.



*Component overview*

## Interactions

We deliver small chunks of information when the student clicks on images, graphics and icons. High quality images help students visually identify components and learn critical details about cables and connectors.



*Types of connectors interaction*

For example, the different types of connectors are described in an ebook interaction, available in iSpring Suite. Students can flip the pages back and forth to explore the material at their own pace.



*Interactive mini-game on tools and equipment*

As another example, we created an interactive mini-game to teach students about the tools and equipment that they need in order to actually replace the component.

## Resources

To address different learning styles, we have added downloadable resources to each lesson.

For example, students can download a PDF document and read the entire lesson. All resources are easily accessible from the course player.



*Downloadable resources available in the player*

I also created supporting content for each video, so the student can do a quick review before taking the quiz.

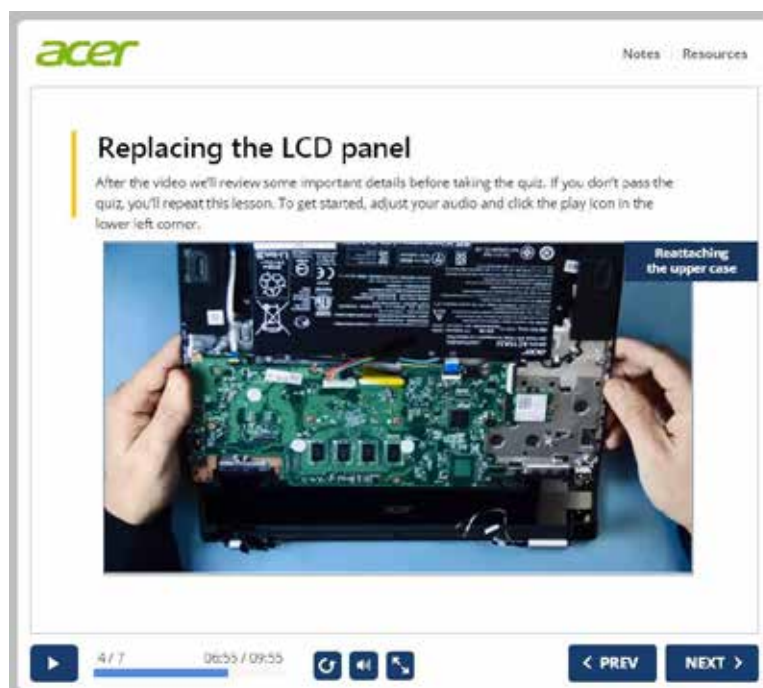


The screenshot shows a web interface for Acer support. At the top left is the Acer logo, and at the top right are links for 'Notes' and 'Resources'. Below this is a 'Review' section with a vertical navigation menu on the left containing four circular buttons labeled 'A', 'B', 'C', and 'D'. The main content area is titled 'Removing the stoppers' and contains the following text: 'Remove the stopper securing the cable inside each hinge cap. To do this, grasp the cable and carefully pull until the stopper comes out of the hinge cap. Repeat with the other cable and set both stoppers aside.' Below the text is a photograph of a laptop hinge assembly with three labels: 'Hinge cap', 'cable', and 'stopper'. At the bottom of the page are navigation icons for back, forward, and search, along with buttons for '< PREV' and 'NEXT >'.

*Supporting content to review information*

## Instructional Videos

We provide narrated high-quality videos explaining step-by-step how to replace specific components. Students can work at their own pace to pause, rewind, review, or repeat a lesson.



The screenshot shows a web interface for Acer support. At the top left is the Acer logo, and at the top right are links for 'Notes' and 'Resources'. Below this is a video player titled 'Replacing the LCD panel'. The video player has a play button in the bottom left corner, a progress bar showing '4 / 7' and '00:55 / 09:55', and navigation icons for back, forward, and search. At the bottom of the page are buttons for '< PREV' and 'NEXT >'. The video content shows a person's hands holding a laptop LCD panel, with a caption 'Reattaching the upper case' in the top right corner of the video frame.

*Step-by-step narrated videos*

**Replacing the I/O board**

After the video we'll review some important details before a quiz, you'll repeat this lesson. To get started, adjust your video player to the lower left corner.

**REMOVING THE LOWER CASE AND DISCONNECTING THE BATTERY**

1. Remove 11 screws.
2. Starting from the left side of the **lower case**, insert a plastic pry tool and slide around the edge of the system to release the clips.
3. Carefully open the lower case horizontally and lay it beside the upper case.
4. Disconnect the **battery cable** from the mainboard.

**REMOVING THE I/O BOARD**

5. Unlock and disconnect the **I/O cable** from the mainboard, loosening the adhesive securing this cable to the upper case.
6. Lift the Kapton tape from the I/O board connector. Unlock and disconnect the cable from the I/O board. Set this cable aside to be reinstalled on the new I/O board.
7. Remove the screw securing the I/O board to the lower case. Remove the I/O board from the upper case.

**REPLACING THE I/O BOARD**

8. Place the **I/O board** onto its compartment on the lower case. Replace the screw.
9. Reconnect and lock the component end of the I/O cable to its connector on the I/O board. Replace the Kapton tape over the connector. Press on the cable to adhere it.

*All the steps shown in the video are described in the notes*

Students can access the Notes at the top of their screen to read the detailed steps demonstrated in the video.



## Knowledge checks

After each lesson, students must pass the quiz in order to advance.

Through iSpring's different types of interactive questions, students demonstrate comprehension of the material as they work through the program.

**Question List** | Question 9 of 16 | Your Score: 70 of 150

Can you match each component with its function?

The lights on this component indicate power and battery charge.	 LED board
This component enables wireless connection to a local area network.	 wireless LAN card
This component emits audio directly from the C738T.	 mainboard
Memory, CPU and connectors for input and output devices are mounted on this component.	 speaker module

**SUBMIT**

*Matching questions*



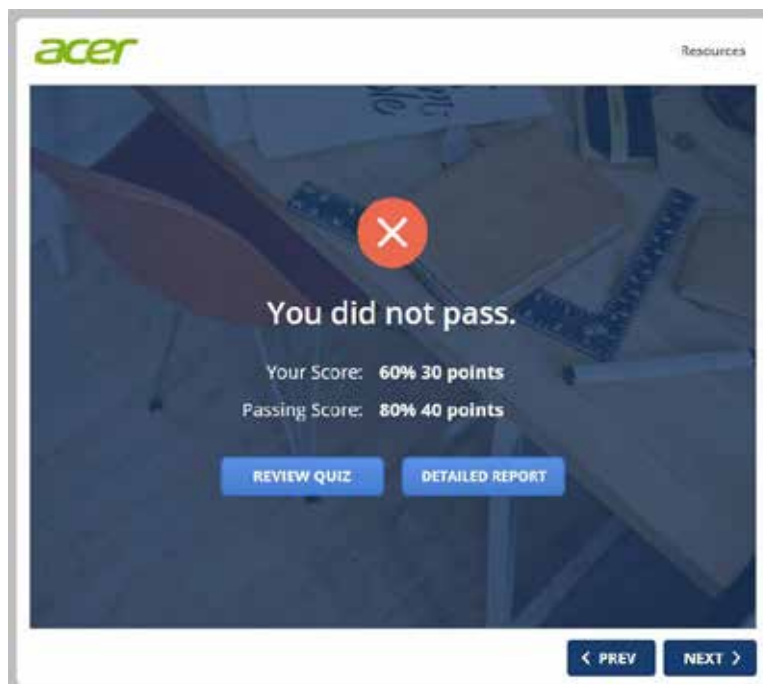
Hotspot questions feature an image of the open unit, challenging students to click on the components they've just learned about.

We want to make sure students can identify the component they're looking for, and where it's located on the unit.

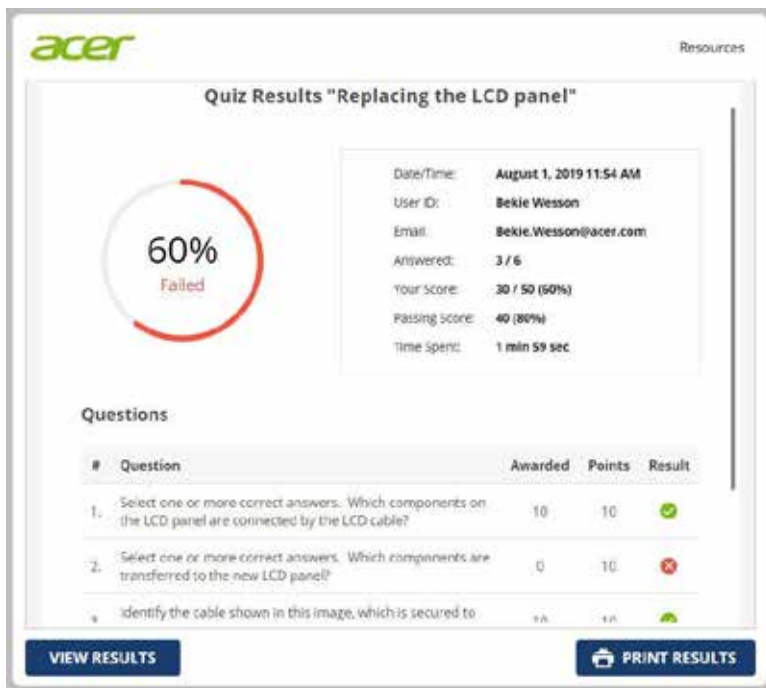


*Hotspot question*

Students see their quiz results immediately, so they know right away how they did.



*Quiz results window*



*Detailed quiz results*

If they didn't pass the quiz, they must repeat that lesson. Students may need to watch the video again, or repeat a lesson to learn all the facts about those components. They can spend as much time as they need.

## Program results and feedback

It's been a great opportunity to partner with our education customers, listening and responding to their needs. We're very pleased with the response and the positive feedback we've received from the users.

- **Teachers.** We provide exclusive technical education materials teachers couldn't create themselves. The program provides about 6.5 hours of instructional time. Teachers are enrolled in the course with expanded rights, so they can view reports and statistics in iSpring Learn.
- **Technicians.** Different Chromebook models can vary significantly in layout and repair procedures. Our course give school technicians a close-up look at technical information and best-practices for their specific model.
- **Students.** Our program is a great way for the students to get real-world work experience. They may decide to consider computer science in college or seek employment as hardware technicians.

What's great about this online course available through iSpring Learn is the flexibility. We have schools using the course in a homeroom class that meets three times a week for 15 minutes. Others use it in a class that meets for an hour and 45 minutes. With iSpring Learn students can log in, complete lessons and then log out. Later they can pick up right where they left off.

It's a very flexible program that's both popular and effective!