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D297 Task 4

The group of adult learners

- Students in a college technical school

Instructional Need

Students enrolled at a college technical prep academy are in the final weeks of their 3rd term in the computer systems repair specialty. This is a 3-term course that starts with computer knowledge basics in term 1 and ends with software installation skills in term 3. For the first two terms, they have learned how to install a motherboard to a case, install the CPU and fan assemblies, how to install a power supply, install RAM, a hard drive, and a video card. Learners also learned how cable management works inside the case, ending with making sure the computer boots and is ready for the operating system installation steps. The students have learned about operating systems, software and driver installation, computer bios, and troubleshooting techniques during the 3rd term.

As a competency-based component before the final assessments, students will complete 2 different e-learning simulations. These simulations are designed to assess the foundational knowledge they have acquired during the 3rd term. Students will be allowed to attempt the software simulations at any point during the 3rd term. The simulations prepare for the final proctored exam, which will include a 30-question online assessment as a summative final exam.

Instructional goal

Learners will evaluate the software by troubleshooting real-world issues and demonstrating solutions based on knowledge gained during the course.

Module Format

- Online, software simulations with a multiple-choice assessment.

Materials List

- Access to course via personal computer or college computer lab.
- Adobe Captivate recordings.
- Webcam for assessment portion
- Microsoft Teams for collaboration

Learning Time

- 2-4 hours

Module Activities

- Students will be reviewing the **course objectives and rubric** in preparation for the competency-based assessment.
- The instructor will provide **online study guides and software books** that the students can review before attempting the simulations and taking the assessment.
- The instructor will be available for **help and feedback** during the simulations via Microsoft Teams.
- Students will evaluate 2 different software simulations from a bank of 9 various simulations.
 - These simulations may include, operating system installation, driver troubleshooting, boot sector errors, and program installations (such as Microsoft Word, Adobe, or antivirus software).
- The actual **software simulations** are not timed and not proctored. The student may proceed at their **own pace** through the simulations.
 - The simulations will be click and point, feature hotspots and mouseovers. There will be context-sensitive features to help students with small tips and hints. They will give direct answers, merely guide the student to the area of the area they should be focused on.
- Once the student has **demonstrated competency** with the simulations, they will be allowed to take the final 30-question proctored assessment.
 - Students who do not demonstrate competency will have the chance to go back through the study guides and take another simulation take in the same area as the one they were not competent in

Assessment

The purpose of the assessment

The purpose of the assessments is to ensure earners display a mastery of the simulation topic before moving on to final assessment. Learner cannot take the final assessment before proving competency in the simulations. This helps by ensuring they have the skills needed for the field of computer repair.

The format of the assessment

- Proctored, 30-question proctored assessment.

The element(s) to be evaluated on the assessment.

- Sections of the assessment may include operating system installation, driver troubleshooting, boot sector errors, and program installations (such as Microsoft Word, Adobe, or antivirus software). These are the same themes covered in the software simulations. This ensures that the assessment lines up with the course goal, "Learners will evaluate software by troubleshooting real-world issues and demonstrate solutions based on knowledge gained during the course."

Discuss two best practices that informed your design. Support your discussion of both with evidence from your design.

For my best practices, I utilized **Design for Higher-Level Thinking Skills** and **Use Appropriate Technologies**.

The **higher-level thinking skills** are achieved by the real-life software simulations. The simulations cover topics of operating system installation, driver troubleshooting, boot sector errors, and program installations. To assist the learner during the simulation, click and point, feature hotspots and mouseovers tools and features will be available. There will also be context-sensitive features to help students with small tips and hints.

For **use appropriate technologies**, the simulations are designed in **Adobe Captivate** and are provided as an **e-learning solution**. For instructor help, **Microsoft Teams** is provided to students. The assessment is also **online** and proctored.

Discuss how each of the following informed your design:

Universal Design for Learning (UDL)

Multiple Means of Engagement: For Engagement, I provided **click and point, feature hotspots** and **mouseovers tools and features** during the software simulations, which allows for advanced interaction with the learning concepts.

Multiple Means of Representation: For Representation, I have included **various media representations** for learning the content. One example includes an **online study guide** that the student can use to fill out as a reference during their learning.

Multiple Means of Action and Expression: For expression, I have provided opportunities for **formative and summative assessments** by including the software simulations. While these are competency-based, students can use them as a **formative** if they do not complete a simulation. This will allow them to understand the gaps in their learning and refer to their online **study guides**.

Adult Learning Differences

For learning differences, I have focused on **progression through mastery**, and **personalized support**. For example, with **progression through mastery**, learners will not be able to move on to the final proctored assessment before proving competency in the software simulations. For **personalized support**, Microsoft Teams is provided for learners to interact with the course instructor during the simulations. Also, by providing **online study guides**, students can focus on problem spots in their learning and really focus on knowledge gaps.

Equity and Inclusion

The focus of competency-based learning is to **create learners who have mastered meaningful skills**. Equity is achieved by ensuring that all students achieve the same outcomes and learning goals. The software simulations are designed for all learners. For **inclusion**, mastery of skills is based on the topics covered, not the individual student. This ensures that the focus is **equity** in the content for all learners.

Development of autonomous learning pathways for learners

The module is designed to promote autonomous learning pathways by allowing **learners to take control** of their learning and **control the pace** of the learning. The instructor provided an **online study guide**, and the learner is free to **choose the pace of their learning**. This is demonstrated by allowing the learner to move on the assessment once **mastery of the software simulations** is demonstrated.

Discuss the appropriateness of competency-based e-learning to achieve the instructional goal.

The instructional goal is: "Learners will evaluate software by troubleshooting real-world issues and demonstrate solutions based on knowledge gained during the course." This is met by **scenarios and simulations**, which are authentic assessments to allow the learner to demonstrate mastery of **real-life skills** based on the **computer repair field**.

For the **competency component**, learners with **prior knowledge or skills** can move through the experience faster. Learners demonstrate this by **showing mastery** in the software simulations. This helps to ensure that learners will be prepared when moving onto the final proctored assessment. This also ensures that learners are competent when moving onto their chosen career field, whether it be **computer repair** or not.