

Creating a Gradebook Using Excel

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TOPIC SELECTION

Identify a topic that would be suitable for developing an instructional unit for the course project and explain the key goal of this instruction. Provide a brief rationale in which you explain how you are knowledgeable about the subject and why you find the subject interesting. Also describe why you think the content is manageable and can be taught in about 20 minutes, and why your topic could be categorized as an intellectual skill.

Topic: Creating a Gradebook Using Excel

Goal of Instruction: Familiarize participants with the user interface and basic features of Excel and show them how to use that knowledge to create a basic gradebook with 10 students and at least 5 assignments.

Rationale: I think I am qualified to teach people about Excel because I have been using Excel for over 10 years. I am also a certified [Microsoft Office 2010 Master Specialist](#) and one of the requirements for earning that credential was passing the Microsoft Office Specialist (MOS) Excel 2010 Expert exam. I find the subject interesting because I think it can serve as a great introduction to Excel since a gradebook has components that will show off a lot of Excel's basic features. I think this topic is also useful, especially for people in an educational setting, because it can allow you to create a simple gradebook right on your own computer without having to use, and potentially pay for, an online gradebook tool. It is also more convenient than having to maintain a paper gradebook. I think the content is manageable and can be taught in 20 minutes or less because it is limited in scope and only requires knowledge of basic Excel features. I would categorize this as an intellectual skill because creating your own gradebook requires you to think critically about how gradebooks work from a math standpoint and the fact that it will be done in Excel will help facilitate the development of new technological skills.

TASK ANALYSIS

The task analysis should include a list of three to five tasks to complete a job. For each task identify a minimum of 3 steps an expert learner (or an individual who knows how to complete the task) would follow to learn the instructional goal for your project. Create a list of three to five questions you might ask a subject matter expert (SME) related to the task as a follow-up to your analysis.

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Tasks:

1. Explore the Excel User Interface
 - a. Locate the Ribbon and associate each feature with its corresponding Ribbon tab
 - b. Locate and customize the Quick Access Toolbar
 - c. Locate the working area and distinguish between columns and rows
2. Enter Gradebook Content
 - a. Create a header row with a title for each column
 - b. Enter student names on individual rows and assignment scores in individual columns
 - c. Create one final column for the students' overall (average) grades
 - d. Create a total row for the class average (overall and for each assignment)

3. Format the Gradebook

- a. Bold the header row so that it stands out
- b. Apply the Total cell style to the total row
- c. Use conditional formatting to highlight failing assignments
- d. Display cell values as percentages using number formatting

4. Organize the Gradebook

- a. Reorder columns and rows
- b. Sort students in alphabetical order by last name
- c. Add filters to gradebook to manipulate the data for printing/distribution/analysis purposes

5. Calculate Grades

- a. Use division to calculate the assignment grades (points received/points possible)
- b. Use AVERAGE formula to calculate the students' overall grades and class average
- c. Apply formulas either directly in the cell editor or the Formula Bar

Questions related to the tasks for the SME:

Since I know a lot about Excel I would consult an SME about the essentials of creating a gradebook in general

1. What are the essential components that a gradebook must have?
2. What are the different ways a gradebook can be organized and what are the pros/cons of each method?
3. What is the benefit of using a gradebook to track student progress?

PERFORMANCE OBJECTIVES AND MEASUREMENTS

For this study, develop three objectives based on the results of your task analysis. Your project should include one objective for three different tasks listed in your task analysis project. You should have a total of three objectives.

Objectives

1. Participants will be able to identify the Ribbon and the location of the essential features within it.
2. Participants will be able to use the AVERAGE formula to calculate each student's overall grade.
3. Participants will be able to manipulate an Excel worksheet to display data in a way that is easy to read and analyze.

Measurements/Evaluation

1. Participants will be given a brief quiz where they will have to match various features to their corresponding tab in the ribbon.
2. Students will be given a calculator so that they can double check the results of the AVERAGE function and ensure that all the arguments of the function and the final calculation is correct.
3. After learning how to format an Excel worksheet, students will be given a list of formats that need to be applied to their gradebook and will need to demonstrate that they can apply said formats with minimal guidance from the instructor.