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CEP 800

Lesson Plan

1. Content:

Grade: This lesson can be used with college and adult learners.

Subject: Google Forms

Topic: Collecting and Analysing Data

Rationale:

Students will learn how to collect and analyze data using Google Forms. They will be shown how to take advantage of the automated data compiling features of the forms. It is assumed that when students take this lesson they will know how to use a computer as well as the Internet. In addition, it will be assumed that students have a basic understanding of how a file management system works. Students will also learn how to create a survey using the Google Forms. Students will discover what kind of questions to ask on a survey, what type of demographic or personal information to collect from the participants, and how to arrange the questions for best readability. Students will also be introduced to the concept of cloud computing. Students may find it challenging to grasp the collaboration and ease of access concepts offered by cloud computing. Once they have had the opportunity to create a sample survey, apply it, share it, close it, and reopen it everything will make more sense to them.

Materials and Tools Needed:

Each student will need access to an Internet enabled computer.

Each student will need a Google account.

A teacher station or multimedia system.

Educational Goals/ Outcomes:

Students will be able to design an aesthetically appealing online form.

Students will be able to formulate specific questions directed to a particular group of people.

Students will be able to create, edit, save, and retrieve documents from the cloud.

Students will be able to manipulate information in a spreadsheet format.

Students will be able to export raw data to a PDF or Excel file.

Introduction to the Lecture:

This lesson will be divided into three different levels of difficulty. The first level is simply an overview of cloud computing. For those who are not familiar with the concept of Cloud Computing at all we will have a brief overview of how Cloud Computing works. The second level

is going to cover designing the form, asking relevant questions, and looking at the raw data on a spreadsheet. Students are only required to complete level two for this assignment. Level three will provide a sneak peek into some of the things that can be done with the data once it has been collected.

Lesson Plan Steps:

Level One

- 1) Define cloud computing and explain the difference between computing as a service and computing as a product.
- 2) Explain how cloud computing works.
- 3) Give a couple of examples of cloud computing services.
- 4) Show [Cloud Computing video](#).

Note: Take a moment to answer questions and address concerns.

Level Two

- 1) Show students how to create a Google account.
- 2) Show students how to open their Google Docs root directory.
- 3) Show students how to create a Google Form from within the root directory.
- 4) Ask students for questions they think are relevant demographic data that should be collected from the.
- 5) Show students how to create a question in the “design view” of the form.
- 6) Show students the multiple types of questions that can be created within a form.
- 7) Show students what a finished form looks like.
- 8) Show students how to “share” the form with the survey questions once it is ready to be filled out.
- 9) Show students how to fill out the finished form.
- 10) Show students what the data looks like once it is populated automatically into a spreadsheet.
- 11) Show students how to close, save, and retrieve their Google form.
- 12) Show Google Forms video [tutorial](#).

Note: Take a moment to answer questions and address concerns.

Level Three

- 1) Show students a fully populated form.
- 2) Show students how to make a graph using the information collected with the form.
- 3) Show students how to filter data.
- 4) Show student show to insert formulas into the spreadsheet.
- 5) Show students how to export a form into an excel spreadsheet.
- 6) Show advance spreadsheet features [video](#).

Note: Take a moment to answer questions and address concerns.

Wrapping it all up:

At this point, students will get some time to finish building and personalizing their forms. Once everyone is done and all of their questions have been addressed students will send their form to their classmates and ask them to fill it out.

Essential Questions:

Why is it important to collect and analyse data?

How do graphs allow us to visualize data trends?

What are some methods one can use to collect data using surveys?

What makes Google Forms a particularly powerful data collection method?

Mention some of the characteristics to look for when determining what group of individuals should be targeted for collecting information?

2. Pedagogy:

The pedagogical principles used in this lesson are constructivism and social constructivism mainly. The social constructivist principle is illustrated by the collaboration that will take place among students when they fill out each other's Forms and answer the survey questions. Other pedagogical principles are guided learning, discovery learning, and modeling learning. Student will be shown how to do the tasks, allowed to to work on the projects by themselves, and walked through the process of developing their projects on a step by step bases.

3. Content & Pedagogy:

While other teaching strategies could have been utilized to teach this lesson, I picked the strategies mentioned above because they allow students to have some hands on practice. In addition, Google Docs is a collaborative environment based on a web 2.0 technology. If I had used only a hard copy of the instructions instead of a projector and multimedia system in the classroom, students would not be able to see the actual process.

4. Technology:

I will be using a multimedia system, which includes a projector, desktop computer, and an audio system among other things. Students will be sitting in a computer lab setting. Therefore, they will have a access to a personal computer at any time during the lesson. In addition, I will be using Google Forms, which is part of the Google Docs software suite. I am incorporating the use of the hardware and software because it is essential I used the software since that is what I am going to be teaching students how to use. Also, the multimedia system will allow me to show the different stages and steps of the process to everyone at once.

5. Technology and Pedagogy:

The technology I have chosen fits with the pedagogical strategies primarily in two ways. First the

technology allows students to learn hands on (constructivism). Each student has access to a computer and a “copy” of the software suite, there fore they can follow what I will be doing and projecting on the screen. They can also explore and figure things out (additional functions of the software application) on their own. The second way in which the technology I have chosen fits the pedagogical principles is by allowing students to collaborate (Social Constructivism) and help each other complete their lecture and lecture assignments.

6. Technology & Content:

My choice of technology enables me to express the main ideas by providing an easy way to exemplify the learning goals of the lesson. The technology being used also offers students the opportunity to follow along with me as they work through the tutorial. Furthermore, students can control the pace of the instruction by stopping me at any point and ask me to “redo” a particular step in the process.

7. Assessment:

The main items and ideas I want students to know and master are: Create a Google form, design engaging survey questions, be able to easily open, edit, share, and Analyze a form and the data collected by it. I will assess the students’ work by asking them to share their final drafts with me and give me editing right so I can view and comment on their final survey results. In essence, the same technology I used to show students the learning objectives is the same technology they will be using to complete the assignment and also the same technology I will rely on to view, grade, and provide feedback to them.