9467 Self Assessment Worksheet

Directions:

1. Briefly describe the learning situation you are reflecting on.
2. Rate yourself on each of the five characteristics of meaningful learning in terms of how your teaching supports this characteristic.
3. In the right-hand column, provide a brief, detailed example to illustrate why this rating is appropriate.
4. Respond to the Summary and Reflection questions at the end of the worksheet.

Learning Situation:

I'm helping someone learn how to create a blog using Ruby on Rails. They are familiar with some programming practices, but not with the Ruby language. They are not familiar with web specific programming. A blog was chosen because it's functionality is easy to implement and understand

Characteristics of Meaningful Learning	**Rating (1=low; 5= high)**	**Example**
Active Learning	1 2 3 4 5	They learn the basic syntax of ruby by trying what they think it would be. Some specifics will have to be told them, but some they will be able to pick up by applying they're knowledge.
Constructive Learning	1 2 3 4 5	Web programming has some distinct differences from other types of programming. They will need to construct new ideas about how state is handled.
Intentional Learning	1 2 3 4 5	The reason we program is to accomplish something specific. Every action they take will be directed towards the creation of a blog.
Authentic Learning	1 2 3 4 5	Instead of learning the theory, we're writing code as we go.
Cooperative Learning	1 2 3 4 5	This is a one on one teaching situation, but there is a spirit of cooperation between the student and I.

Summary and Reflection Questions:

Which <u>one</u> dimension of meaningful learning do you believe is the strongest in the situation you selected? Why? (one paragraph)

In this specific situation, I think the Authentic Learning dimension is the most important. Programming is a highly abstract subject, so it's vitally important that there be lots of code created while teaching in order to bring the practical aspect of the lesson. Students better understand how to program when they can immediately interact with the system and experiment with what they want to do. They need to be able to try new things as the ideas come to them instead of being bogged down by theory. The theory can come later as they understand the issues that are involved.

Which <u>one</u> dimension of meaningful learning do you believe is the weakest in the situation you selected? Why? (one paragraph)

In this specific situation, Constructive Learning is the weekend dimension. This is because there are many things about web programming that are counter-intuitive and can be hard for someone new to the subject to discover through guided reflection. While the student has a basis in programming languages that will give them a head start, the web creates unique problems (especially those related to state) that will be very foreign and which they will not have a basis in place for addressing.

Which technologies could be used to enhance learning in the situation you selected? How? Why? (two paragraphs)

Since this is a technology based learning situation, technology is entrenched in every aspect. The basic toolset for the web programmer includes: a web server (usually running on the local machine), a text editor (or a WYSIWYG), database, and a web browser. As the student gains a better understanding of what's going on, other tools will be added, like debuggers, a profiler, and integrated development environment. The web platform (Ruby on Rails) has specific tools that they will learn how to use, such as a Console for interacting with the environment.

Beyond the tools of the trade, graphic organizers are helpful in visualizing what's going on 'underneath the hood.' They can be used to show the flow of data, or the transpositions of a specific algorithm. A programmer will be greatly aided by the ability to use Google effectively. Online Discussion Boards that are code based are also helpful. A specific recommendation I give is the recently launched 'Stack Overflow' website.

Finally, an important part of learning code is what's called 'code review.' Code can be reviewed several different ways, but the best is probably using a simple text editor. I can sit with the student and go over the code with them, adding 'comments' to code which they can go back and review later, and also use command line tools to extract and focus on at a later point in time.