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| --- | --- | --- |
| **Category** | **Student Score** | **Grader Score** |
| **Organization** | | |
| **Basics** | **1/1** | **/1** |
| **Structure** | **1.75/2** | **/2** |
| **References** | **1/1** | **/1** |
| **Work** | | |
| **Effort** | **2/2** | **/2** |
| **Clarity** | **1.5/2** | **/2** |
| **Discussion** | **2/2** | **/2** |
|  |  |  |
| **Total** | **9.25/10** | **/10** |

Problem 1:

In my experience, learning is hard to pin down. Knowing facts is good, but lacking understanding fails to make it set and concrete. I found that many students memorize formulas and teachers teach how to use them. The only time I feel I will remember a formula or concept past a class is when it is explained. Don’t get me wrong, I hated mathematical proofs in geometry and feel that I learned very little in that class but I always remember how to do calculus problems. It wasn’t because I memorized the formulas I just learned what each tool was capable of and knew when to apply them. I have had a similar experience with programming, when learning on my own I always hated videos that went on forever teaching me things I didn’t know combined with things I did. I started learning much faster when instead of waiting to finish all the videos on how to program a game, I just started. When I wouldn’t know how to do something, I would research and test very rapidly. Rather than learning every tool in the book, I learned all the tools I felt I needed. Later I learned more about pointers and linked lists.

I agree with the book that constantly reviewing information is not a valuable use of time and that constant testing is a good way of reinforcing what you know. I also agree with the point of making information relevant is the best way of learning something. I feel that in my experience, physics was the easiest to understand because it came intuitively most of the time and had many connections to our everyday life. Things like chemical formulas and bonds are not as simple to make a connection with and thus I felt it was harder to learn, so instead you must find a use for yourself. In the chapter it talks about how trying to burn something into memory.

My friend is really good at a video game (Rocket League), and he got to be good much faster than normal. He tells me that he got good because rather than just playing the game, he did active learning on what mistakes he was making during his games and practicing specific things individually. Time doesn’t always yield success and targeted practice will yield better results. You can go through every mechanic and feature in a game/program/etc but it would be better to use very few tools at once because before you even know how to use a thing you’re onto a new one. In game design, it is taught that you have to give the player time to understand their mechanics and features before introducing another. Many games add to many features that never get fully realized because of this and the player won’t get a feeling of mastery.

I do like the idea of separating the idea from the words, words are just the way of communicating ideas and it is flawed. Repetition of one phrase isn’t helpful but repetition in multiple different ways helps better understand the idea. A parrot can repeat things but is no wiser because of it. Creativity is born from knowledge, an artist may have a vision but without skill and knowledge can’t make anything. Creativity isn’t exclusive to the arts either, it takes creativity to design programs or circuits that are built of knowledge of the craft.

Citation

Brown, Peter C., et al. Make It Stick : The Science of Successful Learning, Harvard University Press, 2014. ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/iastate/detail.action?docID=3301452>.

Problem 2:

1. Provide a summary of what you are supposed to learn from each video?

1. The analogy between water and electricity
2. That the analogy between water and electricity is flawed in some aspects
3. There cannot be high current without high voltage and your skin has resistance.

2. What is interesting for you in each video?

1. Normally people used pipes, but he used a river instead.
2. That they showed that the AC was incorrect and discouraged using the analogy without any real reason, misunderstood power as well. The voltage would be the pressure in the pipe not in the valve, the valve acts as a resistor because it reduces flow.
3. It explains a body’s resistance but doesn’t talk about it’s capacitance. It does explain why you can have high voltage, high current, but short time and be ok.

3. Do you have any new questions based on what you saw on each video

1. Not really, it seemed like an overall good explanation of the analogy of water and electricity.
2. What analogy would they recommend instead?
3. Why does he show that your resistance would be enough to not have the motor turn on? Why not use something like a light that takes less current.