

3-6: Quality or quantity?

What are the question that I would ask with the student is should they focus on creating more metaphors or creating better metaphors? And on the last video I show you how you could do both. So creating a lot of metaphors, seeing the idea from many different facets, that is one way to improve your memory, another way is to just explore the deep structure using the compare and contrast method. And the basic rule of thumb is that both is better, so better quality metaphors and more metaphors are better because you create more association with one and you're understanding their better more correct association with the other. But which one you should lean towards really depends on your classes and in some cases, having the wrong analogy and having the wrong metaphor or the wrong visualization can throw you off, they can make give you the wrong answer. So the degree to which you focus on the quality over the quantity is to the degree to which this is a problem.

So as an example of this, scientist used to believe that the Adam was like the solar system. So there was core nucleus like the sun and all these electrons were orbiting around it. Now it turns out, this is an actually how it works in reality that the electrons are not just little particles, little infests particles, but they are waste. And the idea of a planet just orbiting just fixed orbit is really that is wave distributed over this volume of areas sort of more like a cloud than like an orbit. And so because they were using the sort of wrong metaphor that made a little bit harder to understand this new way of thinking about the ideas because they were really thinking of them as being a cloud or something that has this wave like property. You're thinking of it as having a particle like property. So this sort of distinction between the ideas can be lead to being slower and really realizing its scientific truth. Now, the same thing in happen to your classes if you're taking a chemistry class and you only think of the Adam in terms of the solar system. Then you have to understand D or P ordinals, you're going to be confused because they don't look like orbits around the planet and they're not believe in distributed that way. Then a lot of principles that apply on the way they work will not apply at all. They're not at all analogies to a solar system

And so in some cases having a bad analogy in this case the solar system model, it can really hinder you in fully understanding how the problem was. So that's where, if you're in the situation where those are key problem to have, where the way you need to explore the idea needs to be very flexible, you're not just using the formula on a certain type of problem in all cases. You are using it on a dozen very different applications. And in those cases where you need extremely flexible representation of the knowledge, so I would say mathematics, physics, those kinds of classes you often need to extremely flexible representation of the knowledge. You want to focus on quality. So it doesn't mean you cannot make more metaphors but your goals should be to have one or two really good ones. So sometimes you have to go to a few ones that are really good metaphors so free find

new ones. So you describe the solar system all the way thru for the cloud model, that's an examples what you might go thru but your goal is to have really high quality metaphors.

In contrast, if you're doing a class where you have to remember a lot of information but the way you're going to need to use the information is less flexible, so I know a lot of people where studying in high to be classes, they have to remember a lot of terms, a lot of the ways the body works. But they're not going to be expected to use that in wildly creative ways, they just expected to know it in a fairly straight forward way. So in this cases, it sometimes need to create a lot of metaphors even if they're not perfect, because the chances you will going to be in a situation where your metaphor is incorrect and its going to lead you a wrong answer is smaller, so it's better to have just a lot of association you actually remember more of the idea better.

So that's the inspection that you are working on. In addition in this course, I'm discussed this ideas, metaphor, diagram and visualization out of the content so just something you do on its own. But in reality you probably not going to lot spend 3 hours just creating metaphors or visualization. What this are, this are the atomic components of larger techniques. So you can use metaphors or diagrams or visualizations while you're taking notes or you can use them while you are reading a text book or you can using them while you're finding a technique another level of method that we discuss later in the course. So what I want you to do is practice these ideas. Figured out which one is going to be useful to you and practice them so you get used to them. But the really core kernels of the idea that you may use in bigger technique, it allows you to focus this powerful tool on the things worth most important. So just doing a spread shot of using metaphors and visualization on every idea you encounter, that's good. But if you are spending hours and hours of doing it, it's probably not the best of used of your time whereas it in doing the conjunction of the finding technique or notes compression or any other idea which is very specific then you will be able to utilize yet the most important ways possible were you using an idea was going the best impact.