

Reflection on Learning Styles

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September 22, 2011

1 Workshop Description

I attended the two hour workshop, “Learning Styles”, on Thursday, September 22nd from 1:00 PM - 3:00 PM in Research Building III, Room 230. This FIT workshop was directed by Dr. Barbi Honeycutt. Approximately 15 people attended the workshop. While there are many different models for learning styles, this workshop focused exclusively on the Felder-Silverman model.¹ This model consists of eight different learning styles: active/reflective, sensing/intuitive, visual/verbal, and sequential/global.

I have attended Richard Felder’s Introduction to Faculty Careers workshop in the past, so much of his work was familiar to me before coming to the workshop.

2 Workshop Details and Analysis

I was interested in attending this workshop because of the recent criticism against learning styles from cognitive psychologists. I came into the workshop with a similar bias against learning styles, coming from the camp of individuals who see effective learning as predominantly relating to the differences between deep and shallow learning. Specifically, I believe that a student must be capable of performing all of the learning styles presented in Felder-Silverman, although until today I did not have a vocabulary for what those styles actually were.

We began the lecture by forming small groups of three, and solving a children’s Jigsaw puzzle. Two members of the group would work to solve the puzzle, while the third member would observe and record notes on the problem-solving approach taken by the group. Unbeknownst to the groups, some of the puzzles had missing or incorrect pieces that were from a different set.

Unsurprisingly, there were roughly as many different strategies for solving the puzzle as there were groups. Our strategy was as follows:

1. Turn pieces over so that the picture-side faces up.

¹http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Learning_Styles.html

2. Examine the picture on the box, and identify the four corners.
3. Separate the pieces into groups by overall color.
4. Each person independently solves their half (left or right side) of the puzzle.

When we found the missing piece, we verbally communicated and agreed that it did not belong to the puzzle and set it to the side. Other groups noticed an incorrect piece, and tried to figure out which group the piece actually belonged to. The goal of the puzzle exercise was to demonstrate that, even in small tasks, people will go about solving the task in different ways. One or two groups, for instance, did not even look at the picture on the cover of the box.

Afterwards, each group presented one of the eight learning styles to the entire class. The most interesting result was that most people are visual learners, rather than verbal learners, yet the focus in a traditional lecture is on the verbal aspect, with slides and other imagery being used only as supporting material. The second outcome was that sequential and global learners will come to the same solution, but using different results. This needs further investigation on my part, because it appears to conflict with the deep and shallow learning concepts that imply that deep learning is a strict superset of shallow learning. That is, all deep learners will also perform the tasks of shallow learning during the learning process, but not the other way around.

Another interesting point brought up during the class was that many of the learning styles seem correlated. For example, students that have a preference for visual input will also have a preference for global analysis. However, being the skeptic of the group, I followed up on this after the workshop. Giovannella², as a counterexample, published a recent result showing that there is no evidence of correlation among Felder-Silverman's learning styles, visual memory tasks and visualization styles.

We concluded the workshop with a brief discussion on the criticisms of learning styles, which included some of what I've presented above.

3 Conclusion

Irrespective of the validity of the different models of learning styles, the fact that instructors need to utilize a variety of techniques when teaching a concept still remains. This variation serves to maintain student interest during the lecture, and also provides a means to present the same information in multiple formats to increase student comprehension. If learning styles are indeed a valid model, then this is an added bonus.

Furthermore, effective teaching requires that students become adept at working with all of these types of learning styles. They can only do so if they are asked to process information in a variety of formats. As was pointed out many times during the workshop, students are

²Carlo Giovannella. No evidence of correlation among Felder-Silverman's learning styles, visual memory tasks and visualization styles. IEEE International Conference on Advanced Learning Technologies. 2011.

not exclusively one style or another. In the course of learning, students will use a variety of different learning styles depending on the material being studied.

From my personal experience, one of the challenges I have noticed in online courses is that the ability to present information in a way that encompasses many learning styles is often difficult. I have tried to minimize some of these concerns by adding video lectures with audio narration. Still, activities such as group work, or global activities, can be difficult to construct. Online courses, because of their inherent Web-based structure, tend to naturally fit more closely with sequential learning classification.

In my own observations, I have often seen that a push to use cutting-edge technology, whether it be PowerPoint or other online systems, comes as a result of the latest research findings from learning styles. While technology is undoubtedly valuable, I think we as instructors need to take a step back and focus on whether these tools are actually enhancing student learning outside of the results found in lab environments. If they are not, then these tools are potential distractions that are ultimately counterproductive to student learning.

In short, it is sometimes the case that the simple technology of a white board and an interested lecturer is really all that is needed.