Introduction

At the beginning of any semester, many college students say that they need a couple lectures to "get" the professor. Each professor differs in his or her teaching style, subject matter, and speaking speed. Studies have looked at the level of satisfaction between a professor's teaching styles and the students' learning styles (Walter, 1980). Close matching between learning and teaching styles has been shown to be detrimental to students. Teachers are instead encouraged to incorporate other teaching styles in order to challenge student’s more (Grasha, 1981). There are numerous booklets available to help teachers modify their teaching styles to include many different modalities and learning opportunities (Vaughn and Baker, 2001). All of the above studies highlight the interaction between students and teachers, but do not investigate the learning styles of a professor and the effects that might have on his or her teaching style. This predisposition to a certain learning style can manifest in a preferred teaching style and an inability to deviate from that.

Oftentimes, professors are shoved into teaching positions without training in actual teaching. Although professors know a large amount of information in their field, many seem to have issues making the material approachable to students. They are set in
one teaching style, which is why it takes students a couple lectures to “get” the professor. Our experiment looks to see if there is a correlation between the learning styles of professors and their teaching styles. Our hypothesis is that the way that professors learned when they were students correlates to the preferred teaching styles in which they teach their class currently. This hypothesis will be tested using professors from the American Sign Language and Chemistry departments. They will be asked to fill out the Grasha-Reichmann teaching and learning surveys.

**Methods**

The professors were e-mailed copies of the Grasha-Reichmann Learning Style Survey and the Grasha-Reichmann Teaching Style Survey. Grasha identified five teaching styles called expert authority, formal authority, personal model, facilitator, and delegator. The study also identified learning styles called independent learner, avoidant learner, collaborative learner, dependent learner, competitive learner, and participant learner. The professors were asked to complete both surveys. Participants were asked by each survey to respond to each statement on a scale of 1 to 5 (1 being “strongly disagree” and 5 being “strongly agree”). The results for 3 professors, along with the average for each category were gathered and organized on a bar graph for observation, and we were able to derive a number of insightful correlations from these results.

There were 5 teaching styles that the surveys classified the professors under. They were ranked as high, moderate, or low based on the amount of points that the professors got from answering the questions in the survey. The first was expert. Like the labeling suggests, they see themselves as the only source of knowledge and expertise that the student needs. They display detailed knowledge during lectures, and challenge students to
become experts themselves. The second classification is formal authority. They assume their position as professor based on status among students and their role as teacher instead of learner. Their classroom environments are rigidly set because of rules of conduct and expectations for students. The third is a personal model. This type of professor believes in teaching by example, and encourages students to emulate their model. The fourth type is a facilitator. Facilitators see students themselves as teachers, and encourage group work and student leadership in the classroom. The final teaching style is delegator, which is similar to a facilitator. These professors are concerned with encouraging students to learn autonomously. Like facilitators, they encourage group and independent projects.

There were six learning styles that the professors could be classified under. Like the teaching styles, their propensity towards one learning style was measured based on points. The first style is an independent learner. These students are confident in their learning abilities, but only study what they feel is important. The second style is an avoidant learner. These students are not enthusiastic about learning the content or participating, and often feel overwhelmed by the material. The third type is a collaborative student. They learn best by sharing ideas and talents, and therefore strongly prefer group projects. The fourth style is a dependent learner. Unlike independent, these students learn exactly what the professor teaches them and show very little intellectual curiosity. The fifth style is a competitive learner. These students always try to outperform other students in their class by learning more. They are very focused on rewards and recognition. The sixth style is a participant. I see these students as “Captain America.”
They are student leaders in the classroom, and are engaged in the materials taught in class. They happily do what is required, and eagerly go above what is expected of them.

**Results**

A positive correlation was seen between teachers with high delegating levels and learners with high collaboration and participation. This could possibly be attributed to the fact that professors who were able to collaborate well with peers and participate a good deal as students find it beneficial to delegate projects and assignments to students because they themselves benefitted from the process of collaboration.

There was also a negative correlation between independent learners and formal authority teachers. This could be because these teachers did not require much direction from their own teachers and so are therefore more likely to not see the need for exact expectations and feedback. Finally, another negative correlation was seen between competitive learning and facilitating, which may come from an idea that a teacher who was a competitive learner may not want to give away too much information to a student as to keep the playing field even between students.

**Conclusion**

It appears, based on these observed relationships, that very plausible correlations do exist between many of the aspects of teaching and learning measured. These correlations lend support to the hypothesis.

The conclusion drawn from this experiment was that there is enough information to maintain the hypothesis that there is a correlation between teaching and learning style. However, the sample size was smaller than ideal and there are many additional possible explanations for these trends. A few shortcomings of the experiment were the small
amount of responses we obtained from our professors, the interesting cross section of participants, and the polarization of a few of the study questions. The small sample size of professors showed a surprisingly high number of relationships, yet perhaps with a larger group, different correlations may have been observed. The fact that the participants used were teachers of American Sign Language and teachers of Chemistry was another interesting variable. We discussed the implications of this cross sections and came to the conclusion that it may have cause slight discrepancies because there is a good chance that the people that go into teaching the two disciplines of language and science have very different learning styles and mindsets to begin with, and it therefore may not be entirely accurate to compare professors of these two disciplines in a study of this kind. It is possible that the inherently collaborative nature of the sign language culture and the competition associated with science fields like chemistry should be taken into account when choosing subjects for a study like this. Finally, in looking closely at the surveys used, it was observed that a few of the questions did sometimes tend to encourage the participant to answer one way or another. For example, one question asked, “do you challenge your students?,” a question to which one would think very few professors would answer no to. This issue however, is slightly unavoidable because perfection in a survey is not very realistic, yet it may also be something to keep in mind in ways that the study could have been improved.

If further studies of this nature were to be conducted, many improvements targeting these weaknesses could be made allowing for the study to produce even more insightful results. If this experiment was repeated, a larger overall sample size should be used. It should also represent more disciplines instead of solely ASL and Chemistry.
Results separated into academic disciplines would also be another interesting way to compare the learning and teaching styles of teachers for each specific field and would serve as better control groups for the experiment.

Overall, the study was an interesting look into a relatively unexplored area of the relationships between learning and teaching. There have been many studies on teacher student relationships, but there is relatively little information on record about the relationships between learning and teaching styles in teachers. This concept is an interesting idea that may really be worth further exploration. Understanding the way that teachers develop their own individual teaching styles could help the field of teaching improve as a whole, with implications on not only the college level, but every level of education.
References


