UNIVERSITY of SOUTH
Colleg 'on
the Adva hin Center for
t of Teaching

RESEARCH BRIEF:

Keeping Students' Attention in the Classroom

Authored by:
David Rosengrant, Ed.D.

Student Attention: What we know and how we know it

We have all probably heard the old teacher adage that you only get your students' attention for the first 15 minutes of class and then you lose them[1]. Educators understand that attention, and keeping it, is a critical part to learning. Teachers want our students to focus on something, and regardless if they do it because they want to or because there is an outside force, it cannot be kept forever[2]. What is interesting though, is that this 15 minute loss in attention is usually researched outside of classroom situations where the presentation methods have little variations in them[3].

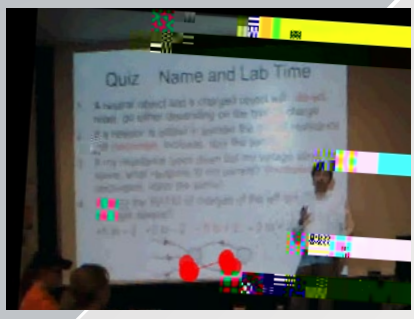
That is not to say that we have not studied classroom attention. Some methods in the past to study attention involved looking at student notes[4], instructors observing their students and how they think their students are paying attention[5], or using technology like clickers where students self-report their levels of attention[6]. These are just a few examples and the results are really mixed. As one might expect, there is a great deal or variability on keeping attention based on the instructor and the format of the course.

Using Eye trackers to study attention

Eye tracking is another tool that researchers use for a plethora of reasons. Recently, eye tracking was used to study student attention[7]. An eye-tracker is a device (usually attached to a computer screen or a special type of glasses) which allows researchers to know what a person is looking at, what things they go back and forth watching, and how long they are fixated on an object. In this situation, we had students in an introductory physical science course for future teachers wear an eye tracker so that the researcher knows what, where, and for how long students look at things during a typical 70 minute lecture.

Now it is important to note that just because a student may have been looking at something we may want them to look at, does not mean they were actually paying attention. The student could be looking at the instructor but wondering if they put deodorant on that morning. On the other side, they could be trying to think about how to answer a question while staring into the wall.

The class was setup to be a guided inquiry format[8]. The instructor usually receives high evaluations and is an active researcher in physics education. The goal was to better understand if a guided inquiry class could keep students' attention and for how long. In some classes, the same student wore the glasses the entire semester where as in other cases students were varied based upon factors like GPA and gender.

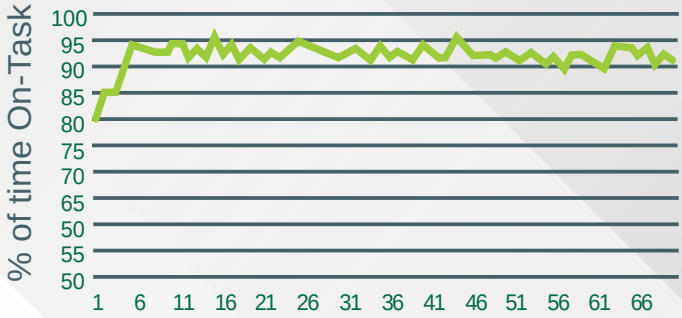


Sample Data (left) & eye tracker (right).

Can they pay attention for more than 15 minutes?

One of the most interesting results from these findings was that there was almost an inverse experience from the "you lose them after 15 minutes." There was actually a ramping up period in class and after that 5 to 10 minute mark, student attention (or On-Task as shown in Figure 2) was relatively constant about 90% of the time. With the first five minutes being low here, it shows there may be a ramping up time to get a student in a mindset for their class so they can pay attention more.

Average Percent of Time On-Task f lecture, 5 Semester Average



The average percent of students being on task every minute.

Beyond just the averages, there is additional evidence that you can keep your students' attention for longer periods of times. The average amount of time that a person was not looking at things related to the class was few. There were only 3 times in nearly 120 classes that a student was not paying attention for more than 5 minutes compared to 264 times in those same classes where the student spent nearly the entire time focused in class for 5 or more minutes. Some of the longest spans of attention were anywhere between 30 and 60 minutes. Thus, the answer is yes, you can keep their attention beyond those first five to ten minutes of class and keep their attention if you are mindful in how you are teaching the course.

Strategies to maintain student attention

Every instructor needs to find out what works for them in the classroom but that needs to include what works for the students. Here are some strategies that were effective in this study and used by the author:

- Have the students take ownership of their learning. Having students build knowledge for themselves as opposed to being told it is one thing to help keep them engaged.
- Vary instructional strategies constantly. This can be going from a discussion, to demonstration, to videos, to instructor led dialogue to group work (in these classes some had 72 students). If an instructor stays in one style for too long, then you can see attention dwindling very soon.
- Be human. The instructor is one of the biggest factors in students wanting to learn. Move around and interact with them, humor is okay in the classroom, and most of all let your passion emanate as you teach.
- Reflect constantly. Nobody is perfect in life nor teaching. We can all think about how we do things and see is there a different way that may reach more people. Never be afraid to try something new. Always ask yourself, would I want to be a student in my class today?

There is never a set strategy in how to keep your students' attention, but it is important to note that it is very possible, and actually more probable that you can keep their attention for an extended period.

References

1. Lucas, S. G., Bernstein, D. A., & Goss-Lucas, S. (2004). Teaching psychology: A step by step guide. Psychology Press. ISBN-13: 978-1138790346
2. Parasuraman, R. (1986). Vigilance, monitoring, and search. In K. R. Boff, L. Kaufman, & J. P. Thomas (Eds.), Handbook of perception and human performance, Vol. 2. Cognitive processes and performance (p. 1–39). John Wiley & Sons. ISBN 0471829560
3. Warm, J. S., Parasuraman, R., & Matthews, G.