

Using Illusions in the Classroom: Principles, Best Practices, and Measurement

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Abstract

Illusions or magic in the classroom is a growing trend with educators at all levels, but especially at the K-12 level. A number of websites are popping up that facilitate this movement. Some educators use illusions for pure entertainment while others use them to make a point about the material being discussed. The question that is often asked is, does the use of illusions add value to the student's learning? Additionally, there is little guidance on the proper use of illusions. This paper will attempt to answer this question through measuring student recall of important points from lectures that were reinforced with an illusion and placed on the midterm exam or quiz. We will also measure student end of course satisfaction. We found a significant improvement on exam test item scores, a significant improvement on the satisfaction of the students toward the class, and we also found an improved attendance level that we were not entirely anticipating. We will also provide principles and guidance for the use of illusions in the classroom.

Introduction and Background

Illusions or magic has been a growing trend in classroom activities, especially at the K-12 grade level. This paper will attempt to explore the benefits of using illusion in the college classroom in the twenty-first century. In addition, it will investigate current practices and principles and go on to establish a list of best practices. While the focus of this discussion is

college business and information systems classes, the same best practices can apply to other disciplines.

Magic tricks or illusions have been around for centuries. The earliest known illusion was performed in Egypt around 1700 B.C. (Fact Monster, n.d.). The word “magic” comes from Magi and was used in Iran in the early eighteenth century (Olson, 2009). Illusions are certainly very popular today. Beyond entertainment, illusions have been used in occupational therapy, treatment of behavioral disorders and with ADHD, special education and autistic students (Healing, n.d.). Research has been conducted into the use of magic for healing including the following titles (Healing, n.d.):

- Use of Magic: Creative Means for Psychosocial Rehabilitation
- Do You Believe In Magic? Teaching magic tricks to patients as an adjunct to their rehabilitation program
- Exploring Ludotherapy And Magic Tricks: “Show me how you play; I’ll tell you how you feel.”
- Magic Arts Counseling: The Tricks of Illusion as Intervention

David Levin and Kevin Spencer (Healing, n.d.) when working with students theorized that students benefited in the following ways:

- Rapport building – connecting with the student and delivering a lesson.
- Empowering the child and self-esteem – teaching the child the “secret” of the trick.
- Instilling hope – can symbolize optimism, possibility of change and indicate that solutions are not always as complicated as they appear.
- Metaphor – bring to the surface unspoken thoughts and feelings.
- Reframing – teaching the skill of reframing can help students look at things from a different point of view.
- Interpersonal skills – modeling appropriate interpersonal skills during the illusion and then allowing the student to practice the illusion using the same skills.
- Group cohesion – effective icebreaker for new groups.
- Assessment tool – used to assess learning disabilities.

- Academic learning – practice cognitive skills such as following complex directions, problem solving, etc.
- Trust building – revealing the “secret” can help a student open up during counseling.
- Recognition of boundaries – setting clear expectations about the illusionist’s personal space and equipment.

In their therapy, students actually are taught to perform some of the magic as well as observe it.

A growing use of magic is in children’s religious services, often called “gospel magic.” It creates anticipation on the part of the learner, keeps their attention and helps illustrate abstract concepts (Linn, n.d.). A well established use of magic is to teach science and mathematics (Swan, 1998). Some of those using illusions to teach statistics see the benefits of student engagement, a focus on conceptual understanding, development of critical thinking and an opportunity to reflect upon the role of assumptions and estimates of probability (Lesser and Glickman, 2009). Dr. Benjamin Krevsky of Temple University uses illusions to teach medical students (Temple Times, n.d.) fundamentals of some bodily processes. He believes illusions reduce boredom and relax students during class.

Some studies indicate the number of visual-spatial learners in the classroom is increasing (Stokes, 2001). One study found that 63% of students were visual-spatial learners (Silverman, 02). Furthermore, we tend to retain more when lectures are both oral and visual in nature (Teach by Magic, 2009). The use of illusions can create the visual anchor for learning and, when supported by an oral explanation of the concept, connect with a larger percentage of the students.

The Basics: Practices, Principles and Planning

Three general categories of illusions are; close-up, stage and platform. Close-up illusions, sometimes called table magic, are performed in small groups usually no more than ten-feet from those observing or while sitting at a table (Wilson, 1988). Stage illusions are performed, as the name implies, in front of larger audiences at a distance (Hopkins, 1990). Often stage illusions are performed to large audiences which can involve elaborate props and often assistants. Parlor illusions are generally performed to smaller audience and fit somewhere between stage and close-up illusions in terms of audience size (Hollingworth, 2008). This paper

will only discuss stage and parlor illusions that are appropriate for the classroom. Illusions from both categories can be suitable.

Illusions can be used to energize a class, get their attention or to make a point about the material being discussed. When energizing a class or getting their attention, the illusion does not have to relate to the material being presented, although it can. Simply doing the illusion will refocus students (Deubelbeiss, n.d.). When performing an illusion, it is important to have some kind of “patter.” Patter is simply defined as “what you say while you’re doing the trick.” (Pogue, 1998, p. 10). Patter can take many forms. According to Pogue (1998)

“If you can’t think of anything clever, just describe what you are doing.... Sometimes you may be able to create a story line that goes with your trick... Make it funny, make it serious and mysterious, make it New Age and life-affirming – just say something.” (p. 10)

Often illusions purchased at magic supply stores will have a scripted patter.

Beginners at illusions should start with easy tricks. There are literally hundreds of self-working devices (Forgaard, n.d.). The effect is built into the device. These tricks do not generally require great skill and work with some manipulation by the performer. Most are very simple, but can be quite mysterious and astounding. However, this does not mean you don’t need to practice. One of the best ways to find illusions is to visit a magic supply shop (Pogue, n.d.). Most shops have sales staff that can perform the illusions, make suggestions and train you on how to use the device. However, they will not reveal the “trick” until after you purchase the illusion.

The use of illusions in the classroom should be based on the following simple principles:

1. The illusion should not overpower the lesson (Linn, n.d.) – Know what you are teaching and find a trick that will enhance the message. There is some danger here since some students will spend time trying to figure out the trick rather than listening to the discussion. You can perform an illusion prior to break or just before the end of class which will reduce this possible negative impact.

2. Practice and then practice some more (Wilson, 95) – Practicing will help you both perfect the illusion and the accompanying message (the patter). Andi Gladwin recommends practicing using a digital movie camera (Gladwin, n.d.). He goes on to recommend viewing your performance from different audience angles.
3. Never repeat a trick for the same audience (Wilson, 95) – Repeating an illusion for the same audience increases the chance they will “catch you.” Additionally, often illusions are based on similar concepts and techniques (Linn, n.d.).
4. Never reveal the secret (Wilson, 95) – Revealing the “secret” is one of the cardinal mistakes that a beginning illusionist makes. It is really a disservice to your audience since it eliminates the mystery, excitement and fun of the illusion.

Illusions can be used for many purposes, but using them to get attention and draw the audience back and make a point about the lecture seems to be most appropriate for instruction. With the increasing use of alternative educational delivery systems such as extended meeting times (e.g., all-day Saturday classes) or compressed teaching sessions (e.g., mini-mesters), students can become bored and drift off. Instructors need to become more creative in keeping and regaining the student’s attention (Gleason, n.d.). With new studies suggesting that the average attention span of college students is just ten minutes (Richardson, 2010), it is very important to re-energize the classroom. Magic can be one tool in regaining attention.

For those interested in including illusions in the classroom, visiting a good magic shop can get you started. Most magic shops will help you with selecting an illusion that supports your topic. However, as pointed out earlier, they will not reveal how the trick is performed until you purchase the illusion. Additionally, they can tell you if an illusion is easy or difficult to perform. Most beginners look for illusions that are easy to perform but have the “Wow” factor for the audience. Wayne Kawamoto has the following advice when getting started in magic (Kawamoto, n.d.):

1. Read a few books on magic and learn a few tricks from the books.
2. Select the appropriate trick for your skill level.
3. Learn from other magicians.

4. Read reviews of magic tricks. Many tricks can be seen on YouTube (see <http://www.youtube.com/>).

The following books and internet links are a good place to learn about performing illusions:

- Magic for Dummies (1998) published by Hungry Minds: New York
- The Complete Idiot's Guide to Magic Tricks (1998) published by Alpha Books: New York
- Mark Wilson's Cyclopedia of Magic: A Complete Course (1995) published by Running Press: Philadelphia
- About.com: Magic & Illusions <http://magic.about.com/od/beginningmagic/a/act.htm>
- Parlor Magic (beginners) <http://www.selfworking.com/parlor.htm>

Selecting tricks for classroom use should be done with care. Once you have decided to use a certain illusion, purchasing it can be expensive. Not all suppliers of illusions (including local magic shops) are price competitive. Here are two that are believed to be price competitive and responsive to customers.

MagicTricks.com <http://www.magictricks.com/>

Daytona Magic <http://daytonamagic.com/>

While doing illusions in the classroom, no one wants to fail or embarrass themselves. However, some tricks do fail. The device breaks or jams, you drop something or you simply forget the steps. If this happens do not worry. It happens to the best of illusionists. Sometimes it is this fear of failure that keeps instructors from trying illusions. Here are some things to say if failure happens (Pogue, 1998):

- "I forgot to compensate for the rotational effect of the earth."
- "Hmm. It worked in the magic store."
- "The real magician will be here shortly."
- "It doesn't look that bad from my side."

If you fail, make a joke out of it. Students are generally forgiving and sometimes think it is "cool."

Pilot Test

In the Spring and Fall of 2011 we sought to test whether illusions could help students remember key concepts and ultimately increase satisfaction with the class. We had two sections of two classes that we took measurements in. One class is a freshman course in entrepreneurship. The second course is a junior level Management of Information Systems course. 12 illusions were selected for use in each class. Each illusion was introduced in the class and was specifically designed to illustrate a key concept in lecture. Other illusions were thrown in as class ice breakers and students did not know when the illusions were coming. We have test item scores from two semesters where no illusions were performed in class for both classes. We compared those two control terms with the pilot test term where the independent variable is introduced. We expected to see higher test item scores for the pilot test semester, along with higher end of term satisfaction scores.

Average test item scores for the freshman class tied to the twelve illusions used in the pilot test were 75 percent prior to the pilot test and 95 percent in the pilot test. The twelve illusions used in the MIS course were not all the same as the freshman class, there is more material covered in the MIS class and test scores were higher in pre-test at 82.5 percent for the 12 items tested and these increased to 92.5 percent in the pilot test. In either case this represented a minimum of one grade improvement up to a maximum of a two grade improvement in test scores. We feel this more than validates our approach.

Further, satisfaction with the course improved less modestly from a 3.2 average pre-test in the freshman class to a 3.9 in the pilot test. The same was found in the MIS class with a 3.75 pre-test satisfaction score to a 4.2 pilot test satisfaction score. Both increases are significant but not to the level of the test scores. So while the test scores increased, which we propose shows a level of higher learning in the subjects, it did not transfer entirely over to their satisfaction with the course. Therefore, the other mitigating factors in course satisfaction are playing a significant role.

We also found a higher attendance levels in the pilot test courses with students missing less than 2 class periods on average (out of 30 class meetings) as compared to an average of 3.1

missed class meetings pre-test for the freshman course. The same occurred in the MIS class, 2.8 missed class meetings in the pilot test as compared to 3.2 missed classes on average pre-test. We did not expect to see such a dramatic decline in classroom attendance. The freshman class faces point reductions in their grade after 2 class meetings but routinely average more than 2 misses per student in prior semesters. In the pilot test not a single student missed more than 2 classes and this must have something to do with the illusions being used in the class. While the MIS class did not see as dramatic of an effect (possibly due to not having the same attendance penalties as the freshman class) we still witness higher attendance rates there as well.

Conclusion

In conclusion, the use of illusions in the classroom is a break from the ordinary. When used properly, they are entertaining and funny and help to get and maintain the student's attention as well as make a point. Students will learn more, will be happier with the course and will actually show up more than they have before. Begin with one or two simple illusions, build your confidence and skill and then move to more difficult ones. However, keep in mind that some of the most amazing illusions are very simple to perform. Students seem to connect better with the instructor when illusions are used in the classroom. They come to class asking if there will be any magic today and are disappointed if there is none.

Little research has been done into the use of illusions in the classroom and more formal research should be conducted. Specifically the following questions should be explored (some of which we are addressing in this research, others are for future research):

- Are illusions an effective tool in getting students attention?
- Are illusions more distracting than beneficial?
- Which course topics are enhanced by illusions?
- How often should illusions be used in a semester?
- Are illusions more effective when class times are extended (3 hours and greater)?
- Do illusions enhance the relationship between the student and instructor?
- Does the use of illusions improve the student's evaluation of instructors?

The use of illusions in the classroom may not fit everyone's instructional style. If it does, use it and have fun and get your students attention and teach them something while you have it.

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