Learning by Gliding

In April 2008, I was awarded a Foundation for Educational Administration/Dodge Principal Fellowship in a program to provide New Jersey principals support in pursuing nontraditional, imaginative professional development and personal and intellectual renewal. My project, designed to promote the experience of taking risks, life-long learning, and science, required me to work toward attaining a glider pilot’s license. It has required instruction, study, practice, patience, risk-taking, and hard work—the very same things educators expect from their students. What I have learned in the process is that learning is not easy. Sharing my reflections on what is working for me as a learner and what my instructor is doing as a teacher can help us all as educators.

Provide the Learner With Choice

Gliding: Learning to fly a glider was my choice. As such, it is motivating and interesting to me. My instructor does not have to reward me with a sticker or a star for coming out to fly. I am motivated to learn the name of the parts of an airplane, the orientation of the airport, and the characteristics of different clouds because this knowledge is important if I am to be a successful pilot.

Schooling: In school, we may not always give students a choice to learn how to punctuate a paragraph or read about the Revolutionary War, but we can offer them some choice into what they learn, how they learn it, and how they demonstrate what they have learned. The minimum that students must learn at school is laid out by the state standards and the district curriculum. But we do not have to stop there. We can offer extensions to learning experiences through individual projects and challenges. We can also present choices within learning. For example, while learning about the characteristics of ecosystems, students can be offered a choice of which ecosystem to study. We can also offer choices in how students learn—by watching a video, reading a textbook, or using the Internet. The more choices we can provide in education, the more interesting and relevant learning becomes for students.

Imbed Learning in the Activity

Gliding: I have been in the glider from my first day of instruction. I was not required to study the history of flight, important figures in gliding, or parts of the plane before I got a chance to fly. I was simply put in the glider with an instructor and towed to 3,000 feet above the ground. This may sound a little scary, or seem like “putting the cart before the horse,” but when you think about it, some of the most difficult things we have all learned have been taught to us in this same way. For example, learning to speak English is extremely complex and requires knowledge of vocabulary, meaning, syntax, and grammar. We learn it by being immersed in it, experimenting, making approximations, trial-and-error, and receiving feedback. Sure, I need to know the parts of a plane, how to fly, and the history of gliding, but this information is imbedded in the experience. For example, I learned very quickly what a rudder is through my need to control the glider. Each time I master a task, a new task is introduced, sometimes in the air and at other times through explicit instruction on the ground.

Schooling: In educational terms, learning by doing is called “top-down” learning. The learner starts by doing the activity as well as possible; the details come later when the learner is ready. For example, one of the most effective ways to teach children to write is to have them write, even if they need to use random letters and pictures to do so. The experience itself creates a...
need for learning. A child who starts off drawing a story soon learns to add random letters. A skilled teacher will then guide the child to use letters that stand for sounds. This is followed by word approximation, simple sentences, and so on. As the new writer masters one skill, a teacher introduces a new one. A top-down learning approach is effective when instruction moves students forward with higher and higher levels of skill and expertise. Eric Jensen, author of Brain-Based Learning puts it this way: “The brain learns best in real-life, immersion-style, multi-path learning.”

Provide Instant and Relevant Feedback

Gliding: I receive instant feedback as I fly. During the tow, I quickly learn that I haven’t controlled the stick and rudder correctly if I am not directly behind the tow plane. If this feedback doesn’t correct my problem, my instructor chimes in with more specific feedback: “Even out your wings!” In the same way, if things are going well, I receive positive feedback (“Nice work staying behind the plane”). The feedback is immediate, so I always know how I am doing, what I am doing well, and what I need to improve. This allows me to correct, reflect, focus, read, and practice the areas in which I need to progress.

Schooling: Traditionally, schools have often fallen short on providing feedback. Typically, a large “C” on top of a paper told the student little about what he or she did poorly or well. However, schools have been getting better at providing feedback. Rubrics and, to a lesser extent, checklists provide students with clear expectations and hands-on learning experiences like inquiry-based science, art projects, sports, and performances (e.g., a school play) have feedback loops naturally imbedded. Today’s teachers also provide verbal and written feedback specific to their students’ work throughout the learning experience.

It is important to remember that true feedback is not praise or criticism, but observation and insight.

Take Safety Precautions

Gliding: If I panic in the glider I will learn nothing and never want to be in a glider again. There are several things that help me feel safe at 3,000 feet above the ground. First, I take all the appropriate safety precautions. The glider is inspected each day, I go through a preflight checklist, and I wear a four-point safety harness. Second, I have my instructor with me in the glider. He is there in case I can’t handle something on my own. Finally, I feel safe because I know that he will not yell at me or demean me in any way. He may raise his voice but he understands that I’m learning and that I will make mistakes. When I make a mistake (and I make plenty), he simply redirects me. He reminds me that I’m learning and mistakes are part of the process.

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by connecting this new and foreign information with what I already know. For example, if there is a crosswind at landing, a glider pilot needs to “crab the plane” by turning the nose into the wind while continuing to move in a straight line. My instructor compared this to taking a motorboat straight across a river. He explained that if you aimed the boat straight, the current would push the boat downstream. But if you turned the nose of the boat against the current, the boat would cross at a slant and arrive directly.

Schooling: As educators, we know that the only way new concepts are learned is when they are connected with previously known information. We can accomplish this by understanding our students, presenting concepts in varied ways, using different modalities, and assisting students in making the connections. It may take awhile for some students to make these connections, so we need to be persistent in trying new avenues. Eventually we will see our students experience an “aha moment” and know that a connection has been made.

Learning to fly has been a wonderful experience for me as a person and an educator. The experience has rejuvenated me and reminded me what it is like to be a learner. Equally important, it has reminded me of the essential elements I require in learning and that we, as educators, need to provide in our classrooms:

- Choices;
- Active learning;
- Feedback;
- Safety;
- Individualization; and
- Making connections.

If we will provide these elements for our students, I believe that all of them will learn to “fly.”

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