

**[Slide 1: Write Side Up]**

Write Side Up:

Using the Neuroscience of Learning to Flip the Business English Class

Robert M. Rowan

**[Slide 2: Overview]**

Ongoing research in the neuroscience of adult learning indicates that the human brain favors experience-based learning in a challenging yet supportive and socially-connected environment. Brain researcher and educator James Zull points out that teachers “cannot give their ideas to adult learners like birthday presents. What we can give is new experiences. Skillfully designed experiences whose purpose is to generate new ideas and theories in the learner are very powerful” (Zull “Key Aspects” 8). By adjusting our course designs to focus on the students’ learning processes rather than the teacher’s data delivery, we can encourage our students to take greater ownership of their own intellectual development and give them some metacognitive tools they can use to effectively assess and revise their work in this and other contexts. The flipped classroom, which replaces lectures with hands-on practice, is not really a new idea. Educators are renewing their appreciation for this class format in light of new evidence about how we learn. As Alison King put it, our goal in flipping the classroom is to move from being the sage on the stage to being the guide on the side.

**[Slide 3: Preparing to Learn]**

For those who may be concerned that the flipped classroom represents a shift from teaching to entertaining our students, rest assured that skills and content are still our primary focus. It’s not the teacher’s job to entertain, but it is the teacher’s job to engage students and help them *get ready to learn*. Our students will only rarely feel as emotionally invested and interested

in the course material as we do, and that's normal. We can't compel the students to be interested, but we can shape and deliver our knowledge in a way that's interesting. It's important to point out that the flipped classroom is the opposite of a magic trick; it works best when everyone involved understands what we're doing and why we're doing it. Some parts of our class will always be experimental, especially at a teaching university like Illinois State, but we owe it to our students to earn their trust by clearly explaining our methods and our goals and how we are working to meet *their* needs.

**[Slide 4: The Role of Emotion]**

Brain research has repeatedly shown that a positive and alert emotional state *physically readies the brain* to receive and incorporate new information, a condition known as neuroplasticity. As we improve our understanding of how the brain works, educators are better able to create or encourage the optimal conditions for learning, retention, and integration. In the past few decades, as researchers have studied the brain within the context of its owners' lived experiences, their findings have shattered the older Western paradigm of the mind as a solitary phenomenon. Louis Cozolino and Susan Sprokay note that "the most effective adult educators may be unwitting neuroscientists who use their interpersonal skills to tailor enriched environments that enhance brain development. The brain is a social organ innately designed to learn through shared experiences" (Cozolino and Sprokay 11). It is also an organ that's sensitive to stress, including fear, anxiety, shame, and humiliation (Perry 21-23). These factors can negatively affect learning, even years after the original occurrence. We usually can't repair a student's past traumas, but we can at least try not to add new ones.

**[Slide 5: Changing the Brain]**

Real-time brain scans of people working and thinking and learning have begun to reveal the mechanics behind what many teachers have already been doing. Zull says that “learning is powerful and long-lasting in proportion to how many neo-cortical regions are engaged,” so optimal learning experiences will make use of the four major areas of the neocortex (Zull “Key Aspects” 5). These four pillars, as he calls them, are gathering data, reflecting on what’s been gathered and its relation to what we knew previously, creating new ideas and associations, and testing out these new ideas to see if our understanding matches reality (Zull “Key Aspects” 5-7).

**[Slide 6: Quick Review]**

Our role as educators requires us to do more than simply deposit information into our students’ minds and expect them to produce it on demand. We have the tools and the know-how to help them integrate new knowledge with prior knowledge, and an important subset of these tools is the prepping of the brain itself for receptive learning. Cozolino and Sprokay suggest that the same general principles or requirements for an effective learning environment apply both in the classroom and throughout a learner’s life:

- A safe and trusting relationship with an attuned other
- Maintenance of a moderate level of arousal [where the learner is attentive and motivated to learn]
- Activation of both thinking and feeling
- A language of self-reflection (Cozolino and Sprokay 12-13)
- Engagement of multiple parts of the brain through gathering, reflecting, creating, and testing new knowledge (Zull “Key Aspects” 5-7)

Rather than trying to make students feel happy or entertained, our attention should be on earning and maintaining their trust and their focused attention. Excessive stress, shifting or unclear

expectations, or a sense of disconnect between the work done at home and the lectures given in class can all negatively impact students' ability (not to mention their desire) to stay positive and focused. While flipping the classroom may not be required to create better neurological conditions for learning, we *can* use it as a means to achieve that end.

**[Slide 7: Flipping 101]**

One of the significant benefits of a flipped classroom is the de-centering effect it can have on students (and on teachers, to a lesser degree). Especially for subjects where the students may arrive with a negative attitude or a rigid set of preconceived notions, the flipped classroom can help us to reclaim these students' interest or attentiveness. Hands-on activities and group or collaborative projects often play a prominent role in the flipped class. Lectures can be recorded or typed up and posted online for students to review outside of class, so in-class time is reserved for them to work and for us to observe and assist. A flipped class still has structure; students will have more latitude in how they tackle the problems we've crafted for them, but our course plans will still provide boundaries to keep the students from wandering too far off-track.

**[Slide 8: Business English Setting]**

Typically, students in Business English are sophomores who have declared a major in some subset of business but haven't yet started taking their major classes. Course size is capped at 18 students, and classes are held in rooms with computers for each student and a computer and overhead screen projector for the instructor. Students are seated in rows of 3 or 4, making it easy to arrange them into working groups. This class is one of those college courses with a reputation that precedes it. Students frequently arrive expecting a time-wasting fluff class on memos, emails, and resumes; as a result of their lack of practical or academic experience, their understanding of just how much written communication gets done in the workplace is limited at best. It's also a

required class, which of course means that it must be boring. Engaging them and persuading them that writing is vital to their future success is a challenging, semester-long venture.

Our Writing Program uses a genre theory and writing research approach to English 101, so most students are already familiar with this mode of writing instruction. Recent research on how students learn to write has shown that the traditional essay-writing approach doesn't work as well as we once thought. That method has its merits, but researchers have found that the skills often don't transfer from that very specific type of writing to other types (or genres) of writing in school or in the workplace. The newer approach asks students to analyze the writing task they've been given, emphasizing the fact that every writing situation is both context-dependent and part of an interconnected system or network of human activities. Such activity systems can be described as "people trying to get things done." Not coincidentally, framing our coursework as socially-situated is a great way to tap into the brain's connection-seeking nature. One of the key shifts we ask students to make is in their understanding of how the document they produce will get used. Instead of getting stuck on "I'm trying to earn an A," which doesn't come up much in the workplace, we nudge them toward "I'm helping others get things done" and the reciprocal "Others are helping me get things done."

**[Slide 9: Flipped Business English]**

My Business English course has the following features: A learning (or grading) contract; written explanations and samples of key concepts that students can review online at any time; a semester-long project that's relevant to the students' future coursework and career plans; and flexible assignment options that let students choose topics or types of writing that interest them. As I mentioned earlier, I also follow the genre and writing research guidelines of the university's Writing Program, which helps students learn how to tackle any type of writing they might

encounter in the future. Lastly, each assignment asks the students to review and reflect on their work, explaining their choices and considering what they might do differently next time. You don't need to adopt all of these components in order for your own flipped classroom to be successful, and some of them may not apply depending on your discipline. Flipping a classroom can be done in small steps rather than all at once, so these components should be treated as flexible options and not as required features.

### **[Slide 10: The Learning Contract]**

I was introduced to learning contracts (sometimes called grading contracts) a few years ago by my colleague Joan Crooks. I've used them in some form nearly every semester since. Peter Elbow and Jane Danielewicz report that learning contracts can be used as a way of sharing power, redistributing authority, negotiating through dialogue, and giving students a voice and a sense of responsibility in the classroom (245). This ties in quite well with Cozolino and Sprokay's principle of "a safe and trusting relationship with an attuned other" (12). A safe and trusting relationship generally requires that expectations and offerings are clear on both sides, which is what a grading contract provides. The students' perception of their role in the class gets shifted from passive recipients to (or at least toward) active participants. It supports a flipped approach by establishing a broad yet attainable set of standards for work in the course, in which students can achieve their desired outcome by following a path of their own construction within the contract's parameters.

In my contract, students start out at a B for the semester. As long as they do a passable job on each assignment, they get a Credit and continue on. "Passable" in this case is roughly B work or better. Substandard assignments can be fixed and resubmitted if desired. Very poor or

unsubmitted work receives a No Credit, which chips away at their final grade. Students can do a limited number of extra assignments to offset these or to bump their course grade up to an A.

**[Slide 11: Course Projects]**

Over the course of the semester, my students create a small business and grow it to maturity. They conduct extensive research on the business, its industry, its customers, and some of the documents that get produced and used in the business. The word “research” often seems to trigger a negative response in students, in spite of the fact that it’s a skill they use regularly. Openness or resistance to research (and other aspects of genre analysis tasks) is often evident early on in my students, as some of them dive in to the task of creating a business right away and some of them spin their wheels or get frustrated when easy answers aren’t immediately forthcoming. Part of my task is to contextualize “research” as a life-skill the students already possess, and to help them see connections between the research done in the class and the kinds of solo or collaborative tasks they will be given in the workplace. I also regularly reinforce the ordinary, everyday nature of much of their research in order to de-toxify it in their minds and give them a sense that it’s something they *can* master. Research and data-gathering is one of the vital components of learning in Zull’s four pillars, so a dysfunctional relationship with research is important to overcome.

In support of the socially-embedded nature of learning, each project includes both group and individual assignments. Group work is a core component of the flipped classroom, at least in my implementation. Students *could* do their work outside of class on their own schedule (and they often do), but conducting group work in class has its own benefits. Ideally, students will come to see themselves as *co-creators* of knowledge as they observe *how* their research and writing affect not only their own progress but also the progress of their partners and vice versa.

For many of my students, writing is strongly associated with schoolwork (and often negatively so), and more than a few of them have expressed surprise that they'd be expected to do much if any writing after college. Compounding this is the fact that common representations of "business" in media, culture, and even college curricula seem to focus on everything about business except writing. Rooting out a strongly-held misperception can be very challenging, and simply telling someone that they're wrong and should update their brain usually doesn't work (even with supporting evidence). Experience, on the other hand, can have a reparative effect that just verbally correcting a misperception sometimes can't (Wolfe 37-38). At the end of the semester, when I ask my students again to share their thoughts on the role of writing in the workplace, their answers are almost always deeper and more complex than just a few months prior. To paraphrase several of them, "When I started the class, I thought all the writing we did got in the way of running our business. Now I see that the writing *is* the business." I've gotten in the practice of telling each new class about that revelation, but each semester many of them still have to get there on their own.

**[Slide 12: Daily Activities]**

Part of what makes the flipped classroom work is the shift it encourages in students' self-perception: they aren't just passive recipients of information any longer but active participants in discovering and even creating knowledge. Class and group discussions can be a very productive way to encourage students to exchange discoveries, research sources, and insights with one another. When planning or conducting discussions, however, we must be careful not to fall into the fill-up-time trap. We aren't lecturing, and we don't need to be talking or making the students talk the whole time. Once the first few days of initial setup are out of the way, a healthy chunk of each class should be devoted to group and individual work. Our job now is to be available for

questions—the guide on the side. Students should be working on their research and their assignments in whatever way works for them, which may include short breaks, the occasional distracting (muted) video or Facebook post, or what may appear to be aimless web browsing. Let it happen, and try not to loom. We have moved their production *from* the dorm room or library *to* the classroom, so we may see some work or study habits that don't match our own. Resist the temptation to micromanage except for critical matters. As long as our students can deliver the goods at the end of the project or assignment, how they get there deserves some leeway—and we've flipped the classroom for the expressed purpose of giving it to them.

**[Slide 13: Self-Diagnostics]**

The flipped classroom disrupts the top-down banking method and invites our students to assume greater control over their learning process. This includes the ability to articulate how and why they did what they did on a task. Cozolino and Sprokay called this a language of self-reflection; others might refer to it as metacognition. Either way, it's an invitation to students to think about their thinking. Although their control may be unsteady at first, nearly all of my students showed at least some improvement in this area during the semester. If the student can show me that they're developing awareness of their own writing and research process, I consider that a success. For most assignments, I ask my students to answer a series of open-ended questions about the work that went into it. I call this document the GUS (Genre Understanding Sheet, chosen solely because it makes a tidy acronym). Its purpose is to invite metacognitive reflection and—like the overall thrust of the flipped classroom—to get the students to slow down as they do their work and consider what they're doing and why. Assignments that are done at the last minute the night before they're due rarely offer this opportunity, and as I tell my students,

the purpose of slowing down and analyzing their thought process is to give them more power and command over it.

**[Slide 14: Parting Thoughts]**

The single best piece of advice I can offer you is to flip your class slowly. Don't feel like you have to radically change the whole course plan at once; add in a few interactive exercises or sections at a time, see how they go, then add in some more. This allows you to test new approaches while minimizing the risk if any given item doesn't work out. One of the most critical components of a productive student-teacher relationship is trust; be up front and transparent with your students before, during, and after the introduction of a flipped component. You are flipping the class *for them*, so their willingness to join you in the experiment needs to be high right from the start. It's easiest to start fresh at the beginning of a course, but don't let the potential for resistance change your mind if you think of an interesting new way to do things. Your enthusiasm for the new approach will often positively affect your class; just be sure to temper your eagerness for "something new" with deliberate choices to provide a good learning experience for the students and to maintain their trust in you as a capable and attentive educator. It's also important to remember that any experiment, no matter how carefully crafted, needs to allow room for failure. Adjust your assessment methods in a way that works for you; build in room for your students *and yourself* to fail with dignity and to learn from that. Think of yourself as a co-learner--and position yourself that way to the class as well. Invite their thoughtful analysis of the experience as a part of the experience, from "How did you approach the assignment and why?" to "What would you do if you were asked to teach these concepts?" This grants them a sense of empowerment and investment in the outcome, not just for themselves but for the students who will come after them.

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