

On the Self-Renewal of Teachers

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ABSTRACT

In previous issues of the *Journal of Veterinary Medical Education*, wide-ranging insights on how to achieve excellence in the classroom have been framed by award-winning teachers. These recipes for educational success, however, invariably lack a key ingredient—the teacher's process of self-renewal. What skills and attitudes prime the teacher for continued high performance? To stay out of the ruts of expertise, where does the teacher turn? Teachers and administrators alike recognize its great importance, yet few opportunities for the renewal of teachers are built into the educational system. In this article, we challenge teachers to see their own self-renewal as an underutilized approach to innovate education. We propose a schema for sustained self-renewal: each educator developing her own personalized, hand-picked gallery of intellectual heroes who in turn serve as the educator's life-long teachers. To illustrate the value of this activity, we introduce our own collection of 10 gifted thinkers, providing a brief encounter with each sage as a way of stimulating new thinking on the skills and attitudes that promote personal growth and transformative teaching. We conclude that the veterinary profession should work to create better opportunities for the self-renewal of teachers. By envisioning even our best teachers as unfinished and under construction, we open up a new dialogue situating the self-renewal of teachers at the very core of educational excellence.

Key words: peak performance, leadership, life-long learning, personal skills, medical education, problem solving, educational approaches, self-awareness, curriculum

INTRODUCTION

Good teachers instruct students on how to function in the world. Great teachers show students how they can transform it. By seeing education as a dynamic and transformative process, great teachers grow to recognize their own *unfinishedness*. Their philosophies and methods are in a state of both permanence and flux. The nameplate outside their door reads "Under Construction." They are experts, yet open to change.

Over the past decade, the *Journal of Veterinary Medical Education* has published several perspectives on great teaching written by the award-winning teachers of the veterinary profession.¹⁻⁹ These educators share wide-ranging insights on achieving excellence in the classroom, offering innovative ways to inspire active learning. To these thoughtful recipes for educational success, we would like to add another key ingredient: *the teacher's process of self-renewal*. Where does the teacher turn for self-renewal? What skills and attitudes prime the teacher for continued high performance to navigate the ever-changing territory that is the teaching-learning space? What keeps teachers from becoming close-minded, from slipping into the ruts of their own expertise?

Both teachers and administrators recognize the immense importance of self-renewal.¹⁰ By not cultivating the teacher's inner self, we put great teaching at great risk. Yet few opportunities for the self-renewal of teachers are built into the educational system. This concerns us. The lack of attention to nurturing the inner self of the teacher poses a serious threat to the long-term viability of even our most accomplished educators (Figure 1).¹¹ What then can we do to cultivate the teacher's inner self?

This article is a call for teachers to take action—to innovate the education process by reaching their highest potential through self-renewal. For several years, the authors have been taking a close look at personal performance, looking at individuals from different disciplines and seeing how they reach their creative and intellectual potential. Here, we propose a schema for self-renewal that, we believe, can assist even the most accomplished teachers with their unfinishedness. Our prescription for sustained self-renewal: Each teacher assembles a gallery of intellectual heroes—gifted and articulate thinkers—to serve as his own life-long teachers. The value inherent in tapping into this approach is twofold. First, you benefit directly from the flashes of insight you receive from spending time with original thinkers. This occurs not through passive uptake, but by actively shaping the meaning of each thinker's words to enlarge your own experience. Second, you experience the process of *becoming teacher and student*. This does not mean becoming a "typical" student, but instead an advantaged student nurtured by top-notch thinkers. This enables you to rapidly expand your skills of *reading* and *listening*, perfecting what Mortimer Adler calls "the art of being taught."¹² It is encounters like these that can spark the kind of authentic reflection—the hard, internal mental work—that fosters the personal growth and new understanding that enable teachers to perform at the highest level.

If we as teachers can spend a bit more time *thinking about our own thinking*, then we will begin to see our own teaching philosophy from new angles, both analytical and creative. By investing in our own self-renewal, we are putting students first—harnessing new energy, gaining fresh insights into structuring the kinds of educational



Figure 1: M.C. Escher's "Rind." Perhaps Escher was imagining the condition of unrenewed teachers—how sometimes they appear as if their effectiveness is at risk of unraveling. Self-renewal fosters an openmindedness to alternative interpretations, a susceptibility to new ways of seeing. Looking again at "Rind," is there something else you can see in Escher's imaginings?

experiences that will nurture the skills and attitudes that can enable each student to go beyond knowledge to expertise.

Here, we share with the reader our gallery of articulate heroes, those gifted intellectuals who have helped us most to think about our own thinking. Collectively, we call them "The 10 Faces of a Teacher," our multifaceted oracle of renewal (Table 1). In the pages that follow, we invite the reader to encounter a snapshot of what we imagine each of these thinkers might tell a teacher in search of renewal. But first, an important disclaimer is in order. We fully expect that not all of these ideas will resonate with every reader. Yet, even if only one or two of our heroes resonates with you in a new or unexpected way, then we have accomplished something—setting you on a course of self-renewal that will stimulate new ways of thinking, regardless of where you are on your journey to learning excellence.

TEN FACES OF A TEACHER

Jerome Bruner^{13–21}

Of all of our teachers, Jerome Bruner would have the most to say about self-renewal. His aim—an ambitious one—is to achieve the *perfectibility of intellect*. One does this by compacting experience into mental models. Building effective mental models requires an ability to create *categories*. Categories are words; therefore, Bruner places language center stage in intellectual development. He sees language as mankind's intellectual prosthetic device—enabling us to manipulate our experiences so they make better sense to us, and to transmit to others what we have discovered. Forming rich mental models requires deep thinking. That is why education is most effective when students leap the barrier from learning to thinking. In the classroom, the teacher must decide whether to expose students to "flat declarations of fixed factuality"²¹(p.127) or instead teach *the language of process*—how we came to believe what we now believe and why today's most deep-seated beliefs will someday be added to the scrap heap of what we once held as truth. The best mental models prepare the mind for inquiry, spawning a steady stream of testable guesses that are neither too flimsy, nor too certain. To achieve this, Bruner would insist that we develop our sense of intuition, our ticket to deepening our pursuit of understanding. It takes a *disciplined* intuition to sense when to proceed intuitively, when to be analytical. Through the process of perfecting your intellect you develop a sense of *promisingness*—the ability to choose the most fruitful options among the innumerable possible paths.

It is common for people to pride themselves in how much they know. But Bruner would urge us to pursue the other side of certitude: Become the one who understands how much we *don't know*, then pursue the unknown with courageous intuition. It takes real courage to be so exposed, so surrounded by the unknown. But that *known-unknown interface* is precisely where we need to take our students. It is there that students can learn *the art of problem finding*—the ability to locate trouble, to find those regions of our "knowledge" that are in need of revision. Problem finding, not just problem solving, is the creative force that helps the scientist cultivate the growing edge of his field. Good problem finders keep themselves sensitive to opportunity and anomaly, focusing their openness on what is non-obvious but relevant. And once you have found your problem and conducted your experiment, the greatest gift of your intellectual maturity will be the ability to *go beyond the information given*. For example, the cancer researcher must develop a refined ability to go beyond his observations of tumor cells in a Petri dish to generate not-too-restrictive, *optimally generic* ideas that transcend the plastic dish so that he might achieve his goal of understanding a disease that kills people, not plastic. That is how we perfect our intellect: by successfully grasping the optimally generic meaning of each experience.

Have you spent much time thinking about the current condition of your mental models? Are your students trained in the art of problem finding?

Table 1: Ten faces of a teacher

Name	Field	Idea*
Jerome Bruner (1915–)	Cognitive psychology, education	The perfectibility of intellect
Wendell Johnson (1906–1965)	General semantics, speech pathology	Language mastery as gateway to reaching intellectual potential
Neil Postman (1931–2003)	Media ecology	Education as counterbalance
Ralph Waldo Emerson (1803–1882)	Philosophy	Teaching as provocation, not instruction
Soren Kierkegaard (1813–1855)	Philosophy, theology	Navigating uncertainty
Roger Schank (1946–)	Artificial intelligence, education	Developing the battle tactics of persuasion
Gregory Bateson (1904–1980)	Anthropology, systems thinking	Information: a difference that makes a difference
George Polya (1887–1985)	Mathematics	The art of guessing
William Zinsser (1922–)	Writing	Writing more clearly to think more clearly
Robert Nozick (1938–2002)	Philosophy	Spiral: the geometry of a transformative life

* This table highlights one skill, attitude, or idea for each teacher. The reader will discover in the narrative that each of these gifted thinkers has the capacity to affect a teacher's thinking in multifaceted ways.

Wendell Johnson^{22,23}

We see the world through our categories, taught Wendell Johnson. Categories again. If you are a dog and my experience is that all dogs bite, then I see you as a biter. In contrast, a person who has developed more extensive categories of dog behaviors would make no such assumption. A word of caution: Categories can cripple understanding. We oversimplify the world and muddle information when we fall into the trap of *either-or-ness*. For example, if we see things as either good or bad, we are prone to ask, "Are vitamin C supplements good for me?" Being more precise with language moves you to ask the better question: "Under what circumstances will vitamin C supplements benefit me?" To Johnson, language is the gateway to perfecting our intellect. This is necessary not just for effective communication with others, but to more effectively *talk to ourselves*. Words are the building blocks of Bruner's mental models—how we shape and re-shape the ideas inside our heads. And when we are ready to move those ideas out of our heads through the act of writing, the words we choose enable us to develop deeper lines of reasoning. Perhaps this explains why people find journaling such an effective tool for enhancing the quality of their thinking. Johnson is adamant about one thing: The responsibility is ours to accurately pass on to the next generation what we really know, and what we have yet to understand. The next generation should stand on our shoulders, not start from scratch. Without focus on language and its careful usage, we are at great risk of passing nonsense to the next.

Could the quality of your thinking be enhanced by increasing your ability to be precise with language? Have you ever considered taking a course in general semantics to transform your language behavior?

Neil Postman^{24–26}

Every teacher a history teacher, every teacher a language educator, taught Neil Postman. By listening to the history of each discipline, the student witnesses the discovery process unfold. She will come to appreciate how emergent are the questions and how contingent is the truth. There is no such thing as "the definitive study." Everything is work in progress. Postman would say that learning any subject demands that we acquire a skill with words—not only definitions, but also the questions and metaphors of a particular domain. Perhaps Postman's greatest insight is the notion of *education as counterbalance*. There is no one-size-fits-all blueprint for the best education. Instead, we must find out how young people are receiving information and then shape an educational process that counterbalances the predominant modes of instruction. If television commercials are teaching young people that quick solutions to problems come *from without* (e.g., win friends by changing your brand of body wash), educators must reveal to students tougher problems that must be solved *from within*.

Do you teach the history of your discipline? Do you see your teaching approach as counterbalance ... counterbalance to what?

Ralph Waldo Emerson^{27–34}

The tough problems are always solved from within. Ralph Waldo Emerson called this *self-reliance*. You must grow your capabilities, reach your potential so you can dig deep to meet life's challenges. Emerson's teaching method would be one of *provocation* rather than instruction. Once provoked, the student turns within to inspect, then revise her mental models. That is how we tap into the genius within each of us. To Emerson, "Perception

makes.”^{34(p.51)} When it rains, it is our perception (not the rain) that makes us mope or dance about. Rack up as many provocative experiences as you can because it is through these experiences—and ultimately your categories—that you grow to see and seize the hidden opportunities dancing out there. Do not neglect to tell your students that *their* experiences are all they have to offer to those whom they will teach someday.

Have you reflected upon the role provocation plays in your own learning? Does your teaching allow students to see cells, organisms, and populations through a lens of conceptual order or perceptual flux?

Soren Kierkegaard^{35,36}

In the world according to this great Dane, reality is subjective. Therefore, each student must co-create meaning. That is why, in Kierkegaard’s classroom, there would be no daily drill of rules, but instead the parables of a wise man. The wise man gives the student two great gifts: the utterance and choice. Students must choose to pay strict attention or to ignore. They must choose to consider the material true or false, worthless or valuable. They must decide which are the most fruitful lines for further inquiry. Kierkegaard would teach us to prepare ourselves to navigate the gap between the understanding and the willing—that is, between our limited knowledge (the understanding) and the need for action (the willing). Our knowledge will always be incomplete. Therefore, only if we have a high comfort level with ambiguity and paradox, can we move forward with decisive action in an uncertain world.

How often do we mislead students with a false impression of how much we know versus what we believe? Are you training students in the art of making judgments under uncertainty?

Roger Schank^{37–39}

Roger Schank’s radical thesis is that intelligence is *story telling and story understanding*—the ability to make the right-time response to someone else’s utterance. Right time, right context. This demands a slew of skills that are likely underemphasized in today’s classrooms: listening, contextual acumen, metaphor. To Schank, an expert in artificial intelligence, becoming a clever indexer is the mark of intelligence. Indexing is the way you successfully access your own experience. To access your previous experiences is to own them. And, as every actor or opera singer knows, owning your material is essential for peak performance. Schank would also teach us how to increase the odds that our new ideas—our discoveries—will stick. It is not sufficient to simply put forward your naked new idea or invention. You must also creatively change the lens through which others will view your new and shiny thing. Otherwise, the cataract of previous belief will prevent the brilliance of your new idea from being seen. Instead of flourishing, your idea will be stomped upon, rejected.

Are you in need of some heady battle tactics to make your own creative ideas win? Should you invest more effort in developing yourself as a skilled storyteller?

Gregory Bateson^{40,41}

Gregory Bateson would turn the classroom upside down with his advice on how to make sense of the world. He would teach what he calls the *successful raid of the random*—the ability to separate the stimuli that one should pay attention to from the noise that does not count. He would insist that context determines meaning and that it is the responsibility of the *recipient* to provide context. It is the recipient alone who can truly communicate. The rest is just noise. And Bateson would have something else creative to say to students. Students equate creativity with “thinking outside the box.” Bateson would instead argue: Grow your box. Grow it big, because a bigger box provides richer context. Bateson’s blueprint for box growing would likely hinge on gathering *information*, which he defines as *a difference that makes a difference*. Bateson’s information is special information indeed. Mastering the art of seeing the similar as different, the different as similar is an enviable achievement. That is why training in comparative religion, comparative economics, comparative medicine, or *comparative anything* is such a good idea. It trains us in the art of spotting connections.

Are you preparing your students for a life of discovery, for finding what’s hidden? Shouldn’t you be teaching a course on comparative something?

George Polya^{42–44}

George Polya is a problem solver extraordinaire. From a mathematician one might expect stifling lectures with blackboards scratched full of equations. But with Polya, you would be surprised and delighted. Polya is a true original, the teacher who would take you beyond problem solving to the skill of plausible inference (i.e., *the art of guessing*). And he would teach you using *stories* about problem solving. Consider the tale of the mouse that got stuck in a caged trap. The mouse quickly tests each of the spaces between the bars to see if he can slip through to make a safe escape. The mouse is searching for *Bateson’s information*—the difference that makes a difference. Problem solving is iterative seeking and the quality of this seeking can be enhanced through the disciplined development of key skills, such as recognizing helpful auxiliary problems, collecting clues from simpler analogous problems, and using heuristic short-cuts. The creative problem solver knows there is no substitute for a disciplined imagination.

Are you trained in the art of guessing? Have you dedicated yourself to acquiring the opposing skills (analytical vs. creative) necessary for developing a disciplined imagination?

William Zinsser^{45,46}

Next to last, but not least, William Zinsser would teach: To think clearly, write clearly. Most of us write crummy. And it is tough to unlearn some of the crummy things we have been taught in school, such as never starting a sentence with the word “but.” But all that would change with Zinsser as task master. He has certainly helped both

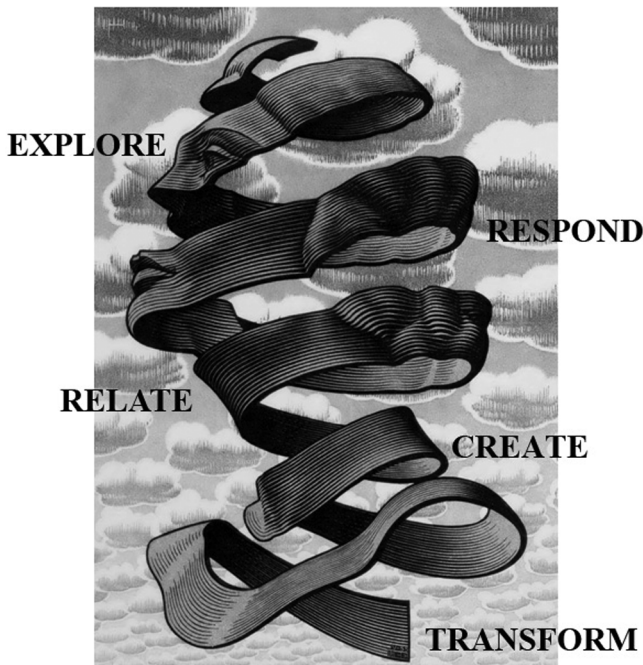


Figure 2: Re-visiting Escher's "Rind." Far from an image of unraveling defeat, could the artist's message be that by embracing the spiral nature of human experience we better prepare ourselves to celebrate a life of discovery and transformation?

of us (DJW, LSW) grow to become more careful writers—respectful of that fidgety fellow (perhaps you at this very moment) who is just looking for an excuse to put away what we have written. Strength through pruning, Zinsser would remind us. And then he would remind us of the importance of constructing a conclusion as a memorable crescendo—what the reader takes away from your piece—rather than a highly forgettable rehashing of what you have already said. As your writing improves, you will watch your clear thinking soar. Your *reading* will also change. More important than reading a journal or book cover-to-cover, you will begin to look for statements, phrases, even single words that will provide some of that *Emersonian provocation*—the provocation that makes you think about your thinking.

Have you ever considered how your writing influences your reading? Is it time to re-think the way you write?

Robert Nozick^{47–48}

The strictest disciplinarian of the lot, Robert Nozick would whip students into shape—the shape of a *spiral*. To be accomplished in this world, you must become an accomplished spiral jumper. You must take every opportunity to grow your box by jumping down a spiraling sequence of EXPLORE-RESPOND-RELATE-CREATE-TRANSFORM (Figure 2). This means being open to transformation with every experience—every lecture, every reading. Mastering the art of being taught¹² takes serious listening and reading skills. But it also demands a special, spiraling attitude of fearless openness. Intellectual growth calls for

courage, because the spiral nature of experience means you never end up back where you started. You must abandon where you began. And, inevitably, some of your old ideas will get gutted along the way. To see every creative act as an act of destruction and not flinch—that is the resilience you must seek. There are times when each of us questions the purpose of our lives. Are we living up to expectations? Are we making a difference? Nozick's advice is uncomplicated: Engage in an activity that has intrinsic value. For him, this is creativity. But Nozick's prescription does not stop there. Fully engage your experiences, knowledge, abilities not to create a thing, but to *create a process*. Create a plan that enables others to find *their* purpose and goal. In this way, endowing their existence with meaning and purpose becomes *your* purpose.

Is that why being a teacher is so satisfying? Is not Nozick's prescription for satisfaction of purpose a call for great teaching and for the nurturing of the teacher's inner self?

SYNTHESIS

The intent of this article was to call teachers' attention to the need for self-renewal, challenging them to consider it as a necessary approach to innovating education. Recognizing the importance of self-renewal, we proposed a schema whereby each educator develops a personalized, hand-picked gallery of intellectual heroes who become the educator's life-long teachers. We tried to illustrate the value of this activity by sharing some lively insights from the teachers who have provoked the deepest reflection in us. After contemplating these insights, we suspect some readers will concede they got Nozicked or Brunerized into seeing their teaching practices in a new light. But if we have been more persuasive in our argument, some readers will find themselves on a new path toward building their own wellspring of wisdom. They will become engaged in a deliberate process of self-renewal.

Dissenters of our approach may argue that assembling their own gang of elite teachers is too big of an undertaking, incompatible with the time demands already placed on them. To these skeptics we reply: Do what a good tree surgeon would do. Begin with the tree of 10 top-notch teachers we planted here and prune it down to what feels right. We do not see the all-too-real time constraints of academicians as a disabling obstacle to renewal. The deeper we have looked for the keys to achieving top performance and reaching one's potential, the more we are convinced there are a limited number of skills and attitudes that really count. This stance is supported by the work of others.⁴⁹

The veterinary profession should work to create opportunities for the self-renewal of teachers. Teachers that renew can transform. We believe that nurturing certain skills and attitudes, like those put forward by our 10 teachers, can truly enhance professional performance. Moreover, we propose that it is time for a curricular rethink to create a "skills course" in which veterinary students and their teachers can explore transformative ideas on personal performance—in the classroom together.

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