

The Last Word:

Interview With Wilbert J. McKeachie— The Teacher of Teachers' Teaching Tips and Strategies

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Initial Paths to Excel

JAA: What motivated you to pursue a career in psychology?

McKeachie: First, I was motivated by my service as a minister. When World War II started, I wasn't quite sure about whether I would file for exemption as a conscientious objector. Thus, I talked to one of my friends who was studying to be a Methodist minister, and he said, "Well, if you can't make up your mind, I go up North every weekend to the Upper Peninsula of Michigan and serve nine little Methodist churches. I can't serve nine churches adequately in a weekend. Why don't you take two of my churches?" I said, "Well, I'm not a Methodist. I'm a Presbyterian." He replied, "Oh, I don't think the bishop will mind. You've thought about being a preacher; you can do it." I went to the Methodist conference, and I was assigned Trout Lake and Hulburt churches. Serving as a minister helped me start to appreciate human nature and psychology.

During my senior year in college, I had to go to the last dance of the year. Ginny worked in the library and I had admired her, but I didn't really know her very well. One day, she was waiting

for the bus when I came out and said, "Will you go to the Spring Breeze dance with me?" She said, "Yes." A month later, I asked her if she would consider marrying a minister. She didn't say, "No." She was a bit shocked, as were her parents when I asked them. We got engaged, and I went up to the Upper Peninsula to be a minister. We have been together ever since.

A few months later, when I became of draft age (21), I went into the Navy. I spent most of the next 3 years on a destroyer in the Pacific. I wrote back to my wife, "If I survive, I'd like to go into psychology after the war." I think the experiences of the ministry and then being on a ship with 300 diverse people influenced me to want to go into psychology. We only had two psychology courses as undergraduates, introduction to psychology and educational psychology. Michigan State Normal College was a teachers college at that time, but I liked those two courses. Since I had a lot of combat, I was released in time for fall term after World War II. I started at the University of Michigan in 1945, and I have been here ever since.

JAA: What motivated you to focus your professional work on learning and teaching?

McKeachie: I was just lucky. I was lucky to survive the war and lucky to marry Ginny. But part of the luck was that there weren't any other careers like that at the time. Everybody studied rat learning, not human learning. Since I had only two courses in psychology, I had to take undergraduate psychology courses during my first year of graduate school. During my second semester of graduate school, Don Marquis became department chair. He asked Harold Guetzkow to supervise the introductory psychology course. Harold had a weekly seminar for those of us who taught the discussion sections in the introductory psychology course, and that's where I first began to think about teaching and learning.

After 3 years, I said, "I guess I should start looking for a job." Don Marquis said, "You can get a job any place in the country. Everybody's looking for faculty with all the GIs flocking in" (the GI Bill of Rights, officially known as the Servicemen's

Readjustment Act of 1944, paid tuition and living expenses for returning veterans of World War II). I responded, “Well, I’d like to go to Sarah Lawrence or Bennington; they’re both interested in teaching.” A week later, he called me in and said, “Instead of going off to Sarah Lawrence, how would you like to stay here, teach our introductory psychology course, and train our graduate students in teaching?” There wasn’t another job like that any place. I had offers from Yale and Northwestern. If I had gone there, I would have probably done experimental work and had a more conventional career. So I decided to stay, and I’ve been here ever since. Running the course and training graduate students to teach were the experiences that got me into teaching and learning.

JAA: What did you learn in particular?

McKeachie: John Dewey said, “If students don’t learn, you’re not teaching.” I think that’s very true, that you can’t just lecture. There still are people who run programs for training college teachers but just teach them tricks of the trade, some skills to use. I don’t think that’s going to make much of a difference unless the teachers understand the theories of learning in terms of why particular strategies will work. At that time, learning theory was primarily behavioristic. Clark Hull was the preeminent learning theorist. As a former math major, I liked his theories because they had equations and I could do those equations. But, Don Marquis had us read Don Hebb’s *Organization of Behavior* (1949) and Norbert Wiener’s *Cybernetics: Or the Control and Communication in the Animal and the Machine* (1948) and these books are predecessors of cognitive psychology. Besides Hull, the other preeminent learning theorist was Edward Chase Tolman who had the beginnings of cognitive psychology. His rats had means-end expectancies. They were using cognition to choose the right pathway in their mazes. Thus, Marquis was moving us toward modern learning theory, even in 1950 or thereabouts. The cognitive revolution came around in the 1960s. Even though B. F. Skinner, who was a good friend of mine, had the preeminent behaviorist theory, I

was always more oriented toward a cognitive approach than to a strictly behavioristic reward and punishment theory.

JAA: Why did you focus on teaching?

McKeachie: I guess because it was my job. I had to train all these graduate students and teach 500 students at a time in the big lecture sections. It was important to do a good job. I was trying different things. There was a professor named Don Phillips at Michigan State University, who had a method called “Phillips 66” (Phillips 66 was a popular gasoline at the time). Phillips named his strategies Phillips 66 because he had six students talk for 6 minutes about some problem and then report out.

I would race up the aisle of the auditorium, and say, “Odd, even, odd, even. Remember if you’re in an odd row or an even row. If you’re an odd row, turn around, and if you’re an even row, talk to the people in front of you. Form groups of four to six and spend 6 minutes discussing this problem. Choose one of your members to be a reporter and report what you concluded about this problem.” After they had their 6-minute discussion, I would ask reporters to raise their hands. I’d say, “Ok, what did your group conclude?” I’d write their conclusion on the blackboard, and then ask, “Any other groups have that?” Several groups would raise their hands. Then, I’d say, “Is there any group that has a different conclusion?” I’d write that. Usually, there were not a lot of different viewpoints even though I had almost 100 groups. I would write all the potential solutions or answers on the blackboard.

JAA: Who have been your role models?

McKeachie: Certainly, Don Marquis, the chair of the department, was my role model. He would have us all come out to his house to discuss new books or discuss current issues in psychology, creating a kind of continuing education program for our younger faculty members. He was a brilliant person and very supportive. My other model was Harold Guetzkow. He ran the introductory psychology course. He was just a very gentle and a very nice person. He

encouraged and stimulated us to ask questions and think about our teaching. My psychology teacher at Michigan State Normal College, Everett Marshall, was also important to me.

My father was also a role model. He was a teacher. I suppose that's one of the reasons why I thought teaching was a good career. My father was very task-oriented, demanding, and hard working. He went to school early in the morning, started the big furnace in the one-room country school, and he stayed after school was over in the afternoon and wrote questions on the board for us to use when we were studying. He wasn't mean at all. He was understanding, but we knew we were expected to study and we might be embarrassed, at least in front of the other students, if we didn't know the answers to the questions.

Teaching Tips and Strategies

JAA: What motivated you to write a book about teaching tips?

McKeachie: I found out that my teaching assistants had problems teaching. Some of the problems were the same from year to year. Thus, I wrote these mimeographed teaching tips about how to handle some of the problems that were likely to come up. Soon after people said, "Can you send us copies of those mimeographed tips for teaching?" There was enough demand that I decided to publish them as a book. I had it printed and published by a campus bookstore for a dollar a copy. I printed 100 copies and they sold out. I think the bookstore would get 80 cents and I got 20 cents. I ordered 500 for the next edition and then 1,000. Now, Wadsworth publishes it. Last year, it sold more than it ever sold before.

JAA: Your book, McKeachie's Teaching Tips, is now on its 13th edition. To what do you attribute its success?

McKeachie: It is practical tips for people that they can use in almost any kind of teaching. I try to explain why they work so

they've got some theory, not just tips to do this or to do that. I explain why a particular strategy should work in a situation so that teachers can adapt it to their own situation rather than just use a technique mechanically. I hope my book makes them think about what they're doing instead of just saying, "McKeachie says, 'Do this and do this.'" The purpose of my book is to train people to be better teachers. The book has many teaching tips. One of them is that students learn more when they're talking to one another than if they're listening to you. Thus, be sure to get them talking rather than spending a long time lecturing.

JAA: In the 12th edition, you added a new chapter on diversity. What specific tips do you offer about diversity?

McKeachie: We already had a chapter on diversity in the 11th edition. It might not have been called that, but there was something about student differences and diversity. "Valuing Student Differences," by Nancy Chism, was essentially about diversity. Then, if you look in the index, you'll find that there's diversity in some of the other chapters as well. It's not a new chapter in a sense, but diversity became a hot topic, so I called the chapter *diversity* rather than *student differences*. One of the specific tips that I offer about diversity is to show respect for students' differences and recognize that having different points of view is a value rather than a bad thing. If you have people with different experiences and different approaches, they enrich learning.

Everything is complex in psychology, and if everyone just had one point of view, they would miss a lot of the complexity. Herb Simon used to say, "Knowledge is like a circle. If what you know is inside the circle and what you don't know is outside, the more you learn, the bigger the diameter of the circle becomes, and you realize how much more there is to know." That's what makes psychology interesting. Psychology is never just a simple *yes-no* thing. It always turns out that there are exceptions and complexities that condition what you're doing. You need to think about the context and culture. It's always something that can be expanded and developed further.

Having different points of view enriches education. In Michigan, where affirmative action was legally challenged, I think it's kind of a shame that they tried to pass a law against it. I served on the admissions committee and it's sad that you shouldn't take account of racial differences when you take into account differences like whether the parents have given money to the university or whether the parents are alumni or other variables that are not directly related to learning. Differences in cultures really do enhance learning so I think it's a shame to ban affirmative action. We shouldn't favor any one group, but we do favor different groups in admissions anyway.

With regard to equity for gender, my take is that women are taking over. I think about two thirds of the graduate students in psychology are women, and in higher education in general there is a big influx of women faculty members in all fields. We need to give women positive experiences in grade school and high school in science. With regard to diversity in relation to students with disabilities, I think we've always been aware of that. I remember one of my early students was completely deaf. I had to accommodate that by putting things in writing for him and making sure that he got notes from other students. Obviously, those who have mental retardation would probably not be able to do well in most colleges, but that doesn't mean they can't learn, right? With the appropriate teaching, we can help them develop.

In the book, I recommend that it is important to be sensitive to cultural differences among students. For instance, it is important to be attentive to nonverbal communication such as eye contact. Students can give you feedback about their understanding by the way in which they look at you. For some African Americans, Asian Americans, and Native Americans, looking away from you could be an indication of careful attention rather than inattention. Students' nonparticipation in class could be a factor of a culturally ingrained value of humility or a history of distrusting the motives or intentions of others rather than a lack of motivation. There are cultural differences related to being on time. For instance, some Native Americans believe that taking the time to do certain tasks well is better than doing them poorly. Other cul-

tural differences affect having grades based on class participation because some groups may think that they should not participate. Being graded on the curve is problematic for groups that value cooperation rather than competition. I recommend that teachers match their instruction styles to their students' learning styles, be concrete, enhance performance measurement, use appropriate nonverbal behavior, be accessible by maintaining consistent office hours, take time to chat with the students, and engage in positive appraisal and support.

JAA: What are your tips to make lectures more effective?

McKeachie: One tip is to be sure to get the students to do more talking. Splitting them up into small groups is helpful. I used to use pairings. I would have students write a minute paper about something such as, "What was the most important thing in yesterday's lecture? Think of one question you have about the topic for the day, and then talk to a student who sits beside you. There are two students who sit on either side of you, turn and ask what they think about the topic." Then, I'd get reports from somebody about what they concluded or what issues came up in their group. It can be pretty deadly to listen to somebody talk for an hour straight, so the more you get students doing things themselves, the better. For example, having them write for a minute, that's one way of getting their attention back on the topic. Doing some talking to other students by using the Phillips 66 strategy, pairings, and demonstrations help.

It is important that teachers know what lectures are good for. Lectures are good for presenting up-to-date information, summarizing material scattered over a variety of sources, adapting material to the background and interests of the students, helping students read more effectively, and focusing on key concepts or ideas. Likewise, it is important that teachers understand the importance of planning lectures, preparing the lecture notes, and organizing the lectures. Getting the students actively thinking in a lecture situation is also important. For example, I often interrupted a lecture to have a *minute paper* time. During a minute

paper, the students write answers to specific questions or summarize what they have learned during a particular lecture. Becoming conscious of the students understanding, reactions, and behavior during lectures is paramount for educators.

JAA: In your book, you observed that grading is not the most important function of teaching. What are your tips for assessing, testing, and evaluating?

McKeachie: The important thing is not to grade on a curve. I think that's very detrimental to learning. One time, our dean decided that there should be a certain proportion of As, Bs, Cs, and Ds. I went to him and said, "I can't train my teaching assistants if you're going to have a system like that." I said, "It means that if all students in class do a good job, the graduate students will still have to give some students in the class Ds and Es, and that's not good motivation for teaching." I persuaded him that we shouldn't have to give any grades according to a certain formula.

We shouldn't grade on a curve; we should grade in terms of whether or not our goals are being achieved. I always told students, "Look, you've got 100 points, and if you all get 95 or above, you'll all get As. We're not grading on a curve in this course." Some medical students used to cut pages out of books in the library so other students couldn't get to them ahead of them. I said, "Grading is not competitive in my course. You can help one another and the more you help one another, the more it'll be good for the person that helped as well as you for you. One of the best ways to remember something is to explain it to someone else. Work together, study together, help one another, and you can all get good grades."

In the book, I observed that learning is more important than grading. Tests and other assessments should be learning experiences as well as evaluation devices. Providing feedback is more important than assigning a grade, nongraded evaluation can be used to increase motivation even if that evaluation is not a criterion for grades, and teachers should avoid evaluation devices that increase anxiety and competition. In the book, I discuss alterna-

tive testing models. For instance, in my own teaching, I often use group testing, online testing, performance assessment, graphic representations of concepts, journals, research papers, portfolios, and peer assessment. In sum, the primary purpose of assessment is to provide feedback to students and teachers so that learning can be facilitated.

JAA: In your book, you recommend testing from the students' perspective. Could you please explain what you mean by testing from the students' perspective?

McKeachie: What I try to get across to students is that tests are a way of learning. I'd usually give a quiz during the first week, maybe another one after the third week, and an hour test after the first month. I'd say,

Now, these aren't going to count for very much but they're going to give you an idea of whether or not you're learning what I'm trying to get across. You're not here just to get a grade. You're here to learn. I'm trying to set it up so you can tell whether you're learning. If you're learning well, your grade will come up. I am concerned about your continuing to learn after you leave the course. What you learn in 15 weeks is not nearly as important as whether you keep on learning afterwards, the rest of your life. I don't want you thinking, "Well, I'm just learning so I can pass the final examination, then I can stop." If you're learning just to pass tests, you're going to be handicapped the rest of your life because you're not going to have people giving you tests just to see how well you've done. It's important to keep on learning because you enjoy learning.

One of the problems with giving tests is that students begin learning just to pass tests and don't develop motivation to continue on after that.

In the book, I shared my own practice to help my students coping with test anxiety. For example, I lowered the stakes of any

given test by having multiple assessments with low point values for each. I also offer second chances to students who have difficulties during a test. I invite the students to explain their answers on the test itself. I gave nongraded practice tests to familiarize the students with my testing practice and style. I also offer suggestions about how to study for my tests. Some of my suggestions include strategies such as taking deep breaths, putting down the pencil, and using other relaxation strategies. I try to enhance my students' self-efficacy beliefs about their capability to do well on a particular test. I tell them to tell themselves, "I'm going to do OK! I can do it!"

JAA: In your book, you talk about what educators can do about cheating. Why do students cheat? How can educators prevent cheating?

McKeachie: Well, I think the main point in reducing cheating is to take the pressure off any one test. Students aren't going to cheat if they know the material, so if you've got them learning all along, they're not going to be as tempted to cheat as if they haven't studied until it's time to take the final examination. So probably the best thing to prevent cheating is to be sure that they're learning and studying during the semester and not just before the final exam. One of the other things I do is that I usually give a practice exam a week before the final exam saying, "This one's not going to count, but it'll give you some idea as to how well-prepared you are for the final."

I had a pool of probably a thousand multiple-choice questions, but I always included essay questions because students study better if they know they'll have an essay question. Even though I tell them, "My multiple choice questions are not going to require straight memorizing of the text. They're going to make you think," they still think you just memorize to study for multiple-choice, true-false exams. If they're going to have an essay exam, they study better and try to think about the material. Even in a class of 500, I say, "There will be an essay question on the final. Obviously, I'm not going to have time to read all 500, but I promise I will read the essay if the points on the essay will make a difference

in your final grade.” I would read, maybe 40 or so out of the 500, where it could make a difference in raising or lowering the grade.

In addition to reducing the pressure off the students to prevent cheating, I address the issue of cheating in my syllabus and I discuss it with the students. Other ways to prevent cheating include making reasonable demands and writing reasonable and interesting tests to avoid student frustration and desperation. Instructors can prevent cheating by creating an environment that supports honesty and by talking to those students who are not doing well in the course to find out their problems. Prevention is preferable to punishment. Cheating will be reduced when the students feel that the teacher and their peers know and trust them.

JAA: In your book, you talk about the ABCs of assigning grades. What is contract grading? What can an educator do when the students want a grade changed?

McKeachie: Contract grading can help achieve academic goals. If you make a contract plan, which involves setting goals, and then includes ways of measuring whether those goals have been measured, that’s OK. When the students want a grade changed, you have to listen to them. Find out what evidence they have. If you think there was an error in your grading, go over their work and see whether they were all questions were graded correctly. Usually, they’d come in with an essay; I’d reread it and I’d say, “Well, I’ll have the other teachers review it to be sure that that my judgment was correct or whether you are right.”

I’d ask them to explain why they think I didn’t give enough points to them. To help prevent problems, I would tell them that when I was giving a workshop for faculty members at Oxford University, one of the faculty members at the workshop said, “I tell my students that when they are assigned a paper or have to answer an essay question, to think of themselves as in a courtroom. In the first part of your essay, think of yourself as the prosecutor. Make the case as to what you think is the right answer to the question. Then, think of yourself as the defense attorney and write down the reasons why the first answer may not be com-

pletely correct and what the difficulties are there. And then think of yourself as the judge and write your conclusions.” The biggest problem students have on essay tests is that they only write down two or three sentences about what they think the answer is.

JAA: What teaching strategies would you recommend for teachers teaching gifted learners?

McKeachie: I don't think it's that much different from nongifted learners. Obviously, you can probably expect more and probably do more problem solving. I like to have students do research as part of a course. Working with a couple of other students on a team to devise a research project and carry it out during the term is one way in which they're learning how to think and learning psychology as well. Teaching gifted students learning is a challenge. However, every class has challenges, whether it's a slow-learning class, a traditional class, or a gifted class. I taught honors introductory psychology the last 10 years I taught. Gifted students are fun to teach because they come up with questions and ideas you haven't thought of, so you can learn a lot from them. You learn in every class if you're a good teacher, but I think gifted students probably do raise more questions, and it was fun to teach them.

Teachers could enhance the learning experience of gifted learners by assigning meaningful activities that the students can see are related to their interests and future careers; making learning interesting through the use of variety and novel tasks; making learning challenging but doable; by giving them some choice in what they are going to do; focusing on individual interests, unique strengths, and qualities; involving them in the planning of the assessment methods; promoting creativity and self-initiative; teaching them self-regulation and delay of gratification; and by focusing on learning rather than on grades.

Self-Reflection of a Successful Career

JAA: Reflecting on your 60-year teaching career, what have been the one or two most memorable moments?

McKeachie: Gee, I don't know, I've had a lot of good moments. I suppose, when Ginny didn't say, "No" when I proposed to her. That was kind of the beginning of a career. Being president of the American Psychological Association was memorable. Just teaching day in and day out is fun in itself. I don't think anything special stands out; I just always enjoy it.

JAA: What advice can you give to aspiring and practicing educators?

McKeachie: Find something you enjoy doing. It could be teaching, research, or administration, and emphasize that. And, if you're doing something that you don't enjoy initially, figure out some way to make it more interesting, more enjoyable. In every job, there are ways you can enrich it by adding some complexity or something different that makes it unique and not just a routine endeavor.

I would tell them, "Don't get into a rut where you just do things somewhat mechanically. If you feel that you're getting bored, think of some new thing to do that will make it different, make it more challenging." We're all motivated through challenges; if you get so you're just doing things so easily that it's not anything challenging any more, that's not good. One of the nice things about teaching is that there's always additional complexity and the challenge might be, "How do I get to these kind of students to do things the way I'd like to have them do and learning the way I'd like to have them learn?" Or it could be, "How can I handle this topic, which I don't really enjoy teaching?" There are always possible challenges and I think finding new challenges is one of the ways of keeping motivated.

JAA: Did I forget to ask you something? Would you like to say something else?

McKeachie: Not that I know of. That's more than I ever would have thought of. I think you've pumped me dry. I know, Héfer, that in your own practice teaching to teachers and teacher candidates, you use some of the tips and strategies I discussed in my book. I found your work on academic delay of gratification and how it is related to learning and teaching very inspiring.

Editors' Note

Wilbert J. McKeachie is a Professor Emeritus of Psychology at the University of Michigan, where he received his Ph.D. in 1949. He is a past president of the American Psychological Association (APA), the American Association of Higher Education, the American Psychological Foundation, the Division of Educational Instruction and School Psychology of the International Association of Applied Psychology, and APA's Divisions 2 and 15. Professor McKeachie served as chair of the Psychology Department at the University of Michigan from 1961 to 1971. He has received eight honorary degrees, the American Psychological Foundation Gold Medal for Lifetime Contributions to Psychology, and the APA Presidential Citation for exemplary service to the academic and scientific community. His classic book, *McKeachie's Teaching Tips: Strategies, Research, and Theory for College and University Teachers*, is now in its 13th edition. *Contact information:* University of Michigan, Psychology Department, 530 Church St., Ann Arbor, MI 48109-1043; billmck@umich.edu.