

Evolution of a Self-Regulation Research Program

The origin of my research program is etched in stone—Stone Building, that is, on the Florida State University campus. It was there in 1979, my first year as a graduate student, that my statistics professor, Harold Fletcher, announced that note taking was outlawed in his class. He believed that note taking hindered students' attention. Yet, he understood that students needed material to study, so he provided notes following each lesson. Most students were relieved to forgo note taking and thankful to receive notes. Not me. I was a voracious note taker who had twice been named Note Taker of the Year Runner-Up in college. Although Fletcher's dictum was troublesome and led me to become a clandestine scribe—scribbling feverishly on a lap-resting, pocket-sized notepad when Fletcher looked away—it also led to my first and long-held research topic—note taking.

Under Fletcher's tutelage, he was also my advisor, I conducted six note-taking studies before earning my Ph.D. in 1982. None of these were published while I was a student, though, making my pub-less, 1982 faculty hiring at Kansas State University a mystery only explainable by the common marathon running interest a selection committee member and I shared.

Once at K-State, I was off and running, publishing 11 note-taking articles in my first three years. The most influential of these were two review articles published in the same *Educational Psychologist* issue. One reviewed the note-taking literature from a depth of processing perspective, and the other recapped the advantages of instructors providing notes. Turns out Professor Fletcher knew what he was doing.

Beginning in 1984, my research world was shaken by a landmark article by William Rohwer published in *Educational Psychologist* titled "An Invitation to an Educational Psychology of Studying." It convincingly argued that educational psychologists must occasionally turn the research spotlight from teacher to student and understand how students learn on their own, what Rohwer called autonomous learning. This article seemed to legitimize my note-taking research and provide it a learner-centered home while also sparking an international autonomous learning research movement. This movement took hold in 1986 when William Rohwer and John Thomas held an invited autonomous learning summit at Far West Laboratory in San Francisco. I recall sitting starry-eyed around a large table with the pioneers of self-directed learning. In addition to Rohwer and Thomas, there was, if memory serves, Michael Pressley, Paul Pintrich, Barry Zimmerman, Martin Covington, John Biggs, Noel Entwistle, Barbara McCombs, and Merlin Wittrock, to name a few. From this summit, the Studying and Self-Directed Learning SIG was born, with John Thomas serving as the inaugural chair. I took the SIG program chair reigns in 1990 and assumed the SIG chair position in 1991 and 1992. For readers new to the present-day Studying and Self-Regulated Learning SIG, as Paul Harvey used to say, "Now you know the rest of the story."

My note-taking research has continued into the present and has investigated both instructor-directed and student-directed methods to improve note taking and achievement. Teacher-directed methods, for example, include: review questions, instructor notes, skeletal notes,

embedded headings, lecture repetition, advance organizers, mnemonics, and organizational cues. Student-directed methods, for example, include: copying and pasting notes, note study methods, note revision, and laptop versus longhand note taking.

My note-taking research took a turn in the late 1980s when Nelson DuBois, my educational psychology mentor stemming from my SUNY Oneonta college days, and I began to study graphic organizers as note-taking tools—particularly the matrix. My graphic organizer investigations also continue into the present and have addressed topics such as: concept learning, text learning, confusing word-pair learning, web-based learning, graphic organizers versus text and outlines, and study methods.

Beginning in 2009, my note-taking and graphic organizer research led to my developing the SOAR teaching and learning method. SOAR is an acronym for the method's four components: select, organize, associate, and regulate. Student success, I reasoned based on information-processing theory and on strategy research, requires that students be prompted or taught to (a) select important lesson information, often using note taking, (b) organize that information, often using graphic organizers, (c) associate that information to uncover meaningful relationships, and (d) regulate learning, often using self-monitoring. My research with student collaborators confirmed that SOAR methods were superior to students' preferred study methods for text-based learning, computer-based learning, learning from multiple sources, and composing synthesis essays. SOAR students also out-achieved those using SQ3R study methods. SOAR methods became the focus of a study skills text for students and a methods text for teachers.

My just described strategy-based research program—from note taking to graphic organizers to SOAR—is illustrated on the left-side of the Figure 1 graphic organizer. However, in the early-2000s, that research agenda had company. My research program took a new turn toward talent development, that of educational psychologists and that of expert performers in various talent domains, as shown on the right-side of Figure 1.

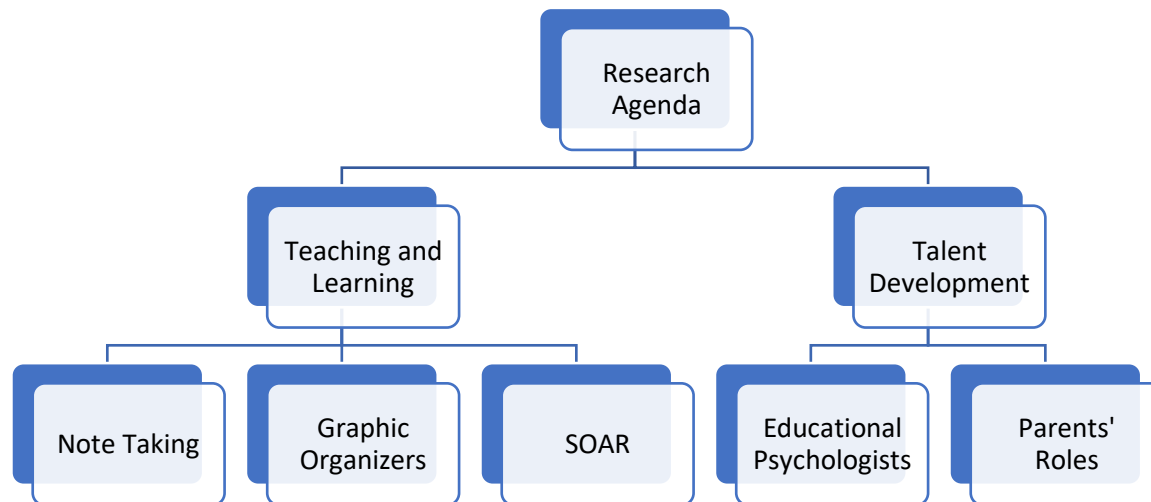
Being an educational psychologist, I was naturally curious about how top educational psychologists became so productive. My first study investigated the success stories of Michael Pressley, Richard Mayer, and Richard Anderson. That study was followed by two others that investigated productive scholars such as Barry Zimmerman, Dale Schunk, Patricia Alexander, Hans Gruber, and Alexander Renkl. Findings from these studies revealed several contributing talent factors such as influential mentors, a center of excellence, conducting pioneering science, collaboration—especially with students, and highly efficient research-management and time-management routines.

My research on expertise began in an unexpected place—my home. When my first child, Keaton, was born in 1987, I had no intention of introducing him to chess and developing his chess talent. I was not a chess player myself, and like most parents, I just wanted him to be healthy and happy. I never imagined that he would one day win national scholastic championships and earn the International Master title. And, I never imagined what a vital role I

would have to play to help nurture his chess talent. This personal experience awakened my data gathering instincts as I investigated the roles parents play in national- and world-class talent development—first in chess and then in many other domains such as Olympic speed skating, Olympic figure skating, baton twirling, music, writing, volleyball, and spelling, among others. This expertise research has culminated in a talent documentary found on my website (<https://cehs.unl.edu/kiewra/>) and in a newly published book titled, *Nurturing Children’s Talents: A Guide for Parents*.

I draw four conclusions from my research program. First, it is based on personal interest. As a graduate student denied note-taking privileges, I wanted to know the relative benefits of recording versus receiving lesson notes. As an educational psychologist, I wanted to know how some educational psychologists could be so productive. And, as parent, I wanted to know how to nurture my child’s talents. Second, my research is programmatic. Note-taking research led to investigating a special brand of notes—graphic organizers. Note-taking and graphic organizer research led to creating and investigating a soup-to-nuts teaching and study method called SOAR. Moreover, investigating academic learning was a natural lead in for investigating talent—the highest rung on the learning ladder. Third, my research agenda is useful in its potential impacts for students studying, teachers designing and delivering lessons, and parents nurturing talent. Finally, all of this work fits snugly beneath the self-regulated learning umbrella that William Rohwer and colleagues unfurled 35 years ago. From this work, a bit more is known about how students should learn autonomously and how teachers and parents can help.

Figure 1. Professor Kiewra’s Research Agenda



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