



Some Lessons Learned that Built Self-Efficacy

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I am pleased to contribute a chapter to this volume. Whether anything I say is helpful or meaningful – well, as the saying goes, "Let the voters decide!"

As a spoiler alert, I have had a most-satisfying 40-year academic career. Of course, in retrospect there are some things I might have done differently. But I believe that things have worked out well, and along the way I have met and interacted with many fascinating people. In this chapter I discuss my background, career progression, significant influences on my life, and lessons learned along the way.

Background

My background has some early indicators of an academic career. I was born and grew up in Chicago, where I received my K-12 education in Chicago Public Schools. I did well in high school and also participated in activities such as playing on the football team for four years. I was accepted at the University of Illinois at Urbana-Champaign. Despite some good academic credentials, I had no idea what to major in once I got to the university. I had three majors (chemistry, English, philosophy) before settling on psychology – a subject that I found fascinating in my freshman-year courses.

During my time at the University of Illinois I became interested in research and worked for two different child psychology professors on research projects. Working with professors showed me what faculty members do – teach, conduct research, write – and also developed my interest in working with children, which I later did in my research. I thought that the life of a faculty member could be highly gratifying and became motivated to attain that career goal.

After graduating from the University of Illinois I was commissioned as a second lieutenant in the U.S. Air Force and spent the next six years as an education and training officer (including four years stationed in Naples, Italy) where I supervised education programs and taught courses in writing and management. While in the Air Force I earned a master's degree in education from Boston University. This stimulated my desire to earn a doctorate, so

I left the Air Force to pursue a PhD. I was accepted into the Psychological Studies in Education program at Stanford University where I joined a talented group of faculty and students, including Phil Winne – one of the editors of this volume!

I was fortunate to hold a graduate assistantship for most of my time at Stanford, where I honed my research and teaching skills. I worked on a school-based project with Dr. Nate Gage where I did classroom observations, conducted literature reviews, and performed data analyses. I also taught an educational psychology course under his supervision. I served as a research assistant with Dr. Herb Clark, where I conducted laboratory experiments and other research tasks, which led to a co-authored journal article with him. I also was a research assistant with Dr. Albert Bandura; we conducted a school-based study on goal setting and this led to a co-authored journal publication. A key point I learned from these experiences is that doing good research takes a lot of time and energy!

My first faculty position was at the University of Houston, where I stayed for seven years before moving to the University of North Carolina at Chapel Hill. Although I had never planned to assume a career in administration, I next moved to Purdue University as head of the Department of Educational Studies and then to the University of North Carolina at Greensboro (UNCG) as Dean of the School of Education. I spent over 17 years in full-time administration, which I found rewarding in many ways, especially working with faculty on career development. But not all was positive, especially making difficult budgetary decisions and dealing with disgruntled faculty and students! I decided to return to where I began and joined the faculty full-time at UNCG where I remain today with the usual responsibilities of research, writing, teaching and service.

Contributions

My primary research focus is investigating the personal, social, and

instructional/contextual factors that affect learning, motivation, and self-regulation-within the framework of social cognitive theory. This focus began to develop while I was at Stanford. I took a course from Albert Bandura when he was doing his early research on *self-efficacy*, one's perceived capabilities for learning and performing actions at designated levels (Bandura, 1977).

I believed that self-efficacy might be an important variable in education settings, where we see students with similar ability levels learn and perform differently. I discussed this possibility with him after the course finished, and he expressed high interest in such an investigation. He became

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my dissertation advisor. In my dissertation, I explored self-efficacy development as children were learning mathematical skills and as influenced by modeling and attributional feedback (Schunk, 1981). My dissertation was the first application of self-efficacy to an educational context involving learning. I believe it is critical to pursue a dissertation topic that you feel is important and for which you have a passion.

In subsequent research I expanded this focus to other student populations and content areas and explored other instructional and contextual influences such as goals, social comparisons, self-verbalization, and self-evaluation. I am pleased that over the years interest in self-efficacy in education has continued to grow, especially internationally. Researchers continue to expand the self-efficacy research agenda, such as by exploring the process whereby self-efficacy changes as learning occurs and by examining self-efficacy in out-of-school settings (e.g., homes, communities).

There are several key contributions arising from this program of research. One is that self-efficacy is an important variable

in education. It affects student motivation, which in turn influences learning. Students who feel more efficacious about their learning capabilities are more likely to attend to instruction, expend effort, persist in the face of difficulty, and achieve at higher levels. I developed a model of academic motivation highlighting the central role of self-efficacy (Schunk, 1999).

Bandura (1977) hypothesized that individuals acquire information about their self-efficacy from performance accomplishments, vicarious experiences, forms of social persuasion, and physiological indexes. Another key point of my research program is that, no matter the self-efficacy source, what is critical for self-efficacy and motivation is that students believe they are making progress in learning or are capable of making progress. Learners' perceptions of their learning progress or learning capabilities can be affected by numerous social, instructional, and other contextual variables.

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Third, the effects of social, instructional, and contextual variables should be gauged not only on students' learning but also on their self-efficacy for learning. Some instructional variables that may improve learning may not have much effect on selfefficacy. For example, Bandura (1977) postulated that performance accomplishments are the most reliable source of self-efficacy information. Instructional conditions that provide much assistance to learners may help them learn but are unlikely to raise their self-efficacy much. Learners may simply attribute their enhanced performance to the assistance and doubt they can be successful on their own. In social cognitive theory, attributions are

hypothesized to be key influences on self-efficacy.

In subsequent research I expanded this model to include self-regulation, or learners' self-generated thoughts, behaviors, and affects that are systematically oriented toward their learning goals. This expansion fit nicely with my research focus, but it was through collaboration with Barry Zimmerman that I began to explore how self-efficacy and other motivational variables influenced various phases of self-regulation. Collaborations can be especially productive but it is essential to collaborate with persons with whom you work well. In my case the collaboration worked ideally even when we disagreed. We also became close personal friends.

Significant Influences

I have been fortunate to be at universities where research was valued. Beginning with my time at Stanford and continuing to the present day, the institutions where I have been not only encouraged research but also provided support to pursue it. This support included some financial incentives and provided me with time to do research and with people who assisted me with various aspects including budgets, data collection and analysis, and consultations. To be able to do quality research requires a supportive environment.

Beyond that, I have had the opportunity to work with many capable, talented, and motivated faculty and students. I learned so much as a student under the tutelage of many wonderful professors including Fred Fehr and Sid Bijou at the University of Illinois, Al Murphy and Steve Ellenwood at Boston University, and Albert Bandura, N. L. Gage, Herb Clark, Mark Lepper, and Denis Phillips at Stanford. While at Stanford I contacted Bernard Weiner and Carol Dweck with questions about my dissertation. I learned early on that if I was going to be successful then I needed successful mentors.

My career has been tremendously bolstered through solid, long-lasting collaborations with professional colleagues. Barry Zimmerman has been a tremendous mentor, colleague, and friend. In 1982 Barry sought me out at a national conference, and that meeting led to years of collaborative discussions and publications. He was most instrumental in getting me to focus more on self-regulated learning. I also developed strong research and writing collaborations with several others including Paul Pintrich, Frank Pajares, Maria DiBenedetto, Ellen Usher, Carol Mullen, and Jeff Greene. We had mutual respect for one another's ideas and helped one another develop professionally. We also split our workloads equitably, which is important as unbalanced workloads can create resentment.

Being in higher education has given me freedom and opportunity to explore research in ways that I felt was important. Key influences on my career have come from the many individuals with whom I worked and who exuded excitement for research. As Bandura (1997) postulated, a sense of self-efficacy likely will not endure if the environment is unresponsive. I have been fortunate to have worked in environments that were not only responsive but also encouraging.

Lessons Learned

One of my research specializations is learning. Happily, in my career I have learned a few things! One is to associate with the right people, or to put it colloquially, "hang out with the winners." These are people who serve as mentors and from whom you can learn. They are good models to attempt to emulate in your academic and personal life. The persons I have mentioned in this article were leading influences on my life. They also are people who encouraged me to continue to develop and who pointed out areas where I had grown and where I needed further development. The perception of progress is so important, and I never stop learning.

A second key lesson is to pursue work you enjoy and believe is important. I have spent countless hours engaged in research and writing. I love what I do so these activities are pleasurable. I would not want to be engaged in tasks that I did not enjoy or believe to be unimportant.

Sometimes I have had to make the case for importance. When I first began my work on the role of verbalization in motivation and learning there was little literature on the topic. I drew from the existing verbalization literature in developmental psychology and cognitive behavior modification. The developmental literature showed that verbalization could help to internalize regulatory influences on behavior. I constructed a theoretical framework showing that verbalization while learning also could help learners substantiate their progress, which can build self-efficacy and motivation. Then I tested this idea in a series of studies that lent support. This was a topic in which I was personally interested, which helped to sustain my enjoyment.

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Third, I have learned not to become too discouraged by setbacks. Instead, treat them as opportunities for learning and improving skills. Early on I felt a mixture of anger and anxiety when a manuscript was rejected for publication, a grant proposal not funded, or a conference proposal not accepted. It is fine to mourn for a little while but then it is time to get back to work. Take seriously the suggestions of the reviewers and revise the proposal accordingly. I have found that most (although not all) of the suggestions made by reviewers were well founded and presented opportunities for me to learn and improve my skills.

But this still requires some judgment. Not all reviewers' comments are sensible, perhaps because they have a particular bias about data analyses procedures or because my theoretical framework does not align with theirs. So, you have to decide whether a comment is worth addressing and if not, then why not. I also have learned to be prudent about time. Once I had a manuscript in a journal review process for 13 months, which I felt was excessive. I notified the editor about that, pulled the manuscript, and submitted it to another journal, where it was published shortly afterwards.

A fourth lesson learned is to always appreciate the efforts of others. In my career I have been helped so much by faculty members, students, teachers, other school personnel (e.g., administrators, counselors), children who participated in research projects, and their parents and guardians. I could not have carried out a research program without such assistance. I learned to convey my appreciation to such individuals and to show them how they made a difference.

Another lesson I have learned is to practice what I preach! One thing that has helped me a lot is to practice self-regulation. Various self-regulation strategies have helped me keep my head above water in the face of busy times. I teach a course in self-regulation to college freshmen and stress to them such activities as goal setting, strategic planning, self-monitoring of performance and progress, maintaining motivation, self-evaluation, and time management, become critical when there is much to be done but time is limited. Practicing simple self-

regulation skills has helped me build my self-efficacy for being successful and to ensure that I prioritize tasks and accomplish them in good time. I relay my experiences to my students, which they find helpful. They are gratified to hear that everyone has issues with time management! In whatever courses you teach it is good to get to know your students better. That way you can relate course topics to their unique situations.

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Good self-regulation has been essential for me to ensure that I build writing time as much as possible into my daily schedule. It is easy to get sidetracked on other tasks and crowd out writing time. So this takes priority for me. I decide when I can write on a particular day and then as best as possible plan the day around that. Writing time can vary from a few minutes to hours, although I find that about two hours is the best I can do and still think clearly.

Conclusion

I suppose that no two academic careers follow the same trajectory and thus what works for one may not for another. Rather than follow any suggestions I have made, I recommend you develop your own regimen early in your career and then adapt it as needed with time and changing circumstances. This has been exciting journey for me, and I wish the same for you!

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About Acquired Wisdom

This collection began with an invitation to one of the editors, Sigmund Tobias, from Norman Shapiro a former colleague at the City College of New York (CCNY). Shapiro invited retired CCNY faculty members to prepare manuscripts describing what they learned during their College careers that could be of value to new appointees and former colleagues. It seemed to us that a project describing the experiences of internationally known and distinguished researchers in Educational Psychology and Educational Research would be of benefit to many colleagues, especially younger ones entering those disciplines. We decided to include senior scholars in the fields of adult learning and training because, although often neglected by educational researchers, their work is quite relevant to our fields and graduate students could find productive and gainful positions in that area.

Junior faculty and grad students in Educational Psychology, Educational Research, and related disciplines, could learn much from the experiences of senior researchers. Doctoral students are exposed to courses or seminars about history of the discipline as well as the field's overarching purposes and its important contributors.

A second audience for this project include the practitioners and researchers in disciplines represented by the chapter authors. This audience could learn from the experiences of eminent researchers - how their experiences shaped their work, and what they see as their major contributions – and readers might relate their own work to that of the scholars. Authors were advised that they were free to organize their chapters as they saw fit, provided that their manuscripts contained these elements: 1) their perceived major contributions to the discipline, 2) major lessons learned during their careers, 3) their opinions about the personal and 4) situational factors (institutions and other affiliations, colleagues, advisors, and advisees) that stimulated their significant work.

We hope that the contributions of distinguished researchers receive the wide readership they deserve and serves as a resource to the future practitioners and researchers in these fields.

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