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Profiles of Productive Educational Psychologists

Melissa M. Patterson Hazley
University of Nebraska-Lincoln, mpatterson.hazley@gmail.com

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Profiles of Productive Educational Psychologists

By

Melissa Patterson Hazley

A THESIS

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PROFILES OF PRODUCTIVE EDUCATIONAL PSYCHOLOGISTS

Melissa Patterson Hazley, M.A.

University of Nebraska, 2013

Advisor: Ken Kiewra

The present study aims to answer the questions: Who are presently the most productive educational psychologists? How do they accomplish so much? And what advice might they give to young scholars? To identify the most productive educational psychologists, a survey was sent to Division 15 members (educational psychology) of the American Psychological Association. The top four educational psychologists were Patricia Alexander, Richard Mayer, Dale Schunk, and Barry Zimmerman. Using instrumental case study methodology, three broad themes were identified that allow these scholars to be so productive. These included professional influences, time management, research and writing techniques, and time management. The four scholars also provided this advice to new scholars: Focus on being the best scholar you can be, follow your own curiosity, collaborate with other scholars, and engage in goal setting regularly.

Table of Contents

Chapter 1 - Introduction

Many consider productivity evidence of true talent, and for decades scholars have been interested in talented people who amaze us with what they can do. This is because the production of new, important work increases our knowledge and leads us toward other worthwhile studies. As a result, productivity and talent have been studied in a wide range of domains to uncover secrets to success. For example, Benjamin Bloom (1985) studied talent in areas such as swimming, mathematics, and tennis, whereas Howard Gardner (1993) studied the lives of creators such as Picasso and Stravinsky. Domains such as music and art (Hayes, 1985), architecture (Dudek and Hall, 1991), chess (Charness et al. 1996), dancing, rock climbing, and carpentry (Czikszentmihalyi, 1997) have also been investigated.

In addition to artistic and athletic areas, productivity has also been studied in a variety of academic disciplines such as psychology (Mahoney, Buboltz, Calvert and Hoffmann, 2010), adult education (Rachal and Sargent, 1995), physical education (Crase, 1993), science education (Barrow, Settlage and Germann, 2008), graduate programs in education and business (Kivlighan, 2008; Kim and Karau, 2009), child abuse and domestic violence research (Gordon, Holmes and Maly, 1999), physical sciences (Bayer and Dutton, 1977), and social work (Corcoran amd Kirk, 1990; Hull and Johnson, 1994). Though productivity in education has been investigated (e.g. Berliner, 1986; Berliner, 1988), there are few productivity studies in educational psychology in general and fewer that explain how researchers are able to be highly productive.

Kiewra and Cresswell (2000) addressed this gap in the literature by interviewing three highly productive educational psychologists, Richard Anderson, Richard Mayer, and Michael Pressley, to ascertain how they are able to accomplish so much. They found the scholars to have several characteristics in common. Each had impressive lineage, studied at centers of excellence, engaged in activities outside academia, collaborated with students often, had a commitment to

effective and clear writing, and held the mantra: follow your bliss. Based on the findings, Kiewra and Creswell (2000) offered this advice to budding scholars in educational psychology: (1) Get solid training, (2) do pioneering science, (3) investigate a few things systematically, (4) build an apprenticeship program involving teams of graduate students, (5) work hard over a long period of time, and (6) write (and rewrite) with clarity.

The present study is a timely follow-up to the study conducted by Kiewra and Cresswell (2000). These questions were addressed: (1) Who are presently the most productive educational psychologists? (2) How do they accomplish so much? And, (3) What advice might they give to young scholars or scholars in training? To answer these questions, four highly productive educational psychologists were identified and interviewed about their work habits related to conducting research, time management, influences, mentorship, personal reflections, and advice. It was expected that this information would have implications for established and budding scholars in educational psychology and related domains.

This thesis is divided into four sections: (1) Literature review, (2) Study methods: nomination process, scoring, data collection, and data analysis, (3) Results: the nominees, professional influences, time management, research and writing techniques, advice for new scholars, and reflections on being nominated, and (4) Conclusions and areas for follow up.

Chapter II - Productive Scholars Literature Review

The productivity research in general and particularly in education is substantial. Though several areas have been studied, three relevant areas are discussed here: school psychology, counseling psychology, and educational psychology.

Most productivity studies are only quantitative and determine productivity by ranking scholars according to the number of times the scholar has been cited and by assigning a point

value relative to authorship position. In terms of school psychology, the top individual

contributors from 1996-2005 were Melissa Bray, Thomas Kratochwill and Thomas Kehle

(Roberts, Davis, Zanger, Gerrard-Morris and Robinson, 2006), Grapin, Kranzler and Daley (

2013), assessed the PsycINFO database and found that faculty published 5.8 refereed journal

articles between 2005 and 2009 and that Matthew Burns, George DuPaul and Frank Worrell

were the top contributors. As assessment of the institutional affiliation of the top journal

contributors (Webster, Hall and Bolen, 1993), revealed the University of Nebraska, Louisiana

State University, Texas A&M University, University of Texas, and Memphis State University

were the most productive. The most productive school psychology programs (Kranzler, Grapin

and Daley, 2011) from 2005-2009 were the University of Minnesota, Lehigh University and

Louisiana State University. In the counseling psychology literature, several quantitative studies

have also been conducted and a few will be mentioned here. According to journal analysis

research conducted by Howard (1983), the most productive institutions from 1976 to 1982 were

the University of Maryland, Ohio State University and the University of Western Ontario.

During the following ten-year period, 1983 to 1992, the University of Missouri, the University of

Maryland and Ohio State University were the most productive institutions according to a study

completed by Delgado and Howard (1990). According to Diegelman, Uffelman, Wagner and

Diegelman (2005), the top programs between 1993-2002 were the University of Missouri-

Columbia, University of Maryland-College Park and the University of Akron.

Whereas the studies mentioned previously analyzed journals or indexes, a different

approach to studying productivity was taken by Roland and Fontanesi-Seime (1996) and

Ramsey, Cavallaro, Kiselica and Zila (2002), both in the counseling psychology area. Roland

and Fontanesi-Seime (1996) surveyed 144 female counselor educators to assess the types of

publications written most, the typical journals they published in, and the publication rate among the group of participants. The authors found that scholars wrote articles for blind-refereed journals most, 8.81 was the average career publication rate in those journals, and they were most likely to publish in the *Journal of Counseling and Development*. Based on these findings, the authors suggested that institutional workshops be created and formal mentoring programs be instituted to help faculty be more productive. The authors also encouraged faculty to save time for research and writing activities, connect teaching to research, attend national conferences to network with other colleagues, and take advantage of seminars pertaining to publishing.

To investigate the extent that scholars were engaged in a range of scholarly activities Ramsey, Cavallaro, Kiselica and Zila (2002) surveyed 113 counselor educators. The researchers administered a scholarly activity survey that asked questions about each participant's publication record (how much they published and the type of studies they conducted), the number and types of conference presentations, and scholarly work pertaining to teaching. Ramsey et al. (2002) found that scholars at research and doctorate granting institutions were more productive than those at comprehensive universities and that faculty in tenure-track positions were more productive than faculty in non-tenure track appointments. Although male and female scholars engaged in similar scholarly activities, men produced more journal publications and women were more productive in terms of conference presentations. They also found that scholars were likely to engage in activities that led to tenure but remained committed to a wide range of activities such as service, grant writing, and book reviews.

The studies included in this literature review thus far reveal that most productivity studies in education are focused largely on quantifying publications or describing research activities, whereas the present study analyzed publication records as well as the characteristics of highly

productive scholars in educational psychology. Though productivity in educational domains has been investigated largely quantitatively, there are, however, at least three relevant studies that use a similar qualitative component. Veronikas and Shaughnessy (2005) interviewed educational psychologist Richard Mayer about his research agenda, the research trends in educational psychology, and the guidance he would give to doctoral students. Mayer stated that the "major ingredients in a successful researcher are intellectual curiosity, intellectual honesty, and expert knowledge." Mayer asserted that a scholar must have intense curiosity in order to find answers to research questions, have the integrity to be honest about research results, and develop the research and professional skills necessary to be a competent participant in the academic community.

A study conducted by Martinez, Floyd and Erichsen (2011) surveyed and interviewed highly productive school psychologists. Ranking lists of top scholars identified in three school psychology productivity studies (Davis, Zanger, Gerrard-Morris, Roberts, and Robinson, 2005; Little, 1997; Roberts, et al., 2006) were used to generate a pool of survey recipients. Fifty-one individuals answered open-ended survey questions about research and writing strategies, books and journals read most by the scholars, navigating the peer review process, and experiences during graduate education. The authors invited the top scholars among this group, determined by publication rate, to participate in semi-structured interviews. Based on the data, several themes contributing to productivity were identified: research and publication strategies such as remaining familiar with relevant scholarly literature, efficient management and protection of time, collaboration with peers and students, effective navigation of the peer review process, employment of efficient writing strategies, personal characteristics such as determination and hard work, and adequate preparation prior to entering the professorate. Similarly, Mayrath

(2008) built upon the study conducted by Hsieh et al., 2004 that ranked highly productive educational psychologists according to number of journal publications. Using this list as a survey recipient pool, Mayrath (2008) analyzed data from thirteen interviews and found four attributes of productive educational psychologists. They were collaboration, which included having relationships with mentors and mentoring others as well as capitalizing on opportunities to collaborate with colleagues. Scholars had passion and curiosity that led to deep interest in the topic area. They also developed research skills such as the ability to know the literature well and writing skills to effectively communicate it. And lastly, they were expert at managing time and multiple research projects..

Although these studies add important information to related productivity literature, the present study differs because the scholars were identified through a nomination process and addressed the knowledge gap in three ways. 1) By investigating who are currently the top educational psychologists, 2) By determining how they are able to accomplish so much and, 3) By asking direct questions regarding scholarly advice in an effort to assist new scholars.

Chapter III - Methods

This instrumental case study was completed in four stages: (1) nomination process, (2) scoring, (3) data collection, and (4) data analysis and interpretation. According to Creswell (2007), case study research involves the study of an issue explored through one or more cases within a bounded system (i.e., a setting, a context). Consistent with Creswell's description, this study investigated the issue of productivity within the bounded system of successful educational psychologists. This was accomplished by analyzing multiple sources of data including in-depth interview transcripts, examples of scholarly work, and the scholars' curriculum vitas. Both Yin (1989) and Creswell (2007) support the review of multiple data sources when conducting case

study research. Instrumental case study methodology (Stake, 1999) was chosen because it can provide detailed information about the characteristics of a productive scholar. In an instrumental case study, the researcher focuses on a pertinent issue, such as productivity, and then selects one bounded case, such as educational psychology, to illustrate the issue (Cresswell, 2007).

Nomination Process

An electronic letter was sent to the American Psychological Association (APA) Division 15 President asking for permission to survey the membership. Members of the division include educational psychologists from across the United States and abroad. APA Division 15 was selected because it is designated for educational psychology, and their mission is "to expand psychological knowledge and theory relevant to education" (American Psychological Association website, 2011). Permission was granted to survey the membership and the President disseminated an electronic recruitment letter. The letter included a description of the study and a request to follow an Internet link that led to the survey, which was administered by surveymonkey.com. The survey asked, "Who are the three most productive educational psychologists in the learning and cognition area in terms of their contribution, visibility, and influence?" There were three empty boxes numbered 1, 2, and 3, inside which nominators entered their choices. A ranking key, 1 = most, 2 = second most, 3 = third most, was presented between the question and the numbered boxes. The research invitation letters (president, members) are found in Appendix A and B, respectively. The survey is found in Appendix C.

Scoring

All survey responses were downloaded from the survey program and sorted by nominee. Each nominee was assigned points based on the ranking received: most, three points; second most, two points; and third most, one point. The total point value determined rank among the group. The

top four nominees according to survey results in alphabetical order were: Patricia Alexander, Richard Mayer, Dale Schunk, and Barry Zimmerman. In the table below, the top ten nominee's of the present study, in alphabetical order, are shown on the left side. For comparison of the samples, the top ten nominees' from the Kiewra & Cresswell (2000) study are shown on the right side of table.

Table 1

Present Study			2000 Study	
Name	Institution		Name	Institution
*Patricia Alexander	University of Maryland		*Richard Anderson	University of Illinois
Albert Bandura	Stanford University		David Berliner	Arizona State University
Carol Dweck	Stanford University		John Brandsford	Vanderbilt University
Arthur Graesser	University of Memphis		Ann Brown	Stanford University
Herbert Marsh	Oxford University		John Gardner	University of Southern California
*Richard Mayer	University of California, Santa Barbara		Joel Levin	University of Wisconsin
*Dale Schunk	University of North Carolina, Greensboro		*Richard Mayer	University of California, Santa Barbara
Robert Sternberg	Oklahoma State University		*Michael Pressley	University of Notre Dame
Phil Winne	Simon University of Fraser		Robert Slavin	John Hopkins University
*Barry Zimmerman	City University of New York		Robert Sternberg	Yale University

Note: * indicates top nominees interviewed

Examining both lists, the following observations were made. First, in both lists, there is no geographical bias. Each region of the United States is represented and two of the nominees from the present list are from countries outside of the United States. Second, eight of the present nominees were not listed in the top 10 previously. Richard Mayer and Robert Sternberg were nominated in both studies. Third, gender representation is similar in both lists. Only two female names appear on the present list, Patricia Alexander and Carol Dweck, while Ann Brown was the only woman on the list from the previous study. Female representation is addressed later in this

thesis. Fourth, two of the top three scholars last time did not make the top 10 this time: Richard Anderson and Michael Pressley. Pressley's absence is explained by his untimely death in 2006. Anderson retired from academia in 2010. Last, among the four top scholars this time, three of them did not appear in the list last time (with Mayer being the exception). Mayer was included again to investigate if his research methods have changed, especially due to what seems to be a high rate of increased productivity over the last 10 years.

Excluding gender representation, the present list seems to represent a new group of educational psychologists whom the nominators considered the most productive in terms of contribution, visibility, and influence in the field. There are at least two explanations for the differences across the studies. The divergences could be representative of change over time or because the present study surveyed the membership of APA Division 15 whereas the membership of AERA Division C (in the Midwestern Educational Research Association) was surveyed in the previous study. However, because both organizations are comprised of educational psychologists and others interested in learning and instruction, it is reasonable to assume that our samples were drawn from the same population and that differences represent actual changes in who are perceived as the most productive in the field.

Data Collection

The top four scholars (name them) were contacted via email and asked to participate in the study. All agreed to a phone interview except Barry Zimmerman who sent responses electronically due to a temporary illness. All nominees sent their full vita and informed consent via email prior to answering interview questions.

For each of the three phone interviews, an online calling service was employed and the conversation was recorded electronically. Each digital file was downloaded after the interview

was complete and played back on a computer for transcription. The interviews lasted approximately one and a half hours each and contained questions around six topics: (1) theoretical interests in an effort to reveal any programmatic patterns, (2) professional and personal influence to grasp how mentorship and educational experiences might have contributed to their success, (3) time management to determine how they accomplished so much in a relatively short period of time, (4) research and writing to ascertain more specific aspects of their scholarly work, (5) reflections on their nomination to reveal what they thought of their inclusion in this study, and (6) advice for new scholars. The complete questionnaire is located in Appendix D.

Data Analysis

The qualitative data obtained from the interviews provided a rich, detailed account of each scholar's work and work habits. This information was first analyzed using direct interpretation, which consists of analyzing individual transcripts (Creswell, 2007), to determine broad categories such as family life, educational preparation, and career lifestyle. When comparing the transcripts to one another (Yin, 1989), broad themes emerged such as time management, mentoring experiences, research and writing processes, and surprising aspects.

A computer program, called Dedoose, was then used to code the data for emergent themes. First, each transcript was read, color-coded, and labeled according to emergent themes. Next, the document was reexamined to identify broader themed categories. For example, the following excerpt is from Schunk's interview. It was coded *time management*: "If possible, I like to write and revise in the morning when I am the freshest. I always like to take on the toughest job first. Typically, my best time is about 9-11:30 in the morning. I can't do that every morning.

But if I have that opportunity that's when I really like to write and revise, and I save other tasks for later on. I just find that works best for me."

Next, patterns were sought across transcripts using a cross-case approach (Yin, 2003). These common categories were identified: professional influences, time management, and research and writing techniques. Below is a passage that helped identify an important, cross-case theme coded *early interest and influence*: "I have been fascinated by the topic of learning as long as I can remember. My father was a teacher in a small town in Wisconsin and he taught me strategies for learning various academic skills long before I encountered the topics in class. My father was a wonderful model and he conveyed to me the power of good examples. He also stressed that personal dedication and practice would pay dividends." This data coding process, consistent with validated direct interpretation, theme identification, and cross case analysis prompted the organization for this thesis (Merriam, 1998; Stake, 1995).

Chapter IV - Results

This section contains a description of the nominees including their contributions to the field, research agendas, professional influences, time management practices, and research and writing techniques. The scholars also provide advice to new scholars and reflections on being nominated.

The Nominees

Table 2 provides an overview of where the scholars attended graduate school, the institution where they presently work, how long they have been in the field, awards they have been granted, leadership positions, and other notable activities.

Table 2
The Top Four Nominees

	Patricia Alexander	Richard Mayer	Dale Schunk	Barry Zimmerman
Graduate Program	University of Maryland *1981	University of Michigan (Ann Arbor) *1973	Stanford University *1979	University of Arizona, Tucson *1969
Current Institution	University of Maryland	University of California, Santa Barbara	University of North Carolina-Greensboro	The City University of New York (Emeritus)
Years in the professorate	1981-Present	1973-Present	1979-Present	1970-2011
Editorships/ Boards	2/15	2/17	0/14	0/11
Awards	Scribner, Thorndike	Scribner, Thorndike	Early Contribution Award (APA, Division 15), Research Award (international Reading Association)	Scribner, Thorndike
Notable Activities	Teacher (10 years), department chair (3 years), APA Division 15 president	School Board (30 years), department chair (3 years), APA Division president	College Dean (9 years), department chair (8 years), Division 15 president	Division 15 President

(*Graduation year)

All of the scholars received degrees from and presently work at major universities. Alexander received her doctorate at the University of Maryland, where she is presently a member of the faculty, and was advised by Ruth Garner. She entered the field in 1981. Mayer is a faculty member at the University of California, Santa Barbara. He studied at the University of Michigan and was advised by Jim Greeno. Mayer entered the professorate in 1973. Schunk is a faculty member at the University of North Carolina, Greensboro. He obtained his doctorate from Stanford University and was advised by Albert Bandura. Schunk has worked as a faculty member since 1979. Zimmerman is Professor Emeritus at the City University of New York. He studied at the University of Arizona and was advised by John Bergan. He began his career in educational psychology in 1970.

Analyzing this table leads to several noteworthy observations. First, this group of scholars has spent 30 to 40 years in the field, consistent with the Hayes Rule (1989), which states that it takes at least 10 years to develop expertise in any one domain. It seems timely and plausible that they would be recognized as among the best in educational psychology having had ample time to practice and gain research expertise. Second, each professor has been recognized

for scholarly contributions to the field. Alexander, Mayer and Zimmerman have each received the E. L. Thorndike Award for Career Achievement from the American Psychological Association (APA) and the Sylvia Scribner Research Award from the American Educational Research Association. Schunk, meanwhile, has received the Early Contribution Award from APA and the Research Award from the International Reading Association. These honors illustrate the outstanding level of quality work that the scholars have engaged in. The last row of Table 2 presents other notable activities the scholars have participated in. Alexander spent 10 years as a school teacher, while Mayer served on the local school board for 30 years. Schunk spent the most time as an administrator, serving as a college dean for 9 years and department chair for 8 years. Alexander and Mayer both served as department chair for 3 years. All four scholars served as APA Division 15 president.

Contributions to the Field

Tables 3 and 4 quantify scholars' publication records from the beginning of their careers through 2011and confirm that this group of scholars is indeed productive. Table 3 includes each scholar's publication record in five-year increments and Table 4 includes each scholar's overall publication record. As illustrated in Table 3, there are almost no gaps in productivity. The scholars' outputs have been consistent throughout their long careers. Specifically, Schunk and Alexander have published steadily over 30 years, the smallest time frame, whereas Zimmerman has published over 45 years, the longest time frame. Schunk's shorter career, in addition to the time he has spent as an administrator, explains his lower publication record relative to the other scholars. Alexander and Mayer have the highest publication records among the group. Moreover, their publication rates have increased in recent years. However, Mayer's publication record is considerably higher than that of the other top scholars, and it appears to be increasing steadily.

His 10-year productivity rate improved from 95 publications between 1992 and 2001 to 150 publications between 2002 and 2011, a 63 % increase. His ability to publish at such an accelerated rate is discussed later.

Further evidence that these four scholars are indeed high achieving is found in three productivity studies. These studies ranked the top 20 educational psychologists in terms of published articles in selected journals during designated time periods. Between 1991 and 1996 (Smith et al. 1998), Mayer was ranked 2nd, Alexander 8th, and Schunk 17th. Between 1997 and 2001 (Smith et al. 2003), Mayer was 1st, Alexander 9th, Zimmerman 10th, and Schunk 12th. And, between 2003 and 2008 (Jones et al. 2010), Mayer was 1st and Alexander 2nd. Mayer and Alexander's high rankings make them obvious candidates for the present study; Zimmerman and Schunk's relatively lower rankings raise the question of why they were nominated over other scholars with higher publication rates. The nomination parameters probably contribute to this. Respondents were asked to nominate "the most productive educational psychologists in the learning and cognition area in terms of their contribution, visibility, and influence." Our invitation excludes those who do not focus on learning and cognition and includes those who have earned high visibility or influence possibly through holding leadership positions, publishing articles outside typical educational psychology journals, or through the publication of books allowing them to reach wider audiences. Relative to books, Table 4 shows the ratio of books to other publications. Overall, the nominees published fewer books than articles. The ratio ranges from 0.05 for Alexander to 0.08 for Zimmerman and Mayer, while it is 0.15 for Schunk. Schunk writing a higher percentage of books than the others might also help explain his relatively lower publication rate and his inclusion in this study.

Table 3

Total Published Work in 5 Year Increments

	Alexander	Mayer	Schunk	Zimmerman
2007-2011	35	73	17	26
2002-2006	36	77	20	30
1997-2001	39	52	18	30
1992-1996	22	43	19	20
1987-1991	24	36	19	12
1982-1986	23	31	25	14
1977-1981	(1980) 2	34	(1980) 5	17
1972-1976	0	(1972) 10	0	24
1967-1971	0	0	0	(1970) 6
Total	181	356	123	179

*The year of each scholar's first publication is in parenthesis.

Table 4

Total Career Published Work

	Alexander	Mayer	Schunk	Zimmerman
Books	8	27	16	14
Articles	173	329	107	165
Total	181	356	123	179

Overall Research Agenda

The scholars have programmatic research agendas that enabled them to be productive.

Table 5 provides a brief overview of each scholar's research agenda including signature

contribution to the literature, early research interests, and present interests. Table 5 is discussed

in detail below

Table 5

Scholarship Trends

	Patricia Alexander	Richard Mayer	Dale Schunk	Barry Zimmerman
Signature Contribution	Model of Domain Learning (MDL)	Select, Organize, Integrate Model (SOI)	Application of self - efficacy to education and self - regulation	Cyclical Phase Model of Self-Regulation
Early Interest	Knowledge development, strategic processing and motivation. Combined these ideas and created the MDL	Difference between meaningful and rote learning. Interested in problem solving, prior knowledge, note taking, graphic organizers	Mechanisms that promote self-efficacy in students	Studied children's and youth's acquisition of adults' concepts, standards, and competencies from social modeling and emulative experiences at home and in school
Present Interest	Relational reasoning strategies	Cognitive theory of multimedia learning and educational games	The retention of college students	Development and use of microanalytic research techniques

Each scholar began studying established research areas that provided a foundation for new research endeavors resulting in a signature contribution to the field. For example, Mayer began his career investigating the difference between meaningful and rote learning, and this line of research led to the development of the Select, Organize, and Integrate (SOI) Model (Mayer, 1982; Mayer, 1996; Tajika, Taniguchi, Yamamoto, and Mayer, l988). Mayer began studying meaningful learning in printed text and later shifted his emphasis to studying meaningful learning in multimedia settings, including educational games (Mayer and Moreno, 1998; Moreno and Mayer, 1998; Mayer, 2005; Mayer, 2006). Based on this research progression, Mayer developed a cognitive theory of multimedia learning (Mayer, 2001; Mayer and Moreno, 2003; Mayer, 2003; Mayer, 2005; Mayer, 2009; Mayer 2011). Mayer commented, "My interest in multimedia was a natural extension of the earlier work I had done on learning from paper based text. There I was looking at the effects of putting in advance organizers, which happened to be illustrations actually. Then I became interested in adding illustrations to texts. It's not that far of a step to look at computer-based lessons, and from there it's not that far of a step to look at simulation and games. So the things I am doing now are an extension of the work I have done earlier."

Patricia Alexander said developing the Model of Domain Learning (MDL) was her most important contribution to the field of educational psychology (Alexander 2004; Alexander and Buehl 2009; Alexander, Winters, Dinsmore, and Parkinson, 2011). Early in her career, Alexander was interested in knowledge development, strategic processing, and motivational constructs, and the MDL was a culmination of those ideas (Alexander, 1997; Alexander and Murphy, 1998; Alexander and Murphy, 2002). Presently, Alexander and her team are using the principles of the MDL to investigate why some students are not invested in knowledge building

(Maggioni, Riconscente, and Alexander, 2006; Alexander, Winters, Loughlin, and Grossnickle, 2012). This new line of research has led Alexander and her team to develop what they call "relational reasoning strategies." She explained, "What kind of strategies do people employ that facilitate their perceptiveness, and how does that affect what they can notice in a given immediate environment or remember over time? So again, we are focusing on strategic processing again, but its strategic processing in terms of pattern recognition and knowledge building."

Schunk's early work on the application of self-efficacy to education and self-regulation (Schunk, 1980) was his most important contribution to the field and continues to be a large part of his research agenda (Schunk, 1985; Schunk, 1994; Schunk, 2000; Schunk and Pajeres, 2004; Schunk, 2008). Self-efficacy is one's belief in one's ability to meet a certain goal or to be successful on a given task, whereas self-regulation the self-monitoring actions used to reach a specific goal. Schunk has explored self-efficacy and self-regulation in several contexts such as computer skill acquisition (Schunk and Ertmer, 1999), remedial reading services (Schunk and Rice, 1993), task strategies and skill development (Schunk and Gunn, 1986), and writing (Schunk, 2003). Schunk asserted, "My dissertation was really the first project that applied self-efficacy theory directly to education in the sense of teaching and learning. Subsequent to that, there has been a lot of investigation on that theory, including my own work. So the idea really caught on when people saw that it was a very relevant idea."

Recently, Schunk has applied self-regulation and self-efficacy to the problem of college retention. Schunk is exploring what helps students become successful and graduate. To this end, Schunk was awarded grant funds in 2004 to implement a program for early recruitment and retention of students who had not declared an academic major. In recent years, Schunk has

taught a freshman year seminar, and this experience has contributed to his knowledge of and interest in student retention. Like other scholars in this study, Schunk's current line of research is similar to his early interests. He pointedly explained, "A lot of the ideas I have explored in other studies were very appropriate to college freshman. Motivation, self- regulation, ideas about setting goals, assessing progress, developing good study strategy skills, and time management are important to student retention. These are the things that really make students successful in college and help them to graduate."

Zimmerman's most important contribution is the cyclical phase model of self-regulation (Kitsantas and Zimmerman, 1998; Zimmerman, 1989; Zimmerman, 2000; Zimmerman and Kitsantas, 1997). According to Zimmerman:

"This formulation involved three sequential phases: forethought, performance, and self-reflection. The forethought phase refers to learning processes and sources of motivation that precede efforts to learn and influence students' preparation and willingness to self-regulate their learning, such as task analysis and self-efficacy. The performance phase involves processes that occur during learning and affect concentration and performance, such as strategy use and metacognitive monitoring. The self-reflection phase involves processes that follow learning efforts but influence learners' reactions to that experience, such as their self-evaluative standards for learning and their feelings of satisfaction. These self-reflections, in turn, influence students' forethought regarding subsequent learning efforts, thus completing the self-regulatory cycle."

Recently, Zimmerman developed and used of microanalytic research techniques for assessing self-regulated learning by experts and for the training of novices (Kitsantas, Zimmerman, 2002; Zimmerman, 2006; Cleary & Zimmerman, 2001; Ramdass &

Zimmerman, 2008). Again, this research agenda demonstrates that early interests provided a foundation for later scholarly work.

Professional Influences

All of the scholars credited other people and places for their success. In the following sections, the influences of early environment, parental impact, education, and mentorship are discussed.

Early Environment and Parental Impact

Each scholar's career philosophy and approach to scholarship were impacted by early life experiences. Alexander, Mayer and Zimmerman spoke specifically about childhood and family. Alexander described her life as a first generation college student who grew up in a hardworking, blue-collar family. She attributes her willingness to work hard as an educational psychologist to these characteristics. She said, "When you combine the fact that you absolutely relish hard work and you have a passion for something, the level of work you can achieve is far greater."

Mayer described the influence his family had on his career. His father was an industrial psychologist, and this career gave Mayer early exposure to the field of psychology, including the scoring of psychological tests. Mayer joked that he can score some psychological tests by memory. Mayer's family also exposed him to civic responsibility. Mayer said, "I was brought up in Cincinnati, Ohio in a Jewish home. There was a lot of emphasis on social justice, ethical behavior, the value of working hard, and love of learning. So I think all those things influenced me. Having a set of core values is a good place to start because an interest in social justice is reflected in trying to address practical problems in education."

Zimmerman discussed the influence of his father and the advice he received early in life. He said, "I've been fascinated by the topic of learning as long as I can remember. My father was

a teacher in a small town in Wisconsin, and he taught me strategies for learning various academic skills long before I encountered the topics in class. My father was a wonderful model, and he conveyed to me the power of good examples. He also stressed that personal dedication and practice would pay dividends."

Schunk commented on a pivotal moment early in his college career. While an undergraduate student at the University of Illinois, he was exposed to course work in educational psychology. This piqued his interest a great deal. Schunk explained, "I was a psychology major and as part of that degree I took one course in educational psychology. And I really liked it. I was very much interested in it, particularly the idea about how people learn and the impact of motivation. As a result of that, I just decided that I would like to pursue that further."

Education and Mentorship.

Each scholar commented often on education and mentorship. They had strong feelings about the teachers who trained them and the people who served as professional mentors. Conversely, each scholar served as a mentor as well. In addition to mentorship, each scholar was educated at a center of excellence. According to Gladwell (2008), a center of excellence is a place where people gravitate to in order to become expert in a particular field. The environment is ideal for training, collaboration, and success because of access to expert performers in that field. A familiar center of excellence described by Vice and Malseed (2008) is Silicon Valley. It is a hotbed for technology startups and serves as an incubator for mega-successful companies such as Google, Intel, Adobe, and Apple Computers, to name just a few. The universities that the scholars attended, Stanford, Arizona, Michigan, and Maryland, have programs ranked in the top 20 (U.S. News & World Report, 2011). It is reasonable to assume that such institutions attract

both scholars and students with immense potential, meeting the criteria for a center of excellence.

Because these universities can attract students with great potential, it is no surprise that the scholars have had access to good faculty who served as mentors. Zimmerman, for example, described influential mentors John Bergen at the University of Arizona and Albert Bandura from Stanford University. Zimmerman stated, "John was an ideal scholar, a thoughtful man who impressed me with his awareness of the latest research literature and the rigor of his scientific analysis. He showed me how to develop psychometric scales, to apply statistics, and to build conceptual models. I am especially indebted to Al Bandura whose influence on me was profound. He invited me and my colleagues to contribute to books that he edited, and he has been very supportive throughout my career."

Each of the four scholars remarked that professors were important to their development. Mayer said, "I was really fortunate to work with Jim Greeno at the University of Michigan. That was a life transforming experience. Without that, I'm sure my career would be completely different. I owe a lot to Jim and to the education I got at Michigan." Similarly, Alexander commented about the impact her mentor had on her career. She asserted, "My goal in going to graduate school was to become a better teacher. Ruth Garner, here at the University of Maryland where I got my PhD, set my life on a trajectory that I still pursue." And, Schunk explained, "I've had some outstanding mentoring dating back to when I was an undergraduate at the University of Illinois. Psychology professors, especially Fred Fairs, were very helpful. At the master's level at Boston University, Al Murphy was a wonderful mentor. I did my doctoral work at Stanford and was very fortunate to work with Al Bandura, Nate Gage, and Herb Clark. I feel very fortunate to work with very outstanding people during my life."

Obviously mentorship has served these scholars well and perhaps that experience is what drives the scholars to serve as mentors to their students. Each scholar discussed the time they commit to working with students and the manner in which they spend that time. Mayer, for example, explained, "We spend a lot of time going through drafts. I would say that any article that we submit to a journal has gone through at least half a dozen drafts; probably more than that especially if more than one student is involved. I think it's important for students to learn how to write an effective research paper." To accomplish this, Mayer said, "I meet regularly with each student. I try to have a meeting once a week for an hour with each student individually. We also have a research group meeting on Mondays at noon for all my students and also for students of a few other faculty members with related interests. One of the students presents his or her research ideas and we try to provide constructive criticism and feedback. I also try to make sure that students are in the lab and working from the beginning." The time commitment is notable for Alexander as well, who said, "I am meeting with students all the time and they meet on a regular basis to talk about their individual research and where they are in their projects."

It is reasonable to assume that students benefit from training extensively with the scholars, but this time commitment has benefits for the professor as well. Alexander explained, "I have grown because of my exposure to my former and my current students. Right now I have twelve full time doctoral students in my research laboratory. I also have to stay abreast of the literature and research trends because I'm not asking them to study my model even though they come to work with me because they are interested in the work that I do." In this way, Alexander is constantly learning a wide range of new information because students continue to bring different research ideas to her.

Schunk described his training style, which closely aligns with his research interests. He said the following:

"I try to apply self-regulation principles because the ultimate goal is for students to be self-regulating in their careers after graduate school. Thus, we meet and set goals and sub-goals with timelines, establishing when they'll turn in things they are working on such as a proposal, data analyses, sections of a dissertation, and so forth. I provide constructive feedback to help improve their skills and build their self-efficacy for continued progress. I model skills as appropriate to enhance their learning and gradually withdraw my guidance as they become more skillful. I feel that this approach helps to build their learning, self-regulation, and motivation."

Zimmerman's training style is similar to Schunk's in that it includes scaffolding, supporting students during the learning process, and providing consistent feedback and assistance. Zimmerman explained:

"I prompt them to think about their current interests and prior training when selecting a research area. Then I model how a social cognitive researcher would plan a study of this topic and help the student to write a proposal for that study. I meet regularly with the student to plan and carry out the statistical analyses. I plan with them how to discuss the results and how the introduction should be refined to introduce the study. I edit the final copy to prepare it for publication, which we jointly co-author. I also model how to respond to the reviews, make adjustments, and plan rebuttals when necessary. By the end of this experience, the student is prepared to undertake a dissertation topic. During the dissertation phase, my role changes: My modeling is diminished and my focus is primarily on feedback. My feedback from students has been consistently favorable regarding the effectiveness of this training."

The investment the scholars make in student development is substantial, and it results in productivity for everyone. For example, Alexander spends a great deal of time with students but contends the benefits are reciprocal. She asserted, "I would not be where I am without my students, past and current." This statement is illustrated by several student collaborations (Chiu and Alexander, 2000; Alexander and Buehl, 2009; Alexander, Dinsmore, Fox, Grossnickle, Loughlin, Magonni, Parkinson and Winters, 2011; Alenxander and Riconscente, 2005) that have contributed to her publication rate. The scholars in this study seem to have the ability to engage in time consuming student training while remaining highly productive.

Another example of the reciprocal nature of mentorship is the recognition of outstanding work. Most of the scholar's have had students that have been recognized in some capacity. For example, Zimmerman's student won the Outstanding Dissertation Recognition Award by

Division 15 of the American Psychological Association; another student won the New Researchers Award by the American Dietetic Association for dissertation work; and another was awarded the Jeanne S. Chall Research Fellowship at the International Reading Association for dissertation work. Alexander's student received the Richard E. Snow Award for Distinguished Early Career Contributions to Educational and another was awarded the APA, Division 15, Dissertation of the Year Award. Mayer's student was awarded a National Science Foundation Graduate Fellowship and another student of his received an Outstanding Teaching and Mentorship Award.

Time Management

Each scholar has a full workday comprised of teaching, reading, writing research reports, and attending meetings. For maximum productivity, time management is crucial, and most of the scholars have found ways to reserve time specifically for research and writing tasks. Time is often parsed, according to the scholar's personality and preferences, resulting in a structured routine.

Mayer, Zimmerman, and Schunk each have similar work routines. Each prefers to reserve mornings for research and writing. They explain that their mind is the freshest during this time of day. With the exception of Mayer, they also prefer to complete work at home if possible. Meetings and teaching occur in the afternoon and most of the scholars teach few classes, leaving more time for scholarly activities. Although all of the scholars spend some time reading and writing on evenings and weekends, Alexander prefers the most flexible schedule. She prefers to fit writing in at her leisure. Alexander quipped, "I can write on the fly. It works just fine for me." She has a heavier teaching load than the others and teaches both graduate and undergraduate

classes. She also seems to have a longer workday. She said, "I get up about 6:00am and I'm normally never in bed before1:00am. Never."

Even though the scholars work hard, most of them find time for leisure activities and winding down. Physical activities were among the favorites mentioned. Schunk enjoys jogging, Zimmerman enjoys tennis and skiing, and Mayer enjoys mountain biking. Zimmerman and Schunk also spoke about their enjoyment for attending movies, Broadway shows, and musical events. Alexander's hobbies, on the other hand, resemble work more than play. At the advice of others, she tried crocheting and painting. Alexander crocheted two Afghans in a week and created fifty paintings in a month.

Research and Writing Techniques

As discussed in the time management section, a large portion of each scholar's day is spent conducting and writing research. Each of the professors described unique research and writing styles and other specific practices that increased productivity. This section explains those processes in more detail.

At the beginning stages of a research project, Schunk conducts an extensive review of the literature. Schunk explained, "I gather research articles and other necessary materials that I'm going to need and do the background reading." After the review process is complete, Schunk conducts the research study. Zimmerman however, prefers templates when beginning a research project. He said, "I frequently use templates for planning and describing research and I have found them to be extremely helpful. For example, I wanted to broaden readers' understanding of the underlying dimensions of academic self-regulation, I created a table that involved a series of research questions, psychological dimensions underlying these questions, self-regulation attributes associated with each dimension, and self-regulatory processes designed to influence

each attribute." Mayer's strategy for conducting research is to use existing materials. This lessens what Mayer described as the pain associated with writing multiple drafts and is one example of how he increases his productivity. Regarding methodology, Mayer said, "Most of my research questions have to do with instructional effectiveness, so an experimental study is necessary." Mayer also tries to keep research studies confined to one or two questions as to not bombard the reader with variables and a complicated design.

Both Zimmerman and Schunk engage in detailed planning processes as they prepare to write research. Schunk explained, "The first thing I do is write an outline. I write it with some level of detail in it. And then I will revise that outline until I am satisfied with it. It will probably change once I start writing but I just want something that will serve as a framework for me to follow." Schunk said he writes somewhat urgently, saving revisions for later. Once the manuscript is written, he prints it and begins the revision process by hand, which may continue for two to four drafts. But for Zimmerman, revision seems to be intertwined in the writing process. He explained, "I have a series of questions that I pose for each of the four main sections of a research report. For example, is the title compelling? Does the abstract give a succinct overview of the sample, variables, research question, and the meaning of the results?

Both Mayer and Alexander stressed clarity, and they both write in a way that prompts the reader's prior knowledge. Mayer explained, "I try to at least start with a paragraph that describes the purpose of the study, and I include a concrete example. Then I usually start with the main data tables that I want to show, any figures that lay out what the methodology was so people have a clear idea of what the task was." Influential in Mayer's emphasis on clarity was an important but humorous experience involving a research report he submitted to his advisor, Jim Greeno. After reviewing the report, Greeno responded, "I don't understand what you are saying."

Mayer revised the paper and resubmitted it. Greeno responded, "Now that it is written clearly, I don't think it is a very good idea." Mayer explained, "I didn't understand when I was a student how important writing is. I thought you just do good work. But you actually have to explain it clearly to others."

Regarding sections of the manuscript, Mayer begins with the methods section first because it is the easiest part to write, and completing it increases morale, whereas Alexander prefers to start with the introduction because it gives her the big picture. The big picture seems to be a part of Alexander's research writing goals overall. She said, "If you are going to engage in the high level of reasoning and thinking required to complete a research study, you should always think about the literature review as publication number one." And for Alexander, the literature review is usually accompanied by the creation of measures to operationalize the research ideas. Subsequent studies are then conducted to test the measures' validity and those findings are written for publication as well. It is evident that a research project for Alexander's team leads to the possibility of multiple publishable documents. Although Alexander is hard at work, she is also sure to have fun and describes the finished written product as dramatic and elaborate, similar to the writing style of Earnest Hemingway.

Advice for New Scholars

Each scholar offered advice for new scholars in educational psychology based on over twenty-five years of experiences as successful researchers. This section presents that sage advice.

When asked about the keys to success in the field of educational psychology, Alexander argued against trying to be a superstar. Instead she suggested, "The first thing you aim to be is the best scholar *you* can be. Being prolific should never be the goal. But if you aim at being the best scholar you can be, you may become prolific as a result. I don't think I ever aimed to be the

most productive scholar I can be. Though I never aimed to be prolific, it happened because so much of being the scholar I wanted to be led to productivity. So in some ways, it's detrimental to want to be prolific. This is because it leads you on a path of producing without meaning. The numbers take precedence over the influence that those numbers could have. Sometimes it takes me twice the time to write a manuscript with students than it takes when I work alone, but the payoff is far greater. So I don't think that anyone should aspire to being prolific. I think one should aspire to true scholarship and whether that leads to 500 publications or 50 publications, it really doesn't matter provided that each of the publications represent your best thinking, that they are influential, and that they have an impact on someone else."

Mayer recommends that young scholars stay focused on what they are interested in despite the sweeping demands of graduate education. He said, "Sometimes you find yourself in a situation that's not ideal. You might be working in a lab where you don't have as much freedom to pursue what you want to pursue. You have to figure out a way to incorporate your interests. I think if you're really persistent, you can probably accomplish what you want to." Mayer also emphasized the importance of research methodology and writing. He recommends that new scholars take advantage of all opportunities to develop skills in this area. Mayer asserted that the starting point should be clear, meaningful research questions that can be studied and communicated to peers in a concise manner. Mayer further explained, "Get started on a research study; it's important to start with good research questions. Have a research question that is personally interesting to you, that also has educational and theoretical relevance, and is feasible. Then focus on disseminating your work in a way that other people will understand."

Zimmerman's advice focused on creating a network of collaborators that can contribute positively to one's career goals and research productivity. He said, "Associate with other prolific

scholars in order to increase your production rate. More specifically, locate a burning topic, locate other researchers who are doing research on the topic or related topics, and set up a symposium at a professional conference where this group can meet to discuss common issues and points of agreement and contention. Determine whether these differences can be resolved empirically in future conferences and then organize an edited book to summarize research from the various perspectives on the topic." According to Zimmerman, working with a group of scholars increases productivity and harnesses the generation of multiple ideas.

Setting goals and monitoring progress frequently are two self-regulation strategies that Schunk suggested. He recommended revising goals as needed to stay focused and productive. Also, Schunk stated that it is important to seek mentors and colleagues. This network of people, according to Schunk, contributes to one's growth as a scholar and provides valuable feedback and advice as a career begins. He also recommends asking a lot of questions "because that is how we learn." Because Schunk has experienced success using self-regulation tools, he believes strongly that this advice will benefit other scholars.

Reflections on Being Nominated

The scholars were asked to reflect on their nomination in an effort to explain what might have occurred in the last ten years leading to their nomination for this study. Alexander and Schunk spoke about time. Schunk remarked, "You publish more, it gets more visibility. More people are aware of some of the work I have done. I think earlier in your career you are building a research base, you are developing an agenda and people are aware of some of the work you have done. At that point you probably haven't had an opportunity to pull it all together and develop more of a conceptual base for what you are doing. That's something in the last ten years that I have been able to do more of. So I think part of it is a function of time and publication and

a certain amount of visibility at conferences. Also, getting in different kinds of journals and different kinds of publications allow you to reach a broader spectrum so more people have at least heard of you."

Alexander said, "I just think I was in it longer, a matter of ripening. I don't know where I would have been on the list last time but I think I have leadership roles now. I think there are people who may be less prolific, meaning not producing huge numbers but highly influential. I think my leadership roles and my activities in mentoring and editing a journal for over a decade have made me more visible than I was ten years ago. But I don't think its happenstance that the people whose names came up this time are senior in their careers. People like Dale and Barry and Rich, they've been in the field ten years longer than I have, if not more. Part of it is longevity. Part of what gets you to the stage is not that you have a burst of energy but that you sustain it."

Alexander was also the only female in the top four scholars nominated and provided interesting remarks about that. She said, "When I came through the field it would be very rare to see a woman, and not just in educational psychology, because I think there's a choice to be made between devoting time to building a family as much as to building a career. Many women understand the need to give up on certain time constraints in order to raise a family. As much as men can be partners in our lives, they can't give birth. They can't breastfeed for us." But Alexander is optimistic about women's presence in the field increasing. She noted that women in her lab have chosen increasingly to have children and continue doctoral studies, so there is a possibly that the necessity to choose family over career is subsiding.

Consistent with Alexander's remarks about the underrepresentation of females in the field of educational psychology overall, Robinson et al. (1998) found that in 1976 (around the time the four scholars identified in this study were beginning their careers), there were just 0.43

female authors per published article compared to 1.38 male authors. Moreover, women held just 13 % of editorial board positions in 1976 versus 87 % for men. Fortunately, women's involvement in publishing and leadership positions in educational psychology has been on the rise and has basically equaled that for men. Fong et al. (2009) found in 2008 that there were 1.20 male authors per published article and 1.39 female authors per published article. That same year, women held 47 % of editorial board positions and men held 53 %. It seems that women are publishing more often and holding more leadership positions. As a result of that growth, women's appearance on productivity lists and inclusion in studies similar to the present one might increase.

When asked about the last ten years, Mayer and Zimmerman could not point out anything considerably different than the techniques used in the past. Zimmerman commented that it was difficult to assess what could have changed over the last ten years. He said, "I will give my best guesstimate. Although my research on self-regulation was well established by 2001, the implications of this research became increasingly apparent during the last ten years in diverse areas of functioning such as sports, health, music, motivation, metacognition, engagement, help seeking, writing, and academics in general. This increase in scope of research and application attracted the attention of a broader audience to my work during the last decade."

Mayer said, "When you are an academic, you are always thinking about research questions and you are always reading and following up on things so I really haven't noticed a change in the last ten years in regards to how I go about doing things." But because his growth continues to increase, an explanation is warranted. Therefore, an informal examination of his research publications was made to investigate the number of sole authorships and the types of publications he has produced in the past ten years. An examination of publication rate in the

Journal of Educational Psychology (*JEP*) was made because there is a possibility the publication

rate increased due to journal type. *JEP* was chosen because it is considered the top empirical

journal in educational psychology based on impact factor (Nolen, 2009). Perhaps shifts in these

areas are responsible for the continued rise in publication rate. Illustrated in Table 6, there was

no major difference in the amount of collaboration (sole authorship or multiple authors) in the

recent ten years as compared with the preceding ten years, and there was a slight decline in

submission to *JEP* from 22 to 12%. This decrease likely represents a shift in research topic,

rather than quality. Explained in the "overall research agenda" section earlier, Mayer's most

recent work has focused on computer learning and was published in journals with that focus.

Therefore, this informal investigation does not support the idea that the continued publication

increase was a result of shifts in authorship or publication rigor. A more plausible explanation

might lie in Mayer's ability to maximize existing research materials and his vast research

knowledge base due to the interrelatedness of his research agenda.

Table 6
Mayer Collaboration, Last Ten Years

	Mayer
1997-2011	187
Solo	89
Collaborative	98
First Author	33
Journal of Ed Psych	28

Chapter V - Conclusions

There were three research questions addressed in this study: 1) Who are currently viewed

as the most productive educational psychologists? 2) How do they accomplish so much? And, 3)

what advice might they give to new scholars? Each are answered in turn.

Patricia Alexander from the University of Maryland. B) Barry Zimmerman, Professor

Emeritus at the City University in New York. C) Richard Mayer, a faculty member at the

University of California, Santa Barbara and, D) Dale Schunk who serves at the University of North Carolina, Greensboro.

Each of the four scholars' was exposed to educational psychology early and developed a passion for it that did not decline. Most were influenced by family upbringing and parental involvement. Each was educated in top educational psychology programs and benefited from influential mentoring early in their career. It is reasonable to assume that each scholar engaged in deliberate practice, as described by Ericsson (1993) over the course of at least 20 years. The faculty appointments, awards bestowed, and publication rates justify this assumption (see Table 2 and Table 4, respectively). Also, they each have writing and research strategies that led to productivity. These include the use of existing materials, preparing outlines and tables for planning and revising research, harnessing multiple publishing opportunities per study, collaboration, and programmatic research methods leading to a family of publishable projects.

Each scholar has specific ideas born out of their own experiences in terms of what should be done to become a successful, productive scholar. In short, the scholars suggested the following would positivity impact a scholars career: (a) follow your personal interests and curiosity, (b) be the best scholar you can be, (c) associate with other prolific scholars in order to increase production rate, (d) set goals, monitor your progress frequently, and revise goals as needed. Detailed advice from each scholar is found in the "advice for new scholars" section of this thesis.

Areas for Follow - up

The information gathered from each of the four scholars is interesting and can be helpful. However, the present study had a few limitations that future investigations of productive scholars might address. First, the response rate was low (5%) even though the request came directly from

the APA Division 15 President. Measures can be taken to obtain a better response rate such as more persistence in contacting nominators or recruitment at appropriate annual conferences. Second, it may be beneficial to ask nominators to identify why they are nominating a particular scholar. The survey question asked, "Who are the most productive educational psychologists in the learning and cognition area in terms of their contribution, visibility and influence?" This question might be too broad because it included three criteria (contribution, visibility, and influence). It could be rephrased such that the parameters are narrow and nominators have a clear understanding of who should be included. These two adjustments might provide a better understanding of the types of accomplishments that led to nomination. Third, demographic information should be collected from nominators in future studies. This allows better identification of the sample and might explain the nomination pool. For example, there were few female nominees and this could be due to more senior nominators since women, as mentioned by Alexander and supported by Robinson et al., 1998 and Fong et al., 2009, are increasingly involved in the field in recent years. These adjustments, along with a continued focus on qualitative analysis of what top scholars do in order to be productive will help add to what we know about best practices in the field and provide further advice to new researchers.

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Appendix A

Dear Dr. Carr:

My name is Melissa Patterson Hazley and I am a graduate student in the Department of Educational Psychology at the University of Nebraska, Lincoln. I am interested in Talent Development and I plan to investigate top educational psychologists in much the same way that Kiewra and Creswell did a decade ago (see citation below). Their study investigated how top educational psychologists (Richard Mayer, Michael Pressley, and Richard Anderson) were able to be so productive.

To conduct this study, I need your help. I am requesting that you send an electronic letter to te APA Division 15 membership on my behalf. The attached letter asks participants to nominate who they believe are *the three most productive Educational Psychologist's in the Cognition, Learning and Instruction area?*

Thank you so much for considering my request. I will contact you in the coming days to discuss this request in more detail.

Warm Regards,

Melissa Patterson Hazley
Graduate Student, Educational Psychology
Cognition, Learning and Development
University of Nebraska -Lincoln
Mphazley@huskers.unl.edu
816-305-1651 (cellular)
402- 472-8331 (office)

Kiewra, K., Cresswell, J. (2000). Conversations with Three Highly Productive Educational Psychologists: Richard Anderson, Richard Mayer, and Michael Pressley. *Educational Psychology Review, 12(1)*, 135-161.

Appendix A, Continued

Dear Dr. Carr:

Thank you for agreeing to send an electronic letter to the APA Division 15 membership on my behalf. The attached letter explains the study and asks participants to nominate who they believe are *the three most productive Educational Psychologist's in the Cognition, Learning and Instruction area?* Please cut and paste the letter into the body of an email.

Thanks again for your help. Please contact me if you have any questions.

Warm Regards,

Melissa Patterson Hazley
Graduate Student, Educational Psychology
Cognition, Learning and Development
University of Nebraska -Lincoln
Mphazley@huskers.unl.edu
816-305-1651 (cellular)
402- 472-8331 (office)

Kiewra, K., Cresswell, J. (2000). Conversations with Three Highly Productive Educational Psychologists: Richard Anderson, Richard Mayer, and Michael Pressley. *Educational Psychology Review, 12(1)*, 135-161.

Appendix B

Dear APA Division 15 Member:

My name is Melissa Patterson Hazley and I am a graduate student at the University of Nebraska, Lincoln. I am interested in Talent Development and I am conducting a study with my advisor, Ken Kiewra about talented educational psychologists in much the same way that Kiewra and Cresswell did a decade ago (see citation below). Their study investigated how top educational psychologists (Richard Mayer, Michael Pressley, and Richard Anderson) were able to be so productive.

To conduct this study, I need your help. Please list the names of the top three Educational Psychologists working in the Learning, Cognition and Instruction area who you perceive to be the most successful in terms of their contribution, visibility, and influence.

Submit your nominations on a short survey by following the link below. You can control- click on the link or copy and paste it into your browser. It will take just a moment to complete. Please complete the survey before 5pm on September 30, 2011. If you have any questions, please contact me.

 http://www.surveymonkey.com/s/M9Z5H7C

Thank you for your time and attention.

Warm Regards,

Melissa Patterson Hazley
Graduate Student, Educational Psychology
Cognition, Learning and Development
University of Nebraska-Lincoln
Mphazley@huskers.unl.edu
816-305-1651 (Cellular)
402- 472-8331 (Office)

Kiewra, K., Cresswell, J. (2000). Conversations with Three Highly Productive Educational Psychologists: Richard Anderson, Richard Mayer, and Michael Pressley. *Educational Psychology Review, 12(1)*, 135-161.

Appendix C

"Profiles of Talented Scholars in Educational Psychology"
Interview Instrument

Name of Scholar_____

Name of Interviewer_____

Date_____   Place_____

I am going to ask you a few questions about your research, writing, and scholarly work. As you know, this interview is being audio taped so that we have an accurate record of your responses. If, at any time you feel uncomfortable with the questions, please let us know and we will turn off the tape recorder.

1. What factors contributed to you being a successful educational psychologist?
2. Questions about your work
    a. What is your most important contribution to <u>theory</u> and to <u>practice</u>? Explain why these are important contributions.
    b. Looking back over your professional career is it possible to segment the <u>substance</u> and <u>form</u> of your scholarly work into phases? For instance, has the substance of your work changed in scope, purpose, or sophistication? Has the form of your work (e.g., journal articles, grants/contracts, book chapters, and books) followed any pattern?
    c. What are your short and long-range plans for future research?
3. Questions about what influenced your becoming a successful scholar
    a. What personal characteristic helped you become a successful scholar?
    b. What people, places, or things helped you become a successful scholar during your career?
    c. Who are your notable academic ancestry and academic offspring?
4. Questions about how you use time
    a. Describe a "typical" work day from the time you get up until you go to bed.
    b. In an average week, approximately how much time do you spend working on research, teaching and service?
    c. How do you spend leisure time?
    d. Do you have strategies or techniques for increasing your work time? What sacrifices do you make to be productive?
5. Questions about conducting research and writing research reports

  a. Some people have "templates" for <u>conducting</u> and <u>writing</u> research that enables them to work effectively and efficiently. Do you have such templates? Could you describe them briefly?

  b. Some people have "signatures" for their writing, approaches that give a "stamp" to their writing, a distinguishing characteristic or style. Do you have one (or several)?

  c. Describe how you write a manuscript.

6. General Questions

  a. We want to think about your career as a scholar and writer. Does an as apt metaphor come to mind that describes your career? Finish this sentence, "my career as a scholar and writer is like a …..?

  b. A student who aspires to be a prolific scholar asks you for advice. What would you tell her or him?

  c. If you were to conduct this study, what question might you ask that we missed?

Thank you for the interview. I will send you a copy of the report at its completion.

Appendix D

My Surveys   Address Book   Resources   Plans & Pricing   + Create Survey

You have a **BASIC account** | To remove the limits of a BASIC account and get unlimited questions, **upgrade now!**

Highly Productive Scholars
Education Edit   **Design Survey   Collect Responses   Analyze Results**

Edit Survey   Preview Survey   Send Survey »

To change the **look** of your survey, select a theme below.

Aqua   ▼   Create Custom Theme

+ Add Page

PAGE 1   Edit Page Options ▼   Copy

+ Add Question ▼

Q1   Edit Question ▼   Move   Copy   Delete

＊**1. Who are the top 3 Educational Psychologists in the Learning and Cognition area in terms of their contribution, visibility and influence?**

1 = most productive
2 = second most
3 = third most

1. _____

2. _____

3. _____

+ Add Question ▼

+ Add Page

Back to My Surveys   Preview Survey   Send Survey »