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ABSTRACT

In this paper, a panel of four new faculty discuss the challenges they have faced and the lessons they have learned in attempting to create a research agenda for themselves. To provide a point of reference, brief biographical sketches are provided of the panel members and the responder. The panelists' comments are provided on several principal topics and recommendations that emerged: (1) build skills and one research focus through the dissertation; (2) choose an institution/environment that fits your interests; (3) at first, watch for research problems and resources as you deal with the onslaught of demands; (4) select research projects from these identified possibilities and resources; (5) seek out others to collaborate with on research projects; and (6) develop discipline for writing. Additional comments are included from one of the panelists on the social responsibility, politics, goals, methods, and practical steps that go with establishing a research agenda. (AEF)

## Title:

# Establishing a Research Agenda: Perspectives of New Faculty

## Panel:

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**Pennsylvania State University-Harrisburg**

**Stephen W. Harmon, Ph.D.**
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**Department of Instructional Technology**

**James Quinn, Ph.D.**
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**Department of Educational Foundations**

## Responder

**Thomas C. Reeves, Ph.D.**
**University of Georgia**
**Department of Instructional Technology**

## Introduction

Given the present emphasis on research and publishing at many institutions of higher education, and given the dire need for "socially responsible" research that can contribute to effective practice in many types of learning environments, and given the contribution research can make to the professional vitality of instructional technology faculty, a panel of new faculty offer here the challenges they have faced and lessons they have learned in attempting to create a research agenda for themselves.

To provide a point of reference, a brief biographical sketch will be provided of the panel members and the responder. Then, the panelists' comments will be sorted around several principle topics that emerged as we each individually developed our panel presentations. Note that not all of us addressed every topic. Finally, the responder's insights and recommendations will provide closure to the topic.

## Biographical Sketches

Dr. Molly Baker is a "practicing" instructional designer at Western Illinois University. She is in her third year (2nd year since Ph.D. completion) serving the faculty in 12 departments who are learning how to use technology in their instruction and develop hands-on technology experiences for their students. Through the Faculty Instructional Development Lab which she runs, faculty are encouraged to participate in workshops, one-on-one consultation regarding course design, multimedia development teams, individual lessons on a host of technology-based activities, grant writing for technology resources, etc. Her research agenda is driven by urgent need-to-know questions and practical issues of technology utilization/integration.

Drs. John Farquhar, Jim Quinn, and Steve Harmon are assistant professors at universities who adhere to the tenure-track system which rewards good teaching, an active research program leading to publication, and service activities. They are in their 3rd, 4th, and 5th years respectively. Dr. Quinn has been employed at a large, research-oriented institution and the Drs. Farquhar and Harmon have been working at institutions where teaching and research are more evenly balanced. Dr. Reeves is a Senior professor at the University of Georgia, is widely published in the field of Instructional Technology, and has focused some of his recent writing on the need for more "socially responsible" research in the field.

## Perspectives of New Faculty: Building a Research Agenda

### Tip #1: Build Skills and One Research Focus Through the Dissertation

Molly Baker:

When I began thinking about a research question for my dissertation, I identified three criteria: My question must suggest a methodology that would be do-able within a reasonable period of time; it must be interesting to me (since I was likely to spend a large chunk of time on the task and build several years of follow-up research as a new faculty member on it, as well); and lastly, it must be valuable to professionals other than myself--I wanted it to contribute to the field in some meaningful way. It took months to find such a question and my dissertation chair suggested at one point that I might have to give up on one of my criteria!

Now I find that as an instructional designer, the problem is not finding a researchable question at all--I can identify a couple every day on the job! The problem is identifying which ones to pursue, and finding the time and resources to do it. The research skills I developed in graduate school have been essential, but the research focus (effective teaching on interactive television) that I anticipated has been greatly expanded by the demands of my position.

John Farquhar:

In retrospect, my research as a doctoral student should have positioned me to perform a series of related, follow-on studies. My dissertation involved the study of an instructional strategy common in the design of Intelligent Tutoring Systems (ITS). At the time of my defense, I was well versed in the ITS literature and the significance of my work. Additionally, I was pleased to have guided the study so that additional research questions were naturally to follow. Yet, despite this fortune, I have taken a different, less-traveled path.

During the final phases of my work on the dissertation, I became a very focused, one-issue researcher. I intentionally isolated myself physically and intellectually from the Instructional Technology community in order to

achieve this focus. I found my isolation to be a necessary strategy that kept me on track to graduate. The advantage of the strategy was immediately evident in the form of a successful (i.e. completed) thesis. The disadvantage of the strategy did not readily appear to me until many months later.

Steve Harmon:

It all started in the winter of 1986. I was teaching English as a second language in a developing country and was coming to the end of my two-year contract. I knew that I wanted to continue to work in some way with developing nations, and needed a graduate degree to do so, but I didn't want to do the same old development stuff that every body else was doing. I stumbled into something called instructional design and realized I had found my place.

In the Fall of 1987 I enrolled in the Instructional Technology department at the University of Georgia. My intention was to focus on Instructional Systems Design, with an eye toward working in developing nations, but along the way I got sidetracked. I became interested in a new technology called hypermedia. Four years and a couple of studies later, I was hired as a lecturer in Instructional Technology at the University of Houston-Clear Lake. I had not yet finished my dissertation, but had collected my data and was in the process of writing it all up.

Tip #2: Choose An Institution/Environment That Fits Your Interests

Jim Quinn:

If you are already in a faculty position, you already should know what the balance of teaching, research and service is in your institution. If you are a graduate student (or even if you are already in a faculty position), you may still be deciding what balance you want in your career. For example, for some of us, we are in positions where research is the primary criterion on which we are evaluated for promotion and tenure, while others are in positions where teaching is the primary criterion on which we are evaluated. However, irrespective of the type of institution we are in, we will all have some research/creative activity requirements. Therefore, my first suggestion is for you to consider what would be the best type of institution for you to work in given your interests and training. If you wish a considerable amount of your time to be involved in day-to-day interaction with students, teaching classes at the undergraduate and masters level, you may wish to consider an institution where teaching is the number one priority and research is the number two priority. However, you should be aware that in such institutions, you are going to have to be involved in some research/creative activity. On the other hand, if you find yourself primarily excited by being involved on a continuous basis in research projects, supervising Ph.D. students, etc., then you may wish to seek employment in a major research institution.

Tip #3: At First, Watch for Research Problems and Resources as You Deal With the Onslaught of Demands

Tip #4: Then, Select Research Projects From These Identified Possibilities and Resources

Jim Quinn:

It is impossible to be perfect in teaching, research *and* service, and sometimes it seems to me to be impossible to reach the required level of performance that is expected of all new faculty in each of these three. Therefore, the more we can do to integrate each of these the better. For example, in my case, I am very interested in the philosophy of instructional design and the subsequent implications of such a philosophy for how we educate instructional designers. I have been involved in attempting to integrate theory and practice in instructional design by having students in my advanced instructional design course be involved in real-life projects as their course projects. While I am aware that other faculty in many institutions have been doing this for a long time, I was not aware of any publication on this issue, so I wrote up a report on this for ETRD which was recently published. Since then, I have done one more research study on a subsequent iteration of this course in a more formal research manner using qualitative research techniques and I am currently working on this data. I have also been using peer evaluation extensively in my introductory level course and have collected data on its effectiveness through focus group interviews and am preparing this for publication. I have seen similar good empirical work being done on the education of instructional designers by people such as Peggy Ertmer and her colleagues at Purdue recently on the use of case studies in the education of instructional designers.

Steve Harmon:

That first year out of graduate school was an eye-opener. I had worked hard at Georgia and was reasonably competent in my areas of interest. I could conduct and evaluate research. I could design and teach courses on a couple of

topics. I even had some idea about writing and presenting papers. My research agenda was set; finishing my dissertation was my primary concern. (Incidentally, as it turns out, it was on hypermedia.) Much to my surprise, my graduate preparation had not covered what I ended up spending most of my time on.

I had encountered what I now call "the Janis Phenomenon," after the Janis Joplin song "Take Another Piece of my Heart." Far from being able to work happily away on my dissertation, locked safely in my ivory tower, I was suddenly besieged by a host of "real-world" concerns for which I was totally unprepared. These things were like giant sponges sucking up all of my time. I'd like to spend the rest of this discussion going over those concerns and how they drove my research agenda for the next few years.

The first thing for which I was unprepared was students. I had had students in grad school of course, but then they were mostly safely contained in classes. The students I had now were roaming free. They wanted me to advise them. They wanted me to help them. And some of them wanted me to tell them what to do with their lives. I quickly learned why several of my professors kept a box of tissue in their offices. I had become some kind of counselor. I didn't have time for that.

The next thing I was unprepared for was colleagues. In graduate school I had called them faculty, and mostly encountered them when they were safely contained in classes. I only had to deal with them then or when I chose to trap them in their offices and force them to give me advice. But now these people had offices right next to mine. And because I was an instructional technologist they figured I knew something about computers. I began to get a constant stream of colleagues coming in to get me to show them how to plug in a mouse. And who knew which ones would ultimately be on my promotion and tenure committee. I didn't have time for that.

The third major thing I was unprepared for was the Dean. I had never had a dean before. In graduate school the dean was someone who had a big office on the first floor and was either revered or reviled depending on who you talked to. The only time I ever saw the dean in graduate school was once when I had to go show him how to plug in his mouse. Now I had this Dean who actually knew who I was and who wanted stuff from me. I quickly learned that the translation of the word "dean" in the real world is "boss." The dean wanted me to deal with my program ("increase enrollment, specify competencies, tighten-up evaluation of graduates"). He wanted me to deal with the school ("increase enrollment, bring in grants, train other faculty"). He wanted me to deal with the university ("give me an example of the great things you are doing to show the president"). He wanted me to do a hundred other things at the same time. And of course, I didn't have time for that.

I spent the first few years trying to meet all of these demands on my time. My research agenda was dictated by the demands of the Dean. He had me and several other faculty working on a major grant that didn't involve hypermedia. What time I had outside of that was quickly taken by one of the other demands. I seemed to have a choice of either giving up research in hypermedia or giving up support from the dean. In other words, I was demanded if I did and demanded if I didn't.

Over time I became interested in what the Dean was having me work on (systemic change). I didn't lose my interest in hypermedia, but instead found it modified to fit in with my other concerns. More importantly, I began to see how all of those things which had prevented me from getting a research agenda going were really assets which could greatly aid my research. The table below presents the time sponges I originally saw as liabilities and how I now view them as assets.

| Time Sponge | As a Liability | As an Asset |
|---|---|---|
| Students | Need Advising<br>Need Extra Help<br>Need Counseling | Can Conduct Research<br>Can Challenge You |
| Faculty/Colleagues | Want Expertise | Can provide expertise<br>Can provide advice |
| Classes | Take Time for Preparation, Delivery, and Evaluation | Can provide Subject/ Environments for Research<br>Can be test ground for disseminating research |
| Program | Requires time and effort in recruitment and improvement | Can attract better students<br>Can enhance reputation<br>Can provide more colleagues |
| School/College | Requires time and effort to support initiatives | Can provide resources for research<br>Can provide environment for research |
| Committees | Hold seemingly endless meetings dealing with seemingly trivial things | Often control resources (money, equipment, space) needed to support research |
| The Community | Wants expertise and free advice | Can provide real world problems to study<br>Can provide resources |
| The Profession | Requires time and effort for organizational involvement, journal/book reviews, etc. | Can provide expertise, resources, advice, real problems, reputation, etc. |

In short, what I found was that while external factors seem to drive my research agenda, I have begun to learn to steer. Currently I am interested in creating learning and performance environments on both a macro and a micro scale. On the micro scale I want to build multimedia/hypermedia based rich learning environments for individual or small groups of students. On the macro scale I want to create organizational environments in which these micro scale programs can be implemented successfully. This organizational development is based on the systemic change effort that was required of me by the dean. Rather than lament all of the conflicting demands on my time, I now seek to organize these demands so that they can be met while at the same time supporting my own research agenda. It is possible to discover a real synergy in academia, if one is not torn apart by it first.

John Farquhar:

The transition from doctoral student to faculty member is abrupt. Within a few days of the final dissertation defense, I began my career as a faculty member, preparing for new courses and advising students. Even with a reduced teaching load, I spent my first year almost exclusively on course preparation.

It was in January of 1995, 5 months after I started my faculty career, that I received a shock. I had just become aware of the ease of publication on the World-Wide Web. My recognition of the potential impact of this new technology hit me like an oncoming train from behind. I was not prepared to accept that many new and exciting, "cutting-edge" developments had completely escaped my field of vision. At the time, I felt antiquated and depressed.

I now recognize that the World-Wide Web is perhaps the fastest growing technology in all of history and continues to hit many people by surprise. Additionally, I found that the design and development skills I already possessed were easily transferred to the new medium. My new research activities are now largely interested in the instructional viability of networked, computer-mediated communication.

At this point in my career, I am still trying to recover from the isolation I experienced during my dissertation. Additionally, I am still attempting to regain the research momentum that I lost when I began teaching full-time. Lessons to be learned from this experience are (1) isolation from the field for even short periods of time can have a significant impact, and (2) the momentum of dissertation research can easily be lost when starting a new position.

Molly Baker:

Like Steve, I began my first position while I was still working on my dissertation. The demands of the job were constantly competing for the time I needed to complete my research/writing. As I attempted to juggle everything, I began to realize that although my primary research interest would likely remain effective teaching on interactive television (the central focus of my dissertation and part of my job, as well), there would also be many other urgent and important avenues to pursue. During that first year when all I could manage was doing my job and getting my dissertation completed, I started a "research ideas" journal which included:

potential research questions/topics as they occurred to me as spin-off projects from the dissertation
potential research questions/topics as they occurred to me through working on real-world problems in my job
potential research questions/topics as they occurred to me during my reading in the literature (both professional and more "popular")
potential research resources, including:

- potential research partners on the faculty at WIU
- potential research partners elsewhere
- bright graduate students
- support personnel that could help me with various aspects of research
- within-institution grants to support research activities, especially in the summer
- potential publishing outlets (journals, professional magazines, newsletters, books, etc.)
- important dates that might impact research or opportunities to share results, such as conferences, grant deadlines, on-campus events, etc.

As a result, I have lots of ideas for dissertation spin-off questions I would like to examine; however, the real demands of my job as the primary academic support person for faculty teaching courses on our interactive television system at WIU has helped me select specific projects that will reap immediate rewards in terms of enlightening future training of faculty or their effective practice as distance teachers.

Additional research activities have also emerged out of the many other daily demands of my office. Sometimes I get no further than doing a quick Internet search or literature review on topics such as consulting practice, multimedia development teams, innovation adoption, or facility design for teaching with technology. Other times, I pursue activities that have urgent "need-to-know" implications for future planning. For example, I may conduct extensive needs assessments/surveys or in-depth interviews to understand the immediate needs and interests of "my" faculty so that I can better plan a range of services and workshops for them. I may plot a formative evaluation/journaling activity during the development phase of a multimedia development project to better evaluate my role and that of my graduate students in supporting faculty in such endeavors in the future. I regularly do a variety of evaluation and feedback activities following workshops and individual lessons I conduct, with the specific goal of improving future hands-on faculty development activities. Additional job demands that prompt research activities are grant evaluation activities and requests from the Dean's office or College of Education's technology committee for informed guidance on planning initiatives.

Tip #5: Seek Out Others to Collaborate With on Research Projects

Jim Quinn:

Do not try to be a lone ranger. If you have graduate students who are willing to work with you on research projects, make use of such willingness. They will get experience in doing research and you will get help in running research studies. In my experience, I have found it to be of great value to have two to three research students working with me in running empirical research projects.

Whether or not you have graduate students available to work with you, you may also have colleagues who are willing to work with you on such projects. Finally, on a broader level, keep in contact with other new faculty that you meet at conferences such as AECT, AERA, etc. - such networking offers great possibilities for the kind of collaboration that we are talking about here.

On a similar note, involve people who have skills that you may not have. In my case, in particular, I am thinking of someone who has skills in qualitative research, which I am not expert in. I, like many other instructional designers it seems, have been primarily trained in quantitative techniques and a significant amount of the research I have been involved in has required knowledge of various qualitative techniques, and I have been very fortunate in working with someone who is knowledgeable in such techniques.

Steve Harmon:

See Table in section on Tip #4 and #5 for suggestions.

Molly Baker:

I have found it a challenge to find research collaborators. Our master's program, for example, offers a non-thesis option for our students, and most of them choose it, so I virtually have no graduate student assistance for research activities. Additionally, the faculty in my department have their own research agendas which do not seem to overlap much at all with mine. However, I have recently identified some faculty in two other departments with interests that may blend with mine, so there may be hope for future collaboration. Likewise, I have struck up a wonderful relationship with another instructional designer that I met through the distance education listserv (DEOS-L) and we are planning on doing some joint projects. Also, I have a few in my "research journal" that I have not sought out yet.

Tip #6: Develop Discipline for Writing

Molly Baker:

My biggest challenge in sharing my research findings with the wider field of instructional design is time. As the technology activities at WIU have grown and my specific responsibilities have expanded, I no longer have blocks of time to write. I must do that on my own time at home, which for a non-tenure track faculty member is after hours or weekends. I am not free to leave for part of a day to write and I have a large family at home. I am searching for a solution to this problem this year--including more self-discipline on my part! I have a friend, for example, who writes every day from 7:30-10 and does not open his office door until then. I do conduct many presentations at conferences and other events which put me in contact with other ID professionals and give me an oral opportunity to share, at least, and I plan to continue that. The linear process of research, presentation, paper, and publication makes sense to me. I just need to find a better system to get the last two accomplished.

## Establishing a Research Agenda: Social Responsibility, Politics, Goals, Methods, and Practical Steps

Dr. Thomas Reeves

Socially Responsible Research

Although many mainstream academic researchers will disagree, the foremost criteria for establishing a research agenda in the field of educational technology should be "social responsibility." Socially responsible research "addresses problems that detract from the quality of life for individuals and groups in society, especially those problems related to learning and human development" (Reeves, 1995, p. 2). A more traditional view of the purpose of research is captured in this statement by Fred N. Kerlinger (1986), author of one of the best-selling educational research textbooks:

This discussion of the basic aim of science as theory may seem strange to the student, who has probably been inculcated with the notion that human activities have to pay off in practical ways. If we said that the aim of science is the betterment of mankind, most readers would quickly read the words and accept them. But the basic aim of science is not the betterment of mankind. It is theory. (p. 9, Kerlinger's italics)

However, in light of the enormous problems faced by learners, teachers, and trainers around the world as well as the lack of impact that basic research has had on educational practice, basic research in an applied field such as educational technology is a luxury society can ill afford. (Of course, basic research in related fields such as cognitive psychology may be supported.) A socially responsible view of the purpose of educational research is represented by this statement by Robert Ebel, a past president of the American Educational Research Association (quoted in Farley, 1982):

> ....the value of basic research in education is severely limited, and here is the reason. The process of education is not a natural phenomenon of the kind that has sometimes rewarded scientific investigation. It is not one of the givens in our universe. It is man-made, designed to serve our needs. It is not governed by any natural laws. It is not in need of research to find out how it works. It is in need of creative invention to make it work better. (p. 18, Ebel's italics).

Along with other investigators, educational technology researchers are usually required to submit their research proposals to human subject review committees at their institutions. Education faculty and graduate students often complain about the "onerous" task of completing this "paperwork" which is meant to ensure that research activities do not harm humans. Despite these complaints, I propose that universities and other institutions extend these reviews to include "human benefits" criteria. Specifically, if educational researchers cannot demonstrate how their research will benefit human learning and development, it should not be approved for implementation using institutional resources. If a human benefits review was taken seriously, I predict that much of the pseudoscientific research that characterizes education would be exposed and eliminated. (I also predict that such a review process will never be implemented because of the political investment that education faculty have in the status quo.)

## The Politics of Educational Research

Honest educational researchers in colleges of education will admit (albeit not as publicly as Bracey, 1987, quoted in Sykes, 1988, did) that the primary reason they conduct research is so that they will have something to publish in research journals, and thereby attain promotion and tenure. Winning the "publish or perish" game is the ultimate goal of most faculty, and the game itself is behind the rapid proliferation of research journals and conferences in recent years. The "peer review" process that should guarantee that only valid research gets published has been corrupted by the sheer number of outlets for "scholarly" publication. In turn, the review processes adopted by tenure and promotion committees are based upon quantitative criteria such as counting the number of refereed journal articles an applicant has listed in his/her vitae. These committees rarely have any members who could evaluate the quality of these research studies even if they had the time and motivation to do so.

Given the nature of the game, it is not surprising that new faculty are often told: "get your hands on some data" and "publish it everywhere you can," as I was when I was a newly-minted assistant professor. Virtually no one directed me toward the enormous problems that confront educators and trainers in every corner of the globe. Ideally, new faculty and graduate students would be mentored into socially responsible research agendas by experienced faculty, but the sad truth is that many of the latter, having "won" the corrupt tenure and promotion game, are too exhausted, jaded, and/or demoralized to continue with research unless it leads to higher accolades or substantial pay increases.

## The Goals of Educational Research

So what is the educational technology faculty member or graduate student to do to establish a socially responsible research agenda? First and foremost, you must be clear about your goals beyond the mere fact of academic survival. In short, you must decide on the type(s) of research goals to which you can ethically devote yourself. Here is a partial list of research goals appropriate to the field of educational technology.

Theoretical: A research agenda with theoretical goals is focused on explaining the phenomena of human learning and development through the logical analysis and synthesis of theories, principles, and the results of other forms of research such as empirical or interpretivist studies.

Empirical: A research agenda with empirical goals is focused on portraying "how" education works by testing conclusions related to theories of human communication, learning, performance, and the use of technology.

Interpretivist: A research agenda with interpretivist goals is focused on portraying "how" education works by describing and interpreting phenomena related to human communication, learning, performance, and the use of technology.

Postmodern: A research agenda with postmodern goals is focused on examining the assumptions underlying applications of technology in human communication, learning, and performance with the ultimate goal of revealing hidden agendas and empowering disenfranchised minorities. The postmodern researcher often subscribes to a particular political perspective, e.g., feminist, neomarxist, or multicultural.

Developmental: A research agenda with development goals is focused on the creation and improvement of innovative approaches to enhancing human communication, learning, and performance through the integration of technology, theory, and imagination.

Action: A research agenda with action goals is focused on evaluating a particular program, product, or method, usually in an applied setting, for the purpose of describing it, improving it, or estimating its effectiveness and worth. Action research often directly serves the needs of clients in education and training.

Over the course of my career, most of my own research has been driven by developmental or action goals. I have found this to be personally fulfilling, and in the final analysis, I believe my research agenda has had more positive impact on real needs than I would have had if I had devoted my energies to theoretical or empirical goals. This is not to say that my research agenda has not been shaped by the theoretical, empirical, and interpretivist work of other researchers, but very little if any of this influence has come from within our field. Unfortunately, there has been very little interpretivist research in educational technology, and much of the research that might be said to have theoretical or empirical goals amounts to pseudoscience (Reeves, 1993).

## The Methods of Educational Research

Once you have decided upon your goals and identified a meaningful research problem or question, you are ready to choose your methods. Choosing research methodologies is a complex process that has as much to do with your personal epistemology as it does with the nature of your problem or question. Whether you are an empiricist, a constructivist, a critical theorist, or a chaos theorist will have an major influence on your preferred methods of inquiry. Here is a partial list of research methods used in our field:

Quantitative: You may use experimental, quasi-experimental, correlational, and other methods that usually involve the collection of quantitative data and its analysis using inferential statistics.

Qualitative: You may use observation, case-studies, diaries, interviews, and other methods that usually involve the collection of qualitative data and its analysis using grounded theory or other ethnographic approaches.

Critical Analysis: You may choose to engage in the critical deconstruction of "texts" and the technologies that deliver them through the search for binary oppositions, hidden agendas, and the disenfranchisement of minorities.

Literature Review: You may engage in various forms of research synthesis that usually involve the analysis and integration of other forms of research, through methods such as content analysis, frequency counts and meta-analysis.

Mixed Methods: You may develop research approaches that combine two or more methods, usually quantitative and qualitative, to triangulate findings related to a particular problem or question.

## Practical Steps

How do you get started with a developmental or action research agenda?

First and foremost, you must identify the needs in your environment. Spend a great deal of time in other colleges, K-12 schools, and/or business and industrial training centers. Frankly, in an applied field such as ours, I think faculty members and graduate students should spend at least two days a week in the field. After spending time with them, you will perceive the real problems faced by practitioners. Make their challenges your challenges.

Second, collaborate with other educators and trainers in preparing research and development proposals to find the resources needed to tackle these challenges. Once you obtain the necessary resources, engage yourself and your students in these R & D projects, and carry out your research activities within the context of meeting these challenges. You can even extend your teaching into these projects by engaging students in assignments that are situated within them.

Third, write something every day, whether it is a memo to yourself about a new idea, an e-mail message detailing your progress to a colleague, or an outline for a scholarly paper. Back-up everything electronically and set yourself specific goals for writing scholarly publications for periodicals and other outlets. Given that the editorial and

review boards of many refereed journals remain mired in existing paradigms, look for opportunities to publish your work in practitioner-oriented magazines, electronic journals, and edited books.

Fourth, carefully document your scholarship and obtain frequent assessments of its value from the clients with whom you work. Although tenure and promotion committees may still count the number of refereed journal articles you have, I believe that a well-documented portfolio of scholarly work that is also socially responsible will not be ignored. Architects, artists, and others in academe have developed alternative criteria for judging scholarship in their fields, and it is time for educational technology to do likewise.

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