To Know Is Not Enough: Knowledge, Power, and the Zone of Generativity
Arnetha F. Ball
EDUCATIONAL RESEARCHER 2012 41: 283
DOI: 10.3102/0013189X12465334

The online version of this article can be found at:
http://edr.sagepub.com/content/41/8/283

Published on behalf of

American Educational Research Association

and

SAGE

http://www.sagepublications.com

Additional services and information for Educational Researcher can be found at:

Email Alerts: http://er.aera.net/alerts
Subscriptions: http://er.aera.net/subscriptions
Reprints: http://www.aera.net/reprints
Permissions: http://www.aera.net/permissions

>> Version of Record - Oct 25, 2012

What is This?
In this 2012 American Educational Research Association (AERA) Presidential Address, the author considers this year’s conference theme—how to take what we know from research and put it to effective (policy and practice) use. The essay challenges members individually and collectively to improve the connection. She reflects on the history of AERA as an organization, why many seminal research studies fail to get relevant uptake, several models that are instructive in considering the translation process, and comments on several of the papers commissioned by AERA, in advance of the 2012 meeting, which also address different aspects of the translation challenge. The author highlights her own model of change, which she refers to as the Model of Generative Change, and explains the stages or phases of generativity that can be experienced in the research lives of education researchers.

Keywords: descriptive analysis; educational reform; research utilization; social context

I have chosen to use this platform as an opportunity to engage in a conversation with the membership of the American Educational Research Association (AERA). Through this article, I will present what I refer to as a “State of the Organization Address.” I will use this as an opportunity to unpack the theme of the 2012 AERA Annual Meeting and to challenge the membership to move away from research designed as mere “demonstrations of knowledge” toward generative research that has the power to close the knowing–doing gap in education—research that is designed to inform others, influence others’ thinking, and inspire others to action. This year’s annual meeting theme, “Non Satis Scire: To Know Is Not Enough,” was selected to invite dialogue among the membership as well as to elicit—and perhaps address—questions that are particularly timely at this juncture in the life and future of our organization. Regarding this year’s theme, some persisting questions emerged, including the following:

- Why was this theme selected?
- Why isn’t it enough to simply “know” or to simply be in the business of accumulating knowledge?
- If to know is not enough, what, then, is “enough”?

One response to these questions was provided by Cesar Chavez when he concluded that “the end of all knowledge should surely be service to others” (The WRITE Institute, 2001). This article provides some additional responses to these questions as well as some perspectives that should be considered when contemplating issues related to this year’s Annual Meeting theme. The voices represented in the pages that follow reflect on the stated mission of this organization as well as on individual and collective goals for the pursuit of knowledge. As readers engage with the voices and perspectives represented in this article, I ask that members use this as an opportunity to personally reflect on the meaning and importance of the statement “to know is not enough.”

As stated in the AERA mission, the goal of our organization is to advance knowledge about education, encourage scholarly inquiry related to education, and promote the use of research to improve education and serve the public good.

This mission statement has three interrelated parts. This paper focuses primarily on the third part of our mission, to promote the use of research to improve education and serve the public good.

The 2011–2012 Presidential Year began with the goal of engaging AERA in a dialogue that would allow the membership to explore the meaning of the third part of the organization’s stated mission. The 2011–2012 Program Chair, Dr. Cynthia Tyson, worked with Dr. Rick McCown and me to launch an initiative to generate critical discussion on the 2012 AERA
Annual Meeting theme, Non Satis Scire: To Know Is Not Enough.\textsuperscript{3} That discussion took place in the form of commissioned essays written by leading scholars in the field as well as some graduate students.\textsuperscript{3} The charge to the essay writers was to contribute an essay that would provoke, advocate, and take a stand on what we know and on the obligation we have to use what we know to improve education and serve the public good. We were seeking essays that would discuss “what we know as a research community,” consider whether “what we know is enough,” and make “suggestions concerning what actions should be taken by the education research community to ensure that we are carrying out our organization’s mission.” We received many outstanding essays,\textsuperscript{4} several of which I will refer to in this article, and we encouraged responses to those essays from the membership.

In addition to sharing insights from the commissioned essay writers concerning the theme of the 2012 annual meeting, this article shares some historical and present-day observations that situate us as an organization; makes a scholarly proposition concerning the need for generativity in the education research community; presents insights, recommendations, and the voices of some of the people in this organization related to that proposition; and finally, leaves the reader with a challenge and a charge.

\textbf{Situating Our Organization Historically: A Few Observations}

In the summer of 1916 when the National Education Association (NAE) held its Annual Meeting in New York City, a small group of individuals interested in confronting educational issues had already begun meeting at NEA. This group established roots over the years and had grown into an NEA Department focused on education research. That department on education research continued to grow as an organization during the 1960s—one of the most tumultuous periods in U.S. history—while the United States and the world were dealing with issues related to the Vietnam War, the peace movement, changing demographics, racial inequality, and many other issues. In 1968 it was mutually agreed that the NEA Department on education research would form a separate organization. The decision to seek independence from NEA was driven by an attempt by the AERA to dramatize their desire to become a society of scholars and researchers, brought together from many disciplines. After lengthy discussions in 1967, the NEA Council unanimously endorsed the recommendation that AERA become a separate and fully autonomous organization. At the close of the Fiscal Year 1968, AERA boasted a new high of 8,350 members, an astonishing fourfold increase in 5 years (ER, 1968, number 7; also see Mershon & Schlossman, 2008). Today, the organization boasts a diverse, multinational, multidisciplinary membership of approximately 25,000 individuals globally.

Having considered the history of AERA and its evolution, three observations emerge. One observation borrows from the words of Margaret Mead: “Never doubt what a small group of people can do to change the world. Indeed, it is the only thing that ever has.” The first observation is that research and programming conducted by AERA and its constituent members have indeed affected education over the years. The second observation, however, is that in order to not only affect but to change the world, a group of people must be clear about where it is going and what it hopes to accomplish. It was Margaret Thatcher who said, “What is success? I think it is a mixture of having a flair for the thing that you are doing; . . . but, knowing . . . is not enough . . . you have got to have hard work and a certain sense of purpose.” AERA has persevered, not just because of hard work but because it also has a sense of purpose. This leads to a third observation, which is to note how drastically our society has changed since AERA’s humble beginnings in 1916. Since that time, the demands on students, demands on educators, and the demands on education researchers have changed. In addition, the needs of the membership of this organization have changed as well. Yet during almost a century of change, two things have remained constant: the need for our research to remain relevant to the society around us and the demand that education research have some degree of impact on teaching and learning communities. At a time when education worldwide is dealing with persisting challenges and the gap between the economically advantaged and the economically disadvantaged is getting wider, we must ask ourselves the question: Can AERA afford to do what Howard Zinn characterized as “publish while others perish” (Sriraman, 2010)? Clearly, the answer is “no.”

Without a doubt, the creation of new knowledge is critically important. However, in addition to the creation of new knowledge, we must remember that the conduct of research, though necessary, is not sufficient to address social problems, mitigate inequalities, or advance innovative methods of instruction. For this very reason, AERA’s mission demands that we not only advance knowledge about education and encourage scholarly inquiry related to education but that we also promote the use of research to improve education and serve the public good. We know that we must do more than simply “know” in order to remain relevant and responsive to the challenges facing education in the 21st century. Knowing this, we came together to meet in Vancouver, British Columbia, to fully explore the annual meeting’s theme in earnest.

The fourth, and final, observation that I will mention is that there have been a number of highly influential educational studies that have helped set the research agenda in multiple subfields, and whose questions and findings are familiar to most scholars across the field of education research as a whole. Such research includes:

\begin{itemize}
  \item Carol Gilligan’s work concerning gender differences in moral education (Gilligan & Attrani, 1988)
  \item James Coleman’s research on school effects (Coleman, 1975)
  \item Lee Shulman’s models of teacher education (Shulman, 1998)
  \item Shirley Brice Heath’s research on cultural differences in language and learning (Heath, 1983)
  \item John Dewey’s theories of active learning (Dewey, 1938)
  \item Lev Vygotsky’s notion of the Zone of Proximal Development (Vygotsky, 1978)
  \item Benjamin Bloom’s taxonomy of cognitive skills (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956)
  \item William Edward Burghardt DuBois’s landmark studies on American sociology, history, civil rights, and education (DuBois, 1935)
\end{itemize}

It is interesting to note, however, that these important and influential studies have generally had a limited direct impact on policy development, particularly at the federal level (Walters, Lareau, & Ranis, 2009). My point in making this observation is to remind us that, with all the knowledge that we have accumulated...
as education researchers, and with so few of our methodologies, suggestions, and insights being applied within the field of education, we must recognize that there is a gap between what we know and what is widely done in the educational arena.

**Explanations Concerning the Knowing–Doing Gap**

A number of explanations have been offered concerning why the research–practice or knowing–doing gap exists (Broekkamp & van Hout-Wolters, 2007; Fuhrman, 2001; Walters et al., 2009), not only in the U.S. but across the globe. Explanations include the following:

1. the inaccessibility of research reports;
2. a lack of professional norms and time for practitioners and policy makers to consult and use research findings;
3. educational practitioners and policy makers very rarely carry out the research;
4. a lack of a forum for equal collaboration between educational practitioners, policy makers, and researchers; and
5. as Susan Fuhrman has noted, “Research is often used to justify political positions already taken rather than to set a new direction for policy.” And as others have noted, research does not even need to pass standard scientific muster in order to be used to justify policies.

This reality highlights the political nature of policy making. The knowledge–practice gap, which I also refer to as the knowing–doing gap, is not a challenge unique to the field of education. Other disciplines and domains recognize that “to know is not enough” and they, too, are working to address the gap. Pfeffer and Sutton (2000) tell us that in the business world, they have concluded that being smart or reading, listening to, thinking, and writing about a challenging phenomenon is not enough. The most successful business firms—like Whole Foods, Starbucks, and Nike—found that they needed to do more than just research business practices. They needed to do something with the knowledge they accumulated. That realization has been captured in the well-known phrase “Just do it!” Pfeffer and Sutton (2000) also found that those CEOs who valued and rewarded “closing the knowing–doing gap” were more likely to close it and more successful in doing so. Turning briefly to medicine, we find that research-based “double-blind clinical trials” (Lechat et al., 1998) revolutionized medical practice and led to the identification and subsequent adoption of effective new drug therapies. In recent years, another type of medical research has emerged: translational research. Translational research refers to translating research into practice, that is, ensuring that new treatments and research knowledge actually reach the patients or populations for whom they are intended and are implemented correctly (Woolf, 2008). Increasingly, translational research is being conducted by individuals who wear the hat of both physician and scientist and who work for academic health centers in multidisciplinary, multi-skilled teams. These physician-scientists move research from the laboratory to the point of care in an effort to have an even greater impact on the knowledge–practice gap. As a result of new structures that have been developed for conducting research and cultures of collaboration, the field of medicine has been transformed. Looking at the legal profession, again we find that the well-known knowing–doing gap exists. A close look at the work of legal scholars like Derrick Bell (2005) reveals that combining knowing with doing is the formula for a legal legacy that is powerful. Bell’s work (Geneva Crenshaw Society, 2011) confirms that knowledge becomes “powerful” when it is used to influence and impact practice and policy and when it is used to serve the public good. And finally, linguistics Professors Labov (1982) and Rickford (1997) both recall that during the Ann Arbor Black English case, linguists were struggling with questions of how they could reconcile an apparent contradiction between the principles of objectivity needed for conducting scientific research and their commitment to applying their knowledge in the social world to address issues of social action. Labov (1982) made the important observation that “an investigator who has obtained linguistic data from members of a speech community has an obligation to use the knowledge based on that data for the benefit of the community, when it has need of it” (Labov, 1982, p. 190). That conclusion inspired linguists to use their expertise to testify in Federal Court that students have a right to their own language. That ruling still stands today and profoundly impacts the language lives of students in classrooms across the nation.

When we look at other fields, we see that researchers in medicine, business, law, and linguistics have focused a significant amount of attention on addressing the knowing–doing gap. Pfeffer and Sutton (2000), Bell (2005), Labov (1982), and Rickford (1997) all attest to the fact that closing the knowing–doing gap requires persistent, collaborative, and generative work that is based on a philosophy that values and rewards the use of research to serve the good of society. Based on my research and observations, I pose a scholarly proposition below that describes how education researchers can convert knowledge to power using the Zone of Generativity.

**Models for Addressing the Knowledge–Doing Gap**

There is some consensus in the research literature that to address the knowing–doing gap (also referred to as the research–practice gap) in education, more cooperation is needed among researchers, policy makers, and practitioners (Broekkamp and van Hout-Wolters, 2007; Hallinan, 1996; Towne, Wise, & Winters, 2004; Vanderline & Van Braak, 2010). A review of the literature regarding the research–practice gap in education reveals working assumptions about how the gap can be addressed. Broekkamp and van Hout-Wolters (2007) provide models of four types of approaches that have been identified. Those four models are as follows:

1. The Research Development Diffusion Model
2. The Evidence-Based Practice Model
3. The Boundary-Crossing Practices Model, and
4. The Knowledge Communities Model

These four models reflect different perspectives regarding the research–practice gap in education and working assumptions for how the gap can be addressed. The Research Development Diffusion Model reflects a hierarchy of knowledge production that can eventually lead to improved practice. Drawing on this model, practice-oriented researchers draw on theories and decontextualized research produced by basic researchers further
upstream. A key point to this model is that Mediators are the integral link between research and practice. The function of Mediators in this model is to translate research into reports, policies, teaching materials, and professional development programs that can be taken up by practitioners.

The Evidence-Based Practice Model reflects another perspective regarding the research–practice gap in education and working assumptions for how the gap should be addressed. This model is very similar to the previous model in that Mediators, once again, play a central role in linking research and practice. The key difference between this Evidence-Based Practice Model and the previous Research Development Diffusion Model is that the Research Development Diffusion Model values diverse research results, such as conceptual frameworks, descriptive research, and learning tasks, whereas this Evidence-Based Practice Model primarily values empirical evidence that is a result of randomized experimental designs. Again, the Mediators serve a critical role in translating findings from effective research into practice. Within this model, the role of Mediators is to review published educational practices and materials and determine what is effective or “what works” in education. Practitioners then make use of methods that have been “proven to be effective.”

The Boundary-Crossing Practices Model reflects a third perspective regarding the research–practice gap in education and working assumptions for how the gap should be addressed. This model and the next model emphasize the importance of collaboration in ensuring that research translates to educational practice. However, what is unique about this Boundary-Crossing Practices Model is that the role of the Mediator is diminished and research translates to practice through the blurred roles of researchers, practitioners, and policymakers. These roles can be carried out simultaneously by one person who is multiskilled across these areas or, for example, a researcher can engage in teaching and a practitioner can engage in the design and conduct of research.

The Knowledge Communities Model reflects a fourth perspective regarding the research–practice gap in education and working assumptions for how the gap should be addressed. This model, like the previous model, values collaboration; however, instead of blurring the roles of researcher–practitioner–policymaker, in the Knowledge Communities Model, traditional roles are maintained as a diverse group of actors are mutually engaged in a partnership or network of knowledge-exchange as they work to address an educational issue. Figure 1 below provides representations of these four models.

Although some of these approaches have been developed in response to others and particular researchers may advocate for one approach over another—regardless of which model or per-
spective is adopted for addressing the knowledge–practice gap that researchers operate within, there is room for growth in the form of generativity so that education research can have a greater impact on practice.

**What Does It Mean To Be Generative?**

According to the seventh stage of Erik Erikson's theory of psychosocial development, generativity is a stage in which we strive to create or nurture things that will outlast us; we strive to contribute to positive changes that benefit others. *Knowledge as power* occurs when we create knowledge that serves to make the world a better place. Those who do not, generally enter a zone of stagnation, where stagnation refers to the failure to find a way to contribute.

Based on the observations noted above, we know that the knowing–doing gap exists and that it is pervasive across fields and professions. We also know that other fields and professions have made progress in addressing that gap. Knowing this makes us more convinced that we can address the knowing–doing gap in education research as well. But the question remains: How? I propose that first we must acknowledge that the gap exists and then we must choose to close the knowing–doing gap; that is, we must choose to move from the status quo of “publishing while others perish.” I am convinced that if we choose to, we can address it. And, my proposition is that the Zone of Generativity can provide a framework that can assist us in moving from our current level of knowing to a level of potential knowing that is powerful.

Building on the Model of Generative Change (Ball, 2009) and borrowing from the work of Vygotsky (1978), Bakhtin (1981), Wertsch and Stone (1985), and Tharp and Gallimore (1988), I propose a model that can be used to support a researcher's growth toward generativity. I further propose that as researchers progress through the Zone of Generativity, they can demonstrate each stage of the model to the next generation of scholars and to the global community of educational scholars through their own practice. Moving forward, I propose that if we want to fully implement the third part of the AERA mission, we must move toward a philosophy of “Knowledge as Power in the Zone of Generativity.” The Zone of Generativity is the region or area that constitutes the distance between what is currently known as determined by the conduct of research and what education researchers have the potential to know through their ability to apply—or promote the application of—what they have learned through the conduct of research. By combining their research knowledge and their own personal knowledge with the knowledge they gain from the research context, researchers can become generative as they apply their knowledge in efforts to improve education. As researchers learn through doing, they gain a different, more experiential kind of knowledge through a process of self-perpetuating change.

**The Zone of Generativity**

The Zone of Generativity begins at our current level of knowledge creation and has four stages (Figure 2):

1. Reflection
2. Introspection
3. Critique
4. Personal Voice

Following is a description of each of these stages and an example that illustrates each stage.

The first stage is *thoughtful reflection* on the part of education researchers, which leads to increased metacognitive awareness. Reflection should become a regular part of our research practice. We should ask questions such as “Is this research making a difference? Am I aware of the practice in relation to what I research? Who are or will be the consumers of my research?”

Earlier in my review of the literature regarding the research–practice or knowing–doing gap in education, I discussed some working assumptions about how the gap should be addressed, summarizing four types of approaches that have been identified (Broekkamp & van Hout-Wolters, 2007), including the Research Development Diffusion Model, Evidence-Based Practice Model, Boundary-Crossing Practices Model, and the Knowledge Communities Model. Depending on the model we choose to operate within, *thoughtful reflection* on a researcher's personal experiences in the research context and on the research enterprise.
motivates increased metacognitive awareness concerning the critical role of the need for cooperation among researchers, policymakers, and practitioners if one chooses to address the knowing–doing gap in education. Engagement with this reflection stage results in an increased sense of personal awakening concerning the fact that different approaches have been identified for addressing the knowing–doing gap. The importance of thoughtful reflection to promote metacognitive awareness is represented in Phase 1 of the model.

The second stage is introspection, which requires us as researchers to look within ourselves to determine our own role within the research enterprise, which leads to increased advocacy in the form of knowledge integration, collaboration, and the translation of research findings so they are assessable to the practice and policy communities (Figure 4).

Depending on the model we choose to operate within, this stage calls for us to be introspective so we can understand our role as a theorist, a researcher, a practitioner, or some combination of the above. And as we come to understand our role through introspection, this will help us to be more deliberate and strategic about our assumptions on how our work will influence educational practice.

The third stage is critique of our current levels of knowledge and current research practices, and a critique of the current reality that our research knowledge is—or is not—being accessed by the policy and practice communities, which can lead us to increased agency. In our research, we should consider the knowledge–doing gaps that exist and critique how the application of our work can break down those gaps (Figure 5).

Going back to the four assumptions about how research is translated to practice, if a researcher is operating from an assumption that the role of researcher and practitioner should be maintained as separate, distinct roles, and that mediators are key in helping to translate research to practice, then critique might lead us to consider how we can produce the type of research that mediators can consume or translate. Or if a group of mediators does not readily exist within our context, then as a result of critique, we may determine that it is necessary for us to advocate for or support efforts to develop a group of mediators who can translate our work. On the other hand, if a researcher is functioning from the perspective of the knowledge communities model, then critique might lead us to determine that we need to form stronger bonds and more-defined networks with mediators, practitioners, and policy makers—ensuring that we are working toward addressing a shared educational issue despite the fact that we each carry out separate roles within that enterprise.

The fourth stage is personal voice, gained from reflections on our work and our espoused assumptions about how research is translated into practice—as well as through introspection and critique (Figure 6). Through personal voice, we can demonstrate individual approaches taken in an effort to help address the knowing–doing gap. Personal voice is not only our opportunity to articulate how we will support efforts to address the research–practice gaps in a concerted way but will give credibility to our research—where knowledge becomes power as we use it to influence and impact practice and policy to “serve the public good”—which leads to a sense of efficacy. Examples of personal voice are presented in the final section of this article.
Using the Zone of Generativity as a framework, we can utilize reflection, introspection, critique, and personal voice to continually realize our contribution to the research enterprise. The Zone of Generativity draws on the sociocultural processes of metacognitive awareness, ideological becoming, internalization, and generativity as it is consciously and strategically experienced in the research lives of education researchers (Ball, 2009). The model depicted below illustrates the process by which researchers can make use of opportunities to be generative in our approaches to improve education and serve the public good—to operationalize what Franz Fanon (1986) speaks of when he says I should constantly remind myself that the real leap consists in introducing invention into existence. As we progress through these four stages or periods in our development as researchers, increasingly we introduce invention into existence when we use knowledge in generative ways as Eric Erikson defines it—we consciously work toward creating something that can endure beyond ourselves—we exercise power, defined as the ability to influence and to serve others. In this way, knowledge becomes powerful as we conduct research that serves to make the world a better place.

To make this notion of a self-perpetuating process of generativity more understandable, Figure 7 depicts each stage and the results of each stage of development. Using this model, we can monitor our own development rather than monitoring our progress by the number of articles we publish or grants we secure. Figure 7 depicts movement toward the overarching goal of the application of research knowledge to improve education and the use of generative thinking and problem solving on the part of researchers. That process is gained through reflection that can lead to increased metacognitive awareness and results in a realization that to know is not enough. The process continues through introspection that leads to ideological becoming, which can result in a reconsideration of the purpose and role of our research. Critique of one's ideologies, methodologies, and assumptions leads to the process of internalization, which can result in a move toward knowledge integration, translation and more collaboration. As researchers progress through these stages, the development of a generative voice can emerge and result in knowledge that becomes powerful as it influences others and serves the public good. As researchers move toward generativity, their internal changes are reflected externally in their changing research practices—as it becomes more inventive, more responsive. Education research must grow in capacity and in influence if we as a profession are to remain relevant. To accomplish this, education research must do more than demonstrate that the researcher knows something that can be published while others perish. It must inform others, influence others' thinking, and inspire others to action: It must be generative if it is to close the knowing–doing gap. If researchers will model a kind of generativity that serves the public good, they can inspire policy makers and other stakeholders to become generative in their thinking as well.

**Why a Zone of Generativity?**

One other question that arises is: Why am I introducing a Zone of Generativity? It’s because the concept of a zone allows individuals to enter in at different points—based on one’s ability, one’s commitment, one’s own level of advocacy, one’s level of current knowing. Like the zone of proximal development (Vygotsky, 1978), there is no wrong place to enter the zone—you enter the Zone of Generativity where you are, at your current level of knowing, and you measure your development against your own progress. Through reflection, introspection, critique, and the development of personal voice, there is always the possibility for growth and development toward increased levels of potential knowing.
As education researchers, we must continue to look at who we say we are, determine where we are within the Zone of Generativity (ZOG), and decide where we want to be. As members of AERA, we must ask ourselves: what are my contributions toward stepping out in innovative, generative, and powerful ways to meet 21st-century educational challenges. Am I introducing invention into existence that will serve the public good? According to Napoleon Hill (1937), “effort . . . only releases its power [its reward], after we refuse to quit!” Only after we refuse to be satisfied or complacent with “business as usual,” when we move beyond being satisfied with the documentation of failure, when we recognize that fear of failure fosters the knowing–doing gap, and when we experience the reality that knowing by doing develops a deeper and more profound level of knowledge—then, by doing, we will eliminate the knowing–doing gap. Then and only then will we realize that the real challenge that lies before us—for those who will accept it—is to push beyond the current boundaries of research—to forge new, more innovative paradigms.

We realize that many education researchers and AERA members are already operating within the Zone of Generativity. And that research was reported on during the 2012 Annual Meeting. Following are a few examples of some of the AERA sessions that focused on promoting the use of research to improve education and serve the public good:

- On the 3rd day of the Annual Meeting, Susan Faircloth chaired a session on how we, as researchers, might effectively engage schools in research to inform educational practices and effect positive change in Indigenous schools and communities.
- On the 4th day of the Annual Meeting, Lisa Loutzenheiser chaired a session that included camp attendees, youth camp leaders, and the researcher—who acted as an adult camp leader going beyond academic discourse to address the needs and concerns of LGBTQ youth and to inform curricular policy.
- On the 5th day of the Annual Meeting, Willis Hawley chaired a session on using research on culturally responsive pedagogy to strengthen teacher evaluation and student achievement, and John Rogers chaired a session which noted that acknowledging growing economic inequalities is not enough, and he noted important links between the research on economic disparities and implications of the Occupy Wall Street movement for education researchers.

The good news is that we are doing some things to address the knowing–doing gap. However, most of what we are doing is on an individual basis. There are silos of generativity in operation. But, as we learned from linguists, everybody has an obligation to do something. And, one of our invited keynote presidential speakers has noted that if we make an observation, then we have an obligation. By using knowledge in generative ways as Eric Erikson defines it—by creating something that endures beyond ourselves—we exercise power, defined as the ability to influence and to serve others. But, we must keep in mind that working individually we do not have sufficient power to close the knowing–doing gap for the profession.

A Challenge, a Charge, and Suggestions for Closing the Knowledge–Doing Gap

In closing, I remind you of the challenge that lies before us. That challenge begs the question: How can we—as education researchers—operationize the Zone of Generativity in order to close the knowing–doing gap and further use our knowledge to address 21st-century challenges? Our response to this question is a charge. We are charged with the task of harnessing the power of our organization—an organization that is 25,000 members strong. Individually and as an organization we must go beyond the level of simply knowing in order to embody the fullness of our mission. To address this charge, we must first consider the leading question that emerged from this year’s theme: If “To Know Is Not Enough,” what, then, is enough? Well, to be perfectly honest, there is no simple definitive response to that question. Rather than responding with a simplistic answer, I propose that “enough” is our continual, progressive pursuit of improved education for all learners. And no one of us can accomplish this feat alone. We need the strength of our collective as we progressively travel on the path of doing enough. Among our ranks we need basic researchers, we need those who are working to improve educational practices, we need research that reveals the fine-grained, nuanced subtleties that make education research uniquely complex, and we need individuals to design and implement large-scale initiatives so we can—in more strategic ways—impact society. We need more mechanisms to inform and influence policy on local, national, and international levels. Enough is a journey, not a destination.

The fourth stage of this dynamic Zone of Generativity, personal voice, represents the point at which researchers demonstrate individual approaches taken in an effort to help address the knowing–doing gap through an ability to combine research knowledge, personal knowledge, and knowledge gained from the research context based on their own engagement with reflection, introspection, and critique. Through personal voice, researchers articulate how we can support efforts to address the research–practice gap in a concerted way and give credibility to our research by demonstrating knowledge that becomes power as we use it to influence and impact practice and policy to “serve the public good” with a sense of efficacy. Drawing on personal voice, our membership has not only talked about but written about suggested steps that can be taken to close the knowing–doing gap with a sense of efficacy. Let us consider several different examples that can be taken up as we open our minds to identifying tactical solutions to addressing the knowing–doing gap:

1. At the annual Coordinated Committee Meeting of AERA held in Washington, D.C., in October 2011, 36 comments out of 101 questionnaire responses suggested that we must work on the communication of our research in a digestible fashion to practitioners and politicians. Two committees suggested a practitioner-based journal; others suggested providing seminars for practitioners and policy makers, and additional communication with our various constituencies. The need for educating our various constituencies was the second most cited concern by committee members.
Our Communications and Technology Committee suggested that AERA create a knowledge database to provide a forum to articulate and share efforts that are underway to improve educational practice.

1. Remember that the knowing–doing gap is a pervasive, persisting, and important problem because it is driven by deep philosophical thinking. That is why “knowledge itself, as well as knowledge about why the knowledge is not being used, is not enough” (Pfeffer & Sutton, 2000, p. 244). Fundamentally, closing the knowing–doing gap is about our underlying philosophy. So if we want to implement the third part of our theme, we need to adopt a philosophy that is powerful and generative. The essayists Waghid and Smeyers, discussed “Ubuntu” as a powerful yet generative underlying philosophy that can guide us. Ubuntu is about “Acting with Care,” about human interdependence, and about relationships between and among persons. By combining Ubuntu with generative thinking, we can apply research to 21st-century challenges and serve the public good.

2. A deep kind of knowing can occur from doing and from teaching others how. Knowing by doing can develop a deep and profound level of knowledge and can—by definition—eliminate the knowing–doing gap. According to essayists Hartlep and Carlson: “It is high time that the academy values service to its fellow man. . . . As knowledge-generators (academicians), our scholarship should improve the condition of humanity [by working] in concert with the community. . . . No longer should academic navel gazing be accepted, appreciated, or rewarded. . . . The academy must lead by serving.”

3. Action counts more than elegant words and plans. “In a world where sounding smart has too often come to substitute for doing something smart, there is a tendency to let planning, decision making, meetings, and talk come to substitute for implementation. [Too often] people achieve status through their words, not their deeds” (Pfeffer & Sutton, 2000, p. 251). According to essayist Arafeh, there is a need to reconceptualize education through the application of an emphasis on learning that is used to improve the public good, recognizing that learning for the sake of learning is not enough.

4. Remember that all learning involves some failure and mistakes: they are things we learn from. For essayist Lee, it has been a mistake to think about the knowing–doing gap as a simple disconnect or communication issue between research and practice or policy. She argued that there is much to be learned by using a more complex ecological systems approach for viewing—and addressing—the dynamic, complex, and multilayered issues related to educational practice and policy by taking into consideration the many different factors that influence education.

5. Fear fosters the knowing–doing gap, so drive out fear. Instead of operating out of fear, essayist Robinson fearlessly states that all education researchers (not just those in AERA) are obligated to use their research to serve the public good. She suggested fearless ways to make current research more accessible for policy makers and practitioners—including open access to research findings; concise research reports; timely synthesis of results; acknowledging the validity of professional judgment; providing information on how results can effectively be used in schools; reviewing the ethical practices of researchers; and rewarding those who bring their research to the practitioner directly.

6. Results are the product of using knowledge toward common effort, shared goals, and remembering that each member's success is linked to the success of all. Essayist Nieto admonished education researchers to speak truth to power; never being sidetracked by the age-old argument between neutrality and advocacy, research versus activism in education research. She challenged those with knowledge to use that knowledge to challenge mainstream knowledge and help make the world a more equitable place for all. Essayists Hudley and Wells further made a case for better collaboration based on more translational research in education using a looping system in which accessible research informs practice, which informs research, which informs practice, and so on.

7. Focus on what can be done to create a difference and a better future by turning knowledge into action. Essayists Ayers, Kumashiro, Meiners, Quinn, and Stoval used knowledge to make research relevant to their community and to hold their
must reflect, introspect, critique, and develop our voices in order to address the ongoing, never-ending challenges we face. AERA must be an organization that is “not just talking the talk” but one that is also “walking the walk” by putting forward resources and mechanisms to promote the use of research to improve education. It is up to you, current and future leaders of this organization as well as the entire membership, to take up and further develop the third component of our organization’s mission—to “promote the use of research to improve education and serve the public good” because to know is not enough!

NOTES

1 It was an honor and a pleasure to have had the opportunity to serve as the 2011–2012 AERA President along with Dr. Cynthia Tyson as the 2011–2012 Program Chair. I never imagined that the daughter of parents—both educated in one-room schoolhouses in segregated Natchez, Mississippi—would become the President of the premier education research association in the world. Just as Mordecai reminded Ester in the days of Ahasuerus that perhaps she was summoned to service “for such a time as this,” I now understand that the daughter of parents educated in supposedly “separate but equal” school facilities had a purpose for being called to serve at this time. That purpose was to engage the AERA membership in a year-long conversation about the need to remain relevant as producers of knowledge and as researchers who make powerful and generative contributions to the pressing educational issues of our day. Thank you, Cynthia, for the work that we were able to accomplish together.

2 I would like to thank Dr. Rick McCown for the role that he played in the work of crafting the theme and organization of the Commissioned Essays for the 2012 AERA Annual Meeting.

3 Following is a list of the authors of the commissioned essays:
   - Sonia Nieto
   - Cynthia Hudley
   - William Ayers
   - John Willinsky
   - Yusef Waghid
   - Ken Zeichner
   - Carol Lee
   - Ara Tekian
   - Marilyn Cochran-Smith
   - Sousan Arafef
   - Sharon Robinson
   - Gale Sinatra
   - Joyce King
   - Nicholas Hartlep and Robyn A. Carlson
   - Marybeth Gasman
   - Patrick Camangian
   - Mary Beth King
   - Linda Darling-Hammond
   - William Ayers
   - James Anderson
   - C. Janet Smith
   - Yusef Waghid
   - Ken Zeichner
   - Carol Lee
   - Ara Tekian
   - Marilyn Cochran-Smith
   - Sousan Arafef
   - Sharon Robinson
   - Gale Sinatra
   - Joyce King
   - Nicholas Hartlep and Robyn A. Carlson
   - Marybeth Gasman
   - Patrick Camangian

4 In 2011–2012, these essays were published on the AERA website and can be found in the AERA online archives at http://www.aera.net/AnnualMeetingsOtherEvents/AnnualMeetingOtherEvents/EssayCommissionedOnTheTheme/tabid/11051/Default.aspx

REFERENCES


**AUTHOR**

**ARNETHA F. BALL,** the 2011–2012 president of the American Educational Research Association, is a Professor in the Graduate School of Education at Stanford University, 485 Lasuen Mall, CU 226, Stanford, California 94305-3096; arnetha@stanford.edu. Her interdisciplinary program of research is conducted in complex learning environments that work to improve education for predominantly poor, marginalized, and underachieving students in schools and community-based organizations in the United States and South Africa and she focuses on the development of theory that informs the preparation of generative teachers who have the skills, knowledge, and dispositions to work with culturally and linguistically diverse students in today’s complex classrooms.