All of us at this conference have at least one thing in common: we have all asked and sought to answer a question in order to gain a better understanding of our world. We are researchers because we wonder about something, and we wonder because we are human beings. If we trace the etymology of “research,” we find that its original meaning had to do with seeking or searching intensively for something; and that business of asking questions and searching for answers—of wondering about our world—is a fundamental part of who we are, from the moment we are born.

However, the notion of research as systematic inquiry, which is how we generally define and perform it in the university, is not natural. Rather, it emerged during the Renaissance, with the rise of scientific thinking, and became further entrenched during the industrial revolution. For it is not only a scientific but also an industrial way of thinking about research, as a linear, systematic process producing useful knowledge.

The much-heralded movement to a post-Fordist, neoliberal society is not actually doing much to change this; in fact, as education and knowledge are increasingly commodified, systematicity is heightened by a hyper-attention to performance indicators and the measuring and monitoring of research by funding agencies—a reality described by Lyotard (1989) over thirty years ago as the inevitable consequence of the translation of knowledge into “quantities of information” (p. 4) needed to serve “industrial and commercial strategies on the one hand, and the political and military strategies on the other” (p. 5).
When we talk about university research, graduate research, then, we are generally referring to this notion of organized, formal inquiry—research that entails proceeding with an orderly, sequential method. As one popular textbook describes it, “educational research ... is systematic, disciplined inquiry applied to educational problems and questions” (McMillan, 2012, p. 5). The author of this textbook goes on to insist that, “we can study education in a scientific manner, even though education itself is not a science” (p. 6, emphasis in original). Like many social researchers, those of us working from within faculties of education tend to defer to this pseudo-scientific model of inquiry. It is being increasingly challenged by qualitative and critical approaches, but it is still generally the case in education, as in other disciplines, that advancement—in the form of research grants, publication, recognition, and degrees—is contingent on the claim that one’s research is systematic and scientific, and therefore reliable and valid.

During my own years as an educational researcher, I have often felt somewhat confined by the dictates of systematicity that require me to organize my wondering. In particular, it seems to me that there is an important aspect of research that, in our emphasis on method and system, validity and reliability, we tend to neglect and even deny: serendipity. So I would like to use this keynote presentation as an opportunity to pay a small tribute to the role of wondering and wandering in our research.

Serendipity can be defined as the occurrence of happy accidents. The word is said to originate with a Persian folktale about the three princes of Serendip. It is a rather long, convoluted tale about a king who banishes his three sons from the kingdom of Serendip (also sometimes called Serendib), in the hope that they will develop wisdom as they wander through the world. Horace Walpole, who recovered and rewrote the tale in the 1750s, and in the process coined the word “serendipity,” put it this way: the princes of Serendip “were always making discoveries, by accident and sagacity, of things which they were not in quest of” (quoted in Merton & Barber, 2004, p. 108). More recently, in his novel The Last Voyage of Somebody the Sailor, John Barth (1991) explained, “you don’t reach Serendib by plotting a course for it. You have to set out in good faith for elsewhere and lose your bearings ... serendipitously” (p. 13).

Columbus’s discovery of America is a good example of this—he, of course, had charted a course for India—but there are many, many other examples of serendipity in action, particularly in the domain of science. In fact, whole books and journals are devoted to
the subject (for example, Roberts, 1989, and *The Journal of Serendipitous and Unexpected Results*), and by one estimation between one-third and one-half of all scientific discoveries occur through happenstance, because of unexpected outcomes, error, or coincidence (Dunbar & Fugelsang, 2005). In the latter category is Newton’s “discovery” of the principle of gravity. What if Sir Isaac hadn’t chanced to sit under an apple tree, and what if an apple hadn’t fallen from the tree at that precise moment? Fleming’s discovery of penicillin is said to have been a result of the Scottish bacteriologist’s notorious untidiness. In August 1928, Fleming departed for a month-long vacation with his family, leaving some unwashed agar plates in a corner of his laboratory. When he returned, he noticed mould growing on some of the plates, and he also noticed that where the mould was growing, the bacteria on the plates had been destroyed.

These are rather dramatic and well-known examples of the role of serendipity in scientific research; however, examples from our own discipline are much less easy to come by. That is because, although scientific researchers tend to be increasingly accepting of the role of serendipity in their research, quite aware of the important discoveries that have been made over the years by wanderers pursuing chance developments, researchers in education are generally less open to the possibilities offered by the happy accident. Perhaps, ironically, it is the desire to legitimize our research as “scientific” which leads to an adherence to method, and a formality in reporting research that results in descriptions that often bear little resemblance to the actual process. As Neil Postman (1988) puts it, in a culture “peculiarly afflicted with science-adoration,” many people feel compelled to describe their research as scientific “in the hope that [science’s] prestige will attach to their work” (p. 9). How many educational researchers would feel comfortable admitting in a report or thesis that they stumbled across a citation that changed the direction of their research, or discovered a relationship that was not hypothesized because of an error in their data analysis? When such accidental happenings take place, the usual strategy is to “reverse engineer” our research, retrospectively changing research designs and hypotheses, so that the final document bears no traces of happenstance.

Yet I would be willing to bet that many of you here today could recount a story about an accident, mistake, coincidence, or bit of luck that has played a role in your own educational investigations. Of course, serendipity in educational research is a rather different phenomenon than it is in science; we are unlikely to see an
educational researcher leap from his bathtub and run naked through the streets crying “Eureka!” as Archimedes is said to have done upon discovering that volume could be measured according to how much water it displaced. I would like to take a few moments to share some examples of the less dramatic but no less significant role serendipity has played in various stages of my own educational research.

One of the most important and little considered roles that serendipity plays is in leading us to our research interests and questions. I have spent my career asking and seeking to answer questions about the role of technology in education, yet this research journey began quite by happy accident when I was an undergraduate Education student. One rainy day, I went to class, only to find that the classroom had sprung a leak. Rather than cancelling class altogether, the professor suggested that we take the opportunity to check out some educational software programs (in those days, called computer-assisted instruction) that were on display in another building on campus. I spent the next two hours engrossed in educational games, such as “The Oregon Trail,” that by today’s standards would be considered very rudimentary, but that nevertheless sparked my interest and gave rise to many questions that I have spent the years since trying to answer.

Serendipity also plays an important role in library research, and as such may sometimes change the direction our research takes. I can’t tell you how many times I have been in the library, looking for a particular book, and have stumbled across the source I really needed while browsing nearby shelves—an accidental find that gave me just the information I needed, perhaps even led me to modify my research question. A definition of serendipity widely attributed to crime writer Lawrence Block is particularly apt here: serendipity means “Look[ing] for something, find[ing] something else, and realiz[ing] that what you’ve found is more suited to your needs than what you thought you were looking for.” Sadly, I find that this kind of serendipity is becoming a thing of the past, as I spend less time browsing in the library and more time Googling and searching online. Of course, following hyperlinks can lead us to unexpected places, but I don’t find myself having the same kinds of serendipitous moments online as I used to in the depths of the library or a dusty second-hand bookstore.

Finally, serendipity has played a major role for me in my data collection and analysis, particularly in conducting and analyzing the data from interviews. As a novice researcher, I tended to arrive at interviews with a complete interview protocol, and to disregard any
responses that were not on topic as not being “real data.” Over time, I have come to realize the great value of conducting interviews that are semi-structured or even unstructured, as opposed to carefully scripted and planned in advance: they leave the encounter open to the unexpected. For example, a few years ago, a graduate research assistant and I interviewed several science and math teachers, with the intention of learning about the kinds of processes they used to design instruction. During the first two or three interviews, we noticed that much of what the teachers said seemed to be off topic; we were trying to get them to talk about what they did, but they kept coming back to why they did what they did, and in particular the kinds of caring connections they wanted to build with their students. In the end, we allowed this unexpected theme to have its way, and the paper that took shape from our research (Rose & Tingley, 2008) was entirely different from what we had intended—but, after publication, actually went on to win the journal’s editor’s award for that year. I should add that we did acknowledge, in the paper, the role that the unexpected had played in our inquiry.

While I am celebrating serendipity and the role it plays in research, I also want to make the important point that serendipity alone is not enough: our wandering has to go hand-in-hand with wondering. If Fleming hadn’t wondered why there was no bacteria growing around the mould on the unwashed agar plates, then it is unlikely that he would have discovered penicillin. Happenstance and luck can offer unexpected possibilities, but an inquiring state of mind is needed in order to seize and make the most of those opportunities. This means being curious and flexible, open to the unexpected, sensitive to serendipitous clues. For without those qualities, we may not even be able to see the unexpected when it happens. My point is that serendipity is not just an occurrence but a personal quality—in fact, when Walpole coined the term, that was what he had in mind: “a particular kind of natural cleverness” (Merton & Barber, 2004, p. 51) that was able to make the most of incidental or accidental happenings.

If serendipity is a personal quality, then it can and should be cultivated. And the first step in cultivating serendipity is to acknowledge its role, and even importance, in our research. As someone who teaches an introductory course on educational research, I admit that I am often torn between the need to help my students develop basic knowledge about research methodologies and methods while also wanting to foster the development of that “particular kind of natural cleverness” that will allow them to make the most of chance occurrences. I want them to appreciate that
research is not necessarily a mechanical, precise activity but an exploratory, dynamic, and generative process—and that the real joy of inquiry comes when chance, circumstance, or even messiness give rise to the unexpected discovery, the happy surprise.

I believe that once we admit to the reality of serendipity, we can begin to prepare ourselves to take better advantage of serendipitous discoveries as a research strategy. I will therefore conclude by encouraging each of you, as educational researchers, to acknowledge the role of serendipity in your inquiries. The more we talk about serendipity, the more we divulge the important role of the happy accident, the more it will become accepted as a part of the research process, and the more likely we will be to understand educational research not as a strictly rational enterprise but as a dynamic process of wondering and wandering.
References


