Abstract: Science educators worldwide are calling for the development of scientific literacy in today’s schools, yet there is little consensus as to what criteria or goals might constitute the attainment of scientific literacy. In this chapter, we explore the diverse meanings international science teacher educators have for scientific literacy as it relates to their own cultural backgrounds and professional practices. We conducted the study in the interest of preserving two types of context: the unique context of a science educator’s life story and the biographical contexts that enrich the meaning of the individuals’ perceptions of scientific literacy. Participants involved in the study included six science teacher educators representing: Guinea; West Africa; South Korea; Japan; New Zealand; Austria; and Colombia. We initiated interviews with participants using several open-ended questions with the intent to elicit conversational responses. We wrote the narratives presented in the study to preserve the insights shared by participants from their unique perspectives, and to avoid imposing an interpretation drawn from our worldview. Ultimately, the chapter highlights the ways in which scientific literacy is reflective of social, cultural and political situations that shape local communities and science teacher education practices.

With the advance of modem communications technology, the science education “community” is becoming a smaller place. Science educators are empowered by increased opportunities to share information/scholarship and ask questions that transcend national boundaries. In the midst of this media-propelled landscape, we have observed that science educators throughout the
world have a great deal in common. In spite of vast differences in the cultures and politics of our homelands, we ask similar research questions and share concern for educational issues of importance to the global community. We are convinced of the necessity to create critical partnerships of mutual conversation with international science educators. Our observations and reflections have led us to conduct a series of interviews with science educators around the world and to explore and learn about their perceptions of scientific literacy.

The rhetoric of modern day reform is replete with references to scientific literacy and descriptions of how it might be “developed” or “obtained.” An impressive number of science education researchers, reformers, and practitioners throughout the world have joined in the call for scientific literacy in today’s schools. At the same time, others have expressed skepticism toward the goal of making the majority of people scientifically literate. Shamos (1995) described this goal as a “myth” and questioned the extent to which scientific literacy could be developed with a reasonable amount of effort. Reflecting on these criticisms, we wanted to interview science educators around the world and learn about their perceptions of scientific literacy. Because of their involvement with pre- and inservice science teacher education in their respective countries, we assumed that our interviewees would have some interesting perceptions concerning the goal of scientific literacy. We wanted to know how these scholars viewed scientific literacy in relation to their own cultural backgrounds and what the phrase meant to them on a personal level.

The science educators we interviewed are not a demographically representative sample of international scholars in the field. They have diverse roles within the science education communities of their homelands, and their science content specializations are varied. Some are in the beginning stages of their academic careers, some are broadening their educational background in science education, and others have long established careers in science education at their respective institutions. However, all of our interviewees have a strong interest in and commitment to pre- and inservice science teacher education. Their representativeness is irrelevant to the approach we took, since our objectives and assumptions are inconsistent with a generalized portrait of international science educators.

Because we were interested in eliciting personal perceptions of scientific literacy from each scholar/science educator, we began by asking each to consider whether he/she was scientifically literate. We did not assume an a priori definition of scientific literacy; rather, we wanted to gain insights from the biographical narratives of each individual. The interview protocol used in the study was modified from questions developed for an earlier pilot study.