What’s in an acronym? For our organization, this question has recently become more salient with the change in the sequence of the four letters of our label. One constant remains: The “A” in ASTE continues to stand for “Association.” Instead of laboring in isolation, we align ourselves with others who share our interests – the S, T, and E of our acronym. More than for purely social purposes the Association provides a forum for professionals to gather and learn from each other. Since the ASTE Annual Meeting is so well-attended, it might seem the purposes for which professionals are gathering would be obvious. Otherwise, why would so many educated people go to so much trouble and expense? The answer resides within the balance of passion and mastery that is said to define the good work of professionals (Damon, Colby, Bronk & Ehrlich, 2005). We would like to use this space to prod at this notion of our professionalism and consider the implications.

Although changes in science teaching occur at a very slow pace, it is reassuring to take a decades-long perspective. For example, an illustration from an overhead projector manual inevitably provokes a grin: it’s generally understood that effective science teaching involves much more than knowing how to prevent image distortion and how to organize the seating of a classroom. As science teachers, teacher educators, and science educators, we recognize the role of learning theory (everything from Kohlberg to Dewey to Piaget to Vygotsky) that tells us that we must attend to individual needs, provide direct experiences, accommodate developmental concerns, and provide a social environment in which learning will occur. Part of the amusement about the overhead projector is the parody of teaching as being the equivalent of transmitting information to passive audience members. To equate effective
science teaching with such archaic techniques is laughable. It is foolish to expect real cognitive
construction and interaction to occur by relying upon expertise in using projectors to make
presentations.

It ought to be a source of embarrassment when we recognize that within our Association (and no
doubt, many others) educational researchers and teacher educators perpetuate this foolishness upon
each other. We believe that the purpose of the annual meeting and this journal ought to be more than for
dispensing information. Yet, that is exactly how we function. Much of our wisdom about and many of our
commitments to science teaching and learning are left at home when we depart for a professional
conference. The dominant activity, the very mode of instruction we decry for science teachers, is exactly
what we inflict upon our peers.

Why do these practices continue? Are we holding onto some antiquated notion about proper
behavior for a professional conference? Would we feel adrift and helpless without this annual tradition?
What justification could we supply that would justify giving a talk which is exactly what appears within
the accompanying paper? Do we believe that we are so wise that the manner in which we think and
learn differs from that of our students? At any rate, we engage in duplicity, demonstrating the
inconsistencies between what we claim to be our beliefs and how we actually behave.
In the face of this contradiction, we suggest a new vision for being a professional within the Association for Science Teacher Education. We should reacquaint ourselves with the sense of mission and purpose that can provide the drive and direction to our efforts. We owe each other the same consideration and expectations we extend to the science teachers with whom we so conscientiously work. For little more than for the sake of consistency, we should invest an equivalent level concern about the care and feeding of our professional selves into what we use during our work with students and teachers. In that vein, consider the following list of reform practices recommended by Project 2061 and consider which are as appropriate for ASTE members as for science learners:

- Do Work Consistent With the Nature of Scientific Inquiry
- Concentrate on the Collection and Use of Evidence
- Insist on Clear Expression
- Do Not Separate Knowing From Finding Out
- Welcome Curiosity and Reward Creativity
- Avoid Dogmatism
- Support the Roles of Girls and Minorities
- Start With Questions About Nature
- Provide Abundant Experience in Using Tools
- Summon Historical Perspectives
- Deemphasize Technical Vocabulary
- Promote Aesthetic Responses and Expression
- Emphasize Group Learning
- Encourage a Spirit of Healthy Questioning

For some, it might seem artificial to rely upon the above criteria for science learners as a list of standards for science teacher educators. But the differences between the developmental needs of the two populations may not be very distinct. Some individuals would propose that learning is too context dependent to allow for generalizations. Andragogy is sometimes offered as an adult-version of pedagogy (Knowles, 1984) but there is little evidence that the putative differences are real. Without evidence to the contrary, the manner in which people learn is fundamentally the same, implying that we should apply similar guiding principles whether we are interested in helping students understand natural selection or whether we intend to claim that a conference supplies professional development. However, there are differences that separate us from other organizations.
We need to realize that we are, as an Association, fundamentally different from most professional organizations. There is much more at stake. We need to not only build a knowledge base from research, but we NEED to use this research to change things. Otherwise, the best we might claim is that our work contributes to the body of research. Our sense is that colleagues within ASTE believe in more than that. We are trying to initiate and guide educational reform at all levels. We cannot do this in an effective manner by simply reporting on our end products. Instead, we need to create something new, and this can only be done via interactions with one another. We need to use research, but not as a simple end unto itself. We need our work to effect change in ourselves and in our society.

It seems appropriate to encourage our colleagues to commit to making a change. We will provide one illustration of one activity in which we’ve engaged, not as a model for others to follow but simply as a way to show what might be accomplished by taking work seriously and venturing just a little outside of tradition. We had commiserated for several years about how much we longed for the deep discussions that occurred within seminars during our doctoral studies. Only inadvertently were such conversations taking place during professional conferences. These powerful experiences occurred outside the normal bounds of the concurrent session format, and they even transpired during times in which we might have otherwise been attending sessions.

So we decided to organize a conference in which science education stakeholders gathered for the purpose of talking about what they did not know. We invited participants much in the same way as we might recruit people for a dinner party, handpicking individuals who were thoughtful and willing to listen to other perspectives. The sessions were devoted to helping participants to puzzle through their own and others’ vexations. What resulted was a three-day conference of thirty-five people where the projector used was by only one keynote speaker. Or, perhaps it is more appropriate to say that three days without a projector helped to effect an interaction that legitimately focused our attention upon the “confer” of a “conference.”

As powerful as Science Education at a Crossroads [http://conferences.weber.edu/crossroads] proved to be, we recognize the need for creating other venues that serve similar purposes. The point we wish to emphasize is not that our project necessarily deserves to be expanded or replicated. Instead, we
encourage others will to ways for generating fresh approaches to their professional development within the existing ASTE Annual Meeting structure or even distinct from it. In doing so, you can prevent your work from disappearing and your initiatives can make you known as other than a passive attendee at conferences.

We express this because we realize that we cannot be complacent by simply creating a product (in our case, a conference) and hope that this is good enough. We want to continually revisit what we do as individuals within the Association, as well as what the Association does as a whole. We must realize that the Association can exist into perpetuity as a static body, continually making products without providing any direction. However, as individuals, we have the ability (and responsibility) to imagine, test, and create new directions. We must forge ahead, not only in our role as researchers, but also as scholars who are actively involved in improving the condition of science teacher education. We seek to change the face of education, and certainly we can each make contributions towards this end. First, though, we should remind ourselves about the underlying purposes for what we do as professionals. This might be awkward since such introspection could reveal the absence of that purpose in what we do. Yet, we have endeavored (and we would like to embolden others to consider) to make guiding principles much more evident and central within our work. As a result, we can hope to become much more present in our world.

References
