ASSOCIATION FOR SCIENCE TEACHER EDUCATION

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In This Issue :

President's Message 1

Announcements 3

Convention reminders 4

President's Newsletter Message
Patricia E. Simmons, ASTE President

President's message Spring Newsletter

What does it mean to be an effective leader in science teacher education?

As science teacher educators, we work in a leadership capacity from the level of classroom instructor to department head/dean to joint appointee to liaison with school systems and community partners. Although many people would say they know intuitively what effective leadership is, more likely, many of us would say what effective leadership is NOT. At the last two Council of Scientific Society Presidents meetings, a portion of the conferences were set aside to focus on leadership. Following are synopses of sessions highlighting effective and ineffective leadership.

When asked 'what makes a great leader?' Zenger (2004) identified the following characteristics: focusing on results, cultivating interpersonal skills, learning from mistakes, leading organizational change, developing colleagues/students, being open to new ideas, taking initiative, building on and developing strengths (not weaknesses), taking non-linear approaches, and being accountable. One widely known model is the leadership tent model. Leadership qualities are organized around a tent structure where character (integrity) is the center pole around which the tent is erected. At each of the four corners is a set of leadership competencies or qualities. Each competency set indicates organized behaviors; these competencies are not equivalent to each other and are highly interdependent with each other. Quality 1 is leading change (developing strategic perspective, networking, and connecting to the outside world). Quality 2 is personal capability (exhibiting professional expertise, solving problems and analyzing issues, practicing innovation). Quality 3 is interpersonal skills (communicating powerfully and effectively, working collaboratively, inspiring others). Quality 4 is a focus on results (establishing goals and taking responsibility for outcomes and initiatives) (Zenger & Folkman, 2004--info@extraordinaryleader.net). Effective leadership results from the balancing of the five competencies with each other. They further stated that the one quality missing in many effective leadership models is the focus on results; one cannot be an effective leader without producing results (ineffective leaders were described as having ideas with substance).

All of us must accept responsibility for building the next generation of results-based leaders for science teacher education.

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President's message continued

One example related to science education was Project Kaleidoscope (1989; 2004; http://www.pkal.org/), an NSF sponsored agenda to reform undergraduate science and math programs. Successful STEM educational innovators exhibited personality characteristics and habits of personal interaction that include: being risk takers and very hard workers, making and seeing commitments through completion, having a strong sense of mission, being savvy about obtaining resources, and taking pride in doing a good job for students and their institutions. They held the shared belief that they [innovators] worked with people (graduate students, faculty colleagues) by not placing themselves above individuals. This was exemplified by listening to students, building on students' ideas, and recognizing students' insights (consistent with the science education and education research literature). Another characteristic was being comfortable admitting a mistake or not knowing everything. STEM innovators used these opportunities to engage their students in problem solving and teaching opportunities. Students were viewed as potential peers—both faculty and students worked together in "communities of practice", where students were empowered in decision making. Lastly, these educators were genuinely excited about teaching and working with students, and watching their students learn and accomplish goals.

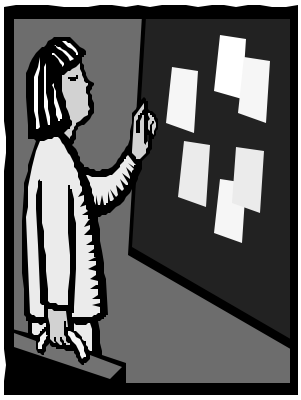
As we draw upon our own experiences and review findings from the literature on leadership and teaching practices, synthesizing the "best of practice" and research enables us to conceptualize, implement, and strengthen our leadership capacity and skills. By melding the research findings within specific contexts (i.e., classrooms, institutions, organizations), we can learn new strategies for developing and enhancing leadership, especially in sessions at our conference. To that end, we must schedule regular professional development on leadership that target leadership skills and capacities for junior faculty and graduate students, and for mid-level and senior faculty (and yes, even for administrators). For instance, senior faculty need to share their leadership capacity skills with graduate student mentees. Ulrich, Zenger, and Smallwood (2004) also articulated the attribute of leadership that many models do not address—leaders who are recognized for getting results are not effective if they neglect to mentor their protégés. All of us must accept responsibility for building the next generation of results-based leaders for science teacher education (i.e., teachers, teacher educators). Parallel to this is the demand which new colleagues/potential peers must make—accepting the responsibility for developing and strengthening their leadership attributes and skills.

Successful leaders understand, communicate about, and act on four attributes of effective leadership: setting direction (i.e., setting a research agenda, developing a state of the art science teacher education program for middle school teachers), mobilizing individual commitment (i.e., securing ownership by schools and universities in teacher education programs), finding and building on organizational capacity (i.e., teachers from school districts working as adjunct faculty; science and education colleagues co-teaching methods and content courses), and demonstrating personal competence (i.e., articulating and implementing teacher education scholarship through research-based practices).

To achieve exemplary science teacher education requires all of us to develop, strengthen, and share leadership capacity in all contexts of our professional lives. Nowhere is this more relevant than in the arena of educational policy. To be effective innovators (as described by Project Kaleidoscope and the leadership literature), we must demonstrate leadership in our own discipline(s). At the May 2005 CSSP meeting, the society advocated strongly for the reallocation of $1 billion per year in the U.S. federal budget to create world class science/mathematics teaching and learning R&D systems, graduate 500 PhD's per year in math/science education R&D, and franchise the best R&D results through Teacher Education Centers. These kinds of bold plans require us to shoulder the responsibility of leadership for ourselves and for promoting leadership in each other.

Suggested readings:

Schweitzer, C. August 2004. The Leader within. Association Management. 77-80.
Project Kaleidoscope. 2005. What works: A resource The Tasks of Leadership. Volume 4, 1-12. http://www.pkal.org.
Ulrich, D., Zenger, J..& Smallwood, N. 2004. Results-based Leadership. Boston, MA : Harvard Business School Press.
Zenger, J. & Folkman, J. 2002. The Extraordinary Leader. McGraw Hill Company, Inc. [based on findings from 200,000+ assessments from 20,000 managers]



Announcements

CALL FOR PAPERS

Science Activities, a 42-year-old peer reviewed journal, seeks articles that describe projects, experiments, and curriculum ideas for the K–12 classrooms. The activities should promote science inquiry and/or integration with other disciplines and be teacher-tested. We encourage authors to submit supplementary illustrative materials, such as photographs, tables, charts, and drawings.

An editorial board made up of science education professionals reviews all manuscripts. The review process takes three to four months, at the end of which authors are notified of the disposition of their manuscripts. Accepted articles are published in turn. If you wish to submit an article or would like a sample of our author guidelines, please contact: *Science Activities,* Heldref Publications, 1319 Eighteenth Street, NW, Washington, DC 20036-1802, (202) 296-6257 ext. 230, e-mail: sa@heldref.org, or visit www.heldref.org.

Association for Science Teacher Education
Annual International Conference
Portland, Oregon, January 12–14, 2006

Learn all you can …

Follow Thomas Jefferson's advice to Lewis and Clark and plan to attend the 2006 ASTE Annual International Conference to be held in Portland, Oregon, January 12-14.

The Conference will be housed at the Portland Marriott Downtown. The hotel is located on the west bank of the scenic Willamette River, with views of both the downtown area and Mount Hood. Between sessions or after the conference, attendees can enjoy the activities on the waterfront, shop in city center (no sales tax in Oregon!), visit one of the 19 microbreweries for which Portland is famous, or explore one of the many museums or galleries in the area. The room rate is the same as 2005—$99 single/double occupancy.

More information is available on the ASTE web page http://aste.chem.pitt.edu/.
Mark your calendars NOW!!

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Dear ASTE Colleagues:

We are pleased to announce that the Call for Proposals for the 2006 Association for Science Teacher Education Annual Meeting is available! You may access the Call on the ASTE web page at http://TheASTE.org. In addition, a paper version of the Call was in the winter ASTE Newsletter. However, the preferred method of submission is electronically, through the ASTE web page. Proposals are due June 30, 2005.

This year we are making an effort to recruit Presiders for every session. As you know, Presiders keep sessions moving smoothly by monitoring the time, and ensuring that participants present in the order designated in the program. If you are interested in being a Presider, there is a place on the Call to volunteer!

Reviewers are crucial to the success of our annual meetings! If you are interested in reviewing proposals for the 2006 Conference, please contact Kate.Popejoy@wwu.edu.

ASTE 2006 Conference Co-Chairs: Jim Carroll Carroll@up.edu Tisha Morrell Morrell@up.edu & Kate Popejoy Kate.Popejoy@wwu.edu