

EDUCATION SCHOOL CHALLENGES: THE INCREASING DEMANDS ON K-8 TEACHERS

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The educational needs of future K-8 teachers in the areas of mathematics and science are greater as a result of the increased (and, I would add, appropriate) student expectations in the area of mathematics and science as enunciated in the SOL and the specific content areas as described in the new licensure requirements. The sophistication and understanding of science and mathematics that is needed at both the elementary school and middle school levels is indeed substantial.

However, proficiency in science and mathematics is only one portion of the total needs of new teachers. How are we all, from the Colleges of Arts and Sciences and the Colleges of Education, going to best provide the educational needs within the very restrictive total time that we have available.

“It takes a University to educate a teacher.” This is a paraphrase Secretary of Education Richard Riley used recently in addressing the American Association of Colleges of Teacher Education. The preparation of future teachers is a university wide responsibility. Approximately 66% to 80% of the total college preparation for a future teacher occurs outside the colleges/schools/departments of education. My colleagues in arts and sciences have a greater opportunity to impact these future teachers than my colleagues in education. And of the time focused in education courses, approximately 50% of that time is allocated to field based experiences (including student teaching or internships).

It can also be said that it could (or should) take a lifetime to educate a teacher. The ideal elementary teacher, covering all the basic disciplines plus art, music, etc., would certainly be the epitome of the Renaissance Man (or in this case, more likely woman). In addition to being well versed in the four promoted disciplines of the Standards of Learning, i.e. History/Social Studies, English/Language Arts, Mathematics and the Natural Sciences, the competent elementary teacher must be a master of language development, reading, technology, appreciation of the fine arts, developmental/cognitive psychology, health and wellness, parental relations, governmental relations, and much more.

So although the task sounds daunting, where does that leave those of us who believe that preparing for the education of future generations is the noblest activity in which one can be engaged? We can start with the body of accumulated knowledge regarding the practice of teaching and the preparation of teachers.

For the purposes of our discussion today, I would offer the following findings for your consideration. These findings have been replicated in repeated reports referenced at the end of this article [1, 2, 3, 4, 5, 6, 7].

- When we think of teaching, we need to think of the teaching – learning interaction. Teaching is made up of knowledge, skills and dispositions informed by the content area, human development and cognition, and instructional strategies. The mandate to the elementary and middle school teacher is to teach **all** students. Therefore, they must have content pedagogical knowledge that allows them to represent ideas in such ways that other people, of varying abilities and learning styles, may access them.
- What teachers know and can do is the most important influence on what students learn. Yes, better preparation in content areas, as well as pedagogical studies, does make a difference.
- However, simply majoring or minoring in a content area does not guarantee that teachers will have the kind of subject matter knowledge they need for teaching. What is needed is knowledge of subject matter that enables it to be a base for **understanding** core concepts and modes of inquiry in the discipline – a sense of structure of the discipline and its connection to other disciplines.
- Pedagogical knowledge needs to be tied to content.
- When put in stressful situations, teachers tend to teach as they were taught. (Remember the 66%/80% - 34%/20% split earlier – who are the role models?)
- We are limited in the amount of time we have to prepare the **entering** professional. Our public and the State Council of Higher Education keep pushing for a reduction in credit hours, greater efficiencies. Also, the entering salary of the profession places a real limit on the payout for investment.

So where do we go from here? Again, I would offer the following points for your consideration.

- We all have the same goal: to place the most highly qualified entering professionals in the

K-12 classrooms of our nation. We are truly partners in this effort.

- Remember the elementary teacher (in most instances) covers all four of the primary SOL noted content areas. Therefore in teacher preparation, we have to give appropriate instructional attention to all four, plus pedagogical studies. More coursework in math and science may be better (or preferred), but it is not always possible – doing it differently is a very real goal.
- Future elementary and middle school teachers need a thorough understanding of the content they will need to teach – not a lot more new content. For example, in mathematics, we need to ensure understanding of the concepts and not introduce more algorithms to memorize.
- In your own classes, think of yourself as one of the most powerful pedagogical models for future teachers – model effective instructional strategies.
- Appropriately integrate the use of technology in your classes and instruction.
- We in education need to reach out and effectively involve our arts and sciences colleagues in “teacher education” courses, e.g., co-supervising of student teachers, integrating education methods courses with content courses, etc.

At that same conference I mentioned earlier, Dr. Stanley Ikenberry, president of the American Council on Education, announced that he was working with presidents of institutions to develop and implement an “University audit” for teacher education: an audit where all facets involved in the education of future teachers would be held accountable for the quality of **their** product. What we are about today and tomorrow is to start down the path of building an infrastructure in Virginia for preparing quality teachers – not a demo project here or there, but a system that really enables people to teach in much more informed and powerful ways. This will take the whole university working together. It is **our** future. ■

References

- [1] J. L. Goodlad, *Teachers for our nations schools*, Jossey-Bass, San Francisco, CA., 1990.
- [2] *Tomorrow's teachers*, The Holmes Group, East Lansing, MI, 1986.
- [3] *Tomorrow's schools of education*, The Holmes Group, East Lansing, MI, 1995.
- [4] *Final report: The national center for research on teacher education*, Michigan State University National Center for Research on Teacher Education (NCRTE), East Lansing, MI 1991.
- [5] *What matters most: Teaching for America's future*, National Commission on Teaching and America's

Future (NCTAF), New York, 1996.

- [6] *Doing what matters most: Investing in quality teaching*, National Commission on Teaching and America's Future (NCTAF), New York, 1997.
- [7] *Project 30 year two report: Institutional accomplishments*, The Project 30 Alliance, Newark, DE, 1991.