

**OF BASEBALLS AND FOUL BALLS:
THE CONTEXT FOR RESEARCH
IN THE KANSAS BOARD OF REGENTS OFFICE**

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Last year at this meeting, Chancellor Hemenway shared that when he spoke with legislators about research, his guiding principle was: “All research is applied.” While some scientists might have seen this as a slight to basic research, it was simply the observation of an experienced educator who recognizes that effective instruction typically builds on a meaningful context for the learner. Legislators, and the public at large, need a context to appreciate the value of research. Potential research applications can provide that context. In my time this afternoon, I’d like to share my observations on the context for considering research that presently exists within the office of the Kansas Board of Regents. These observations may apply to varying degrees to other governing board offices, as well, but I will leave it to you to make those extensions.

The short version of this talk is as follows: “There is no context for considering research in the Board office.” While accurate and perhaps disheartening, that version may not be fully enlightening, so I will attempt a more elaborate rendition.

Public governing boards face a host of responsibilities, the two largest being budget and policy development. On the budget side, two items consume most of the time and attention of the Board. The first is the determination of the tuition rate (or other student-cost metrics) each year. Tuition rates are important to the Board, both for their financial impact and for their political sensitivity. Much discussion and debate is associated with determining these rates and in defending them before the legislature and the public. The second major budget item is the annual request for state support. This request is operationalized in different ways in various states. In Kansas, it typically consists of a requested percentage increase in salaries and other operating expenses. Budget issues have a well-defined timeline with specific planning activities scheduled throughout the year. The most active period, of course, occurs in the spring while the legislature is in session.

Policy development and policy implementation activities cover the full gamut of topics and include both continuous administrative processes, such as program review, and one-time issues. Aside from intellectual property and some ethical issues (e.g. human subjects policies) there are few research

policies that require Board review and approval. This means that the topic of research is not on the Board's agenda (or Agenda). The differentiation of agenda from Agenda is important. Here, I use the small "a" version to denote the list of broad issues addressed by the Board, with the large "A" version denoting the published meeting agenda. In fact, much of the attention of the Board is reflected by, and shaped by, its monthly meeting Agenda. Without specific items on that Agenda any activity, including one as important as research, is largely invisible.

Arguably the most important parameter in shaping Board thinking is the central office staff. Kansas' central office is minimal and is organized to support the Board's primary activities. Research issues, where appropriate, are addressed by academic affairs staff who spend most of their time focused on program review, program approval, and related activities, most of which target undergraduate education. As a result, there is no cadre of staff to shepherd research issues through the Board. This focus on instruction, as distinct from research, is consistent with public and legislative interest. It is also consistent with the message that colleges and universities are currently sending to the public through the media, including television ads recruiting students which focus on many aspects of the university, but seldom on research. I could argue for, and against, the creation of a "Research Division" in our Board Office. But there are more fundamental issues that I'd like to consider here.

It is important to note that this lack of attention to research on the part of our Board is not malicious, but simply the result of a lack of appreciation and understanding of the research enterprise. In fact, most members have a sincere interest in research and take pride in excellent research programs. In keeping with the theme of this meeting, they also value collaborative programming, and especially inter-institutional collaborations.

In the short term, it is relatively easy to educate Board members on research. Here in Kansas, the three research universities (University of Kansas, Kansas State University, and Wichita State University) developed an excellent presentation on the role of research and graduate education this past spring for our Board. That session featured active scientists at each university and highlighted the role of research on the campuses. In my year working with the Board, that session was by far the most successful and had the most impact of all the presentations made to the Board members. I imagine similar presentations are being made in other states as well, but these are only short-term strategies; we need to consider more fundamental strategies, as well.

Here is a baseball. Like most objects, its value is somewhat context-dependent and determined by the individual assessor. I could give this to an artist who might appreciate its intriguing symmetry and starkly contrasting

color scheme, I could offer it to an anthropologist who might value it as an artifact of the modern age and interpret its form within the social context of the day, or I could offer it to an athlete who would see it as a sports implement. In a broader context, we could attach a dollar value to the materials, manufacturing, and marketing associated with its distribution in Topeka, Kansas—\$3.50.

Now consider a different situation, it's the middle innings of a relatively typical major league baseball game. It's mid-summer and it's hot. A long foul ball is hit down the third base line. Out of nowhere, some young man appears, without a shirt, but with a hat and glove. He leans way out over the wall and snags the ball in a daring catch. All of a sudden, 20,000 fans go wild. That is the same ball that's worth \$3.50, but because of the context, it has brought 20,000 people to their feet. Why? Because everyone there appreciates not the ball, but the process of acquiring the ball. They recognize the special combination of **timing** (being in the right place at the right time), **preparation** (having a glove and having it on your hand at the important moment), **skill** (clearly this guy has some modicum of baseball talent) and **nerve** (risking a fall onto the field and facing security teams, or dropping the ball and risking embarrassment on the Jumbotron replay) that contributed to the successful catch. Successful research demands all the same ingredients. In research, timing is everything, being in the right place to take advantage of existing knowledge or circumstances is a recurring theme in the history of discovery. Scientists must be skillful and prepared, or those opportunities will be lost. They must also be risk-takers, not only in the large sense that we often associate with great discoveries, but more importantly in the day-to-day sense that characterizes our willingness to submit our proposals and findings to peer review and criticism.

Traditionally, we have given our students baseballs but not let them appreciate the process or the thrill of the catch. We teach history, but we don't share the excitement of the work of historians in piecing together written records, period artifacts, oral interpretations, and other data to interpret a period of history, a person, or an event. We teach chemistry and laboratory processes, but too few undergraduate students leave their weekly chemistry lab filled with the "excitement of discovery" that we recognize as the heart of research. As a result, students leave our undergraduate institutions without an appreciation for how scientists combine seminar information, library research, and experimentation (both successes and failures) to triangulate on what we believe to be "the truth."

Yesterday, we discussed the impact of the "adherence to the written text" as a factor in shaping humanities research, I would argue that we have also let our "adherence to the canon" overly influence our instruction in all disciplines. Here, I use the word canon in its broadest context and apply it to the accepted tradition that dictates the *required* information that must be part

of the education of all students in a discipline. We have argued for too long about which “baseballs” must be provided to every one of our students, and we have failed to fully consider the importance of “the catch.”

I am thinking about all of our students here, but I am particularly thinking of our non-majors. Most would agree that majors in a discipline should master the canon of a field, but that may not be true for non-majors. Most of the students in introductory chemistry or physics are taking their only course in the field and perhaps the only laboratory science course of their entire educational career. Similarly, most students in undergraduate history courses are not history majors. These non-majors will forget many, if not most, of the facts (baseballs) offered up by their chemistry or history instructors. By focusing on the products and not the process of research, we have lost a great opportunity to educate the public about what we actually do. None of the current Kansas Regents is a scientist or historian. But like most college graduates, each took a college history course and a natural science course. Had those courses helped them understand “the catch,” rather than just the “the baseballs” we would all be better off. Regents are selected from the general public. When we have succeeded at educating the public, we will have succeeded at educating the Regents, as well.

I have appreciated all of the successful collaboration stories that we’ve heard during the past two days. As a bureaucrat from the Regents Office, I need to live up to my reputation and offer a disheartening story of failure.

Three years ago, a colleague in Linguistics, Clifford Pye, and I submitted a curriculum enhancement proposal to the National Science Foundation. This proposal had many components, including enhancements to our departments’ collaborative program with Haskell Indian Nations University and the expansion of laboratory coursework in Speech-Language-Hearing and in Linguistics. The proposal was funded, and with matching funds from the Provost and Dean, we created three student computer laboratories for state-of-the-art speech analysis and synthesis. The central curricular component of this project was the creation of a natural science course, entitled Speech Acoustics, that included a laboratory experience. Students in the lab would participate in real research experiences in speech, a medium with which they are familiar and one which can serve as an exciting entrée to a range of science areas from experimental phonetics, to information technology, to audio engineering, to linguistics. We proceeded to develop the course, laboratory exercises, and other materials. The initial offerings had small enrollments, but were well received by the students and the instructors, and were more successful than we had hoped in exciting students about the discovery of science. The course, however, was never fully integrated into the university curriculum, because the College faculty believed that it was not sufficiently broad to serve as an introductory course in the physical sciences. We had focused on “the catch,” but the university

community was not ready to accept that paradigm, instead, they believed in the importance of “the baseballs.”

I began by noting Chancellor Hemenway’s guiding principle that “All research is applied.” In many ways, he has been forced to adopt that principle by the context, not of the legislature, but of the public as a whole. A public that we have taught to focus on “baseballs” rather than “fly balls.”