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The Teaching/Research Nexus: How Disciplinary Research Can Enhance the Quality of Teaching and Learning and How Teaching Can Motivate and Engage Research Faculty

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The very first thing that I would like to say is that I am honored to have been invited to give the Keynote Address for the 2012 Academic Affairs Faculty Symposium, particularly given this year's topic: the teaching/research nexus. I have been at the University of Georgia for twenty years and this issue – integrating teaching and research – is something that I have constantly struggled with in my own career, some times more successfully than others. What I am about to say, however, is not a “how to” manual or, if I may be permitted to use a geographical metaphor, a map of how to get to the promised land of what a great university experience for both students and faculty should be. Rather, what I want to talk about is what it might mean to combine teaching and research in the modern university and some of the challenges in doing so. However, having said that I do want to talk briefly at the end about some suggestions as to how to better expose undergraduates to issues of research.

The second thing that I want to do at the outset is to ponder for a moment one of my favorite quotes which I think is appropriate for the topic at hand. It comes from the French essayist Joseph Joubert, who was born in 1754 in a small commune in Aquitaine, in southwest France, and who died in Paris in 1824 (whereas Oscar Wilde supposedly said that all good Americans go to Paris when they die, I think it is fair to say that a good many French essayists went to Paris to die!!). Joubert opined that “To teach is to learn twice.” But what did he mean by this? Well, what I think he meant is that there is an important connection between our learning about the world – that is to say, our investigation of the world and the human condition – and our teaching about it.



Teaching and research in the university setting – a brief historical overview:



So, what about the connection between teaching and research in the modern university? Well, within the academy in recent years it has certainly become mantra in a way that it was not really previously that faculty should strive to be excellent both as teachers and as researchers. There are several things driving this, I think: ever greater demands for quality education from taxpayers who may not understand the need to have great research institutions within their states and who still perceive research universities largely in terms of how they teach their sons and daughters; dramatically increasing tuition, which is leading both parents and students to demand greater access to the words of wisdom from “the

leading intellectuals on campus,” who might otherwise be only seen in libraries, archives, or television studios; the growing linkage between the academy and the corporate world, as research universities seek to fulfill their teaching obligations to the citizens of their states but are also increasingly becoming the producers of basic research which is then often commercialized; and, finally, perhaps a post-industrial or post-modern desire to live lives that are holistic and interconnected rather than singular and compartmentalized. As with many things in life, some people do indeed excel in both arenas. Others may excel in one of these – they may excel in teaching but not in research, or they may excel in research but not in teaching. And, of course, some people fail at both – and these latter people are faculty at Auburn!

For myself, I am a firm believer that knowing something of the past can provide significant insights into where we may be headed. In that regard, I’d like to spend a few moments examining the history of what we today call higher education. As many of you will know, the origins of the modern university date back to the mediæval period.¹ The word “university” itself is derived from the Latin *universitas magistrorum et scholarium*, which means “a community of teachers and scholars.” Despite the Latin origins of the word, though, the earliest institutions that we would today recognize as universities were in fact founded by the Arabs, principally as teaching institutions. For instance, the world’s oldest degree-granting institution, the University of Al-Karaouine, was founded in Fes, Morocco, in 859 AD as a place for religious instruction and political discussion, although it later extended its educational offerings to a much broader range of subjects, especially medicine, cartography, law, history, philosophy, astronomy, and mathematics. In similar fashion, the etymologies of some of the terms which we associate with the modern university experience derive from universities’ roles principally as places of teaching. For instance, as far as is known the Latin word *baccalaureus* – from which derives, via French, the English word *baccalaureate* – first appeared in writing in 1231 in the system of degrees established at the University of Paris by the papal bull *Parens scientiarum* issued by Pope Gregory IX, though it was probably used earlier colloquially. Significantly, the term referred to “a student with the first degree,” with this first degree considered to be a license to teach. For

their part, though, Ebied and Young have somewhat controversially claimed that the word itself may have older origins in the Arabic phrase *bi-haqq riwayat* – “with the right to teach on the authority of another” – that was subsequently Latinized as *baccalaureus*.² However, whatever its origins it is clear that the word *baccalaureate* referred to a student being given a license to teach.

Likewise, the concept of the “Bachelor’s degree” has links to the French word *bachelier*. Originally meaning “a young knight or squire,” by the 14th century (and now spelt *bachiler*) the term had evolved to refer to “an apprentice student” – that is, a student completing an initial level of training under the auspices of a master who would teach him.

Jumping forward to the 19th century, the English literary figure, Catholic cardinal, and leader of the Oxford Movement John Henry Newman drew a distinction between Academies and Universities.³ Hence, he proclaimed in his 1853 book *The Idea of a University* that “to discover and to teach are distinct functions; they are also distinct gifts, and are not commonly found united in the same person. He...who spends his day in dispensing his existing knowledge to all comers is unlikely to have either leisure or energy to acquire new...[Equally, the] greatest thinkers have been too intent on their subject to admit of interruption; they have been men of absent minds and idiosyncratic habits, and have, more or less, shunned the lecture room and the public school. [For instance,] Pythagoras...lived for a time in a cave...Plato withdrew from Athens to the groves of Academus. Aristotle gave twenty years to a studious discipleship under him...Newton indulged in an intense severity of meditation which almost shook his reason. The

great discoveries in chemistry and electricity were not made in Universities...I think it must [therefore] be allowed on the whole that, while teaching involves external engagements, the natural home for experiment and speculation is retirement.” For Newman, then, the main purpose of a university was to teach universal knowledge, with research best conducted beyond its walls.⁴ Indeed, he opined, if a university’s principal objective were to encourage “scientific and philosophical discovery, I do not see why a University should have students”!

Nevertheless, despite the fact that for much of their history universities were principally institutions devoted to teaching, during the 19th century research came to play a greater role in university life. This development largely had its origin in Germany. As early as 1809 the German statesman, philologist and architect of the University of Berlin, Wilhelm von Humboldt, had argued that the purpose of a university for both teacher and student is that it serves “a common quest for knowledge” (*Wissenschaft*). As educational reform progressed in Germany during the 19th century, then, German universities largely redefined themselves as institutions focused upon advanced research conducted on scientific principles – the Ph.D. as it exists today, for instance, originated as a doctorate in the liberal arts at the Humboldt University of Berlin. Many of the leading institutions in the US soon began to follow this model and started offering advanced degrees – Yale was offering a Ph.D. by 1861, for example. Whereas, then, for many centuries universities had chiefly been teaching institutions, by the early 20th century the stick had in some ways and in some places been bent quite far in the other direction, towards research. Indeed, in a late 1920s overview looking at what he called the “modern” university in Germany, Britain, and the United States, Abraham Flexner contended that research should have priority over instruction and he encouraged universities to become places of detached scholarship based on concentrated and specialized study.⁵

Linking teaching and research in the modern university – goals and pitfalls:

In response to a sense that the stick may have been bent too far in the direction of research in large private and public universities, however, in recent decades there has emerged a concern to create a better balance between teaching and research. Interestingly, this concern seems to be focused almost entirely upon large research universities rather than upon smaller liberal arts colleges which, it seems to me, the general public still largely expects to focus on one activity – that of teaching. However, the widespread public perception that research institutions only focus upon research does seem to be a little misplaced. For instance, the 1998 Boyer Commission report on educating undergraduates in the research university noted that those universities which are research-led are, in fact, heavily involved in teaching. Thus, although the 125 universities who self-identified as “research institutions” which the Boyer Commission examined accounted for only 3% of the total number of institutions of higher learning, they were nevertheless conferring 32% of all baccalaureate degrees and 56% of the baccalaureates earned by recent recipients of science and engineering doctorates.⁶ Significantly, though, the Commission felt that there was a disconnect between teaching and research at such institutions. In response, as part of its proposal for reforming undergraduate education the Commission came up with a list of ten recommendations. These included:

- building on the freshman foundation;
- removing barriers to interdisciplinary education;
- linking communication skills and course work;
- using information technology creatively;
- providing students with a capstone experience;
- educating graduate students as apprentice teachers;
- changing faculty reward systems; and
- cultivating a sense of community.

Perhaps most notably, though, their first two recommendations involved linking research and teaching, to wit:

- making research-based learning the standard; and
- constructing an inquiry-based freshman year.

Similar arguments have been made in the UK. For instance, in a report for the Higher Education Academy, which is an independent organization that supports UK higher education institutions with strategies for improving students' learning experiences, British researchers Jenkins et al. (2007)⁷ – who are geographers, I should add! – have argued that:

- 1) the “teaching-research nexus” is central to higher education and the value of the link can be expressed in three ways;
 - a. Experientially – as a process which benefits students and staff;
 - b. Conceptually – in terms of satisfying societal needs through the development and then communication of knowledge; and
 - c. Operationally – in terms of the potential reciprocity of teaching and research as learning activities;
- 2) student intellectual development and staff identity can and should be developed by departments focusing on the “nexus”;
- 3) effective teaching research links are not automatic but have to be constructed;
- 4) there are important disciplinary variations in teaching-research relations that need to be understood and valued; and
- 5) academic departments are central to developing the links between research in their discipline and student learning.

Unlike has been the case during most of the history of higher education, then, better linking research and teaching has now become something that faculty are supposed to do. There are, though, a number of forces that are imagined to work to discourage such linkages. Hattie and Marsh (1996) identify three.⁸ The first of these they call the “scarcity model.” By this they mean that faculty have scarce resources of time and energy and that therefore they tend to concentrate their efforts in one realm or the other. This model assumes a zero-sum game of education – the more time faculty spend on research, the less time they have to spend on teaching, and vice versa. The second they call the “differential personality model.” This model suggests that there is a negative relationship between teaching and research, as the two activities require quite different personal orientations – it is assumed, for instance, that a researcher likes “to work alone, responds poorly to outside distractions and pressures, is more at ease with the stuff of ideas, facts, and materials of a discipline than with students and learning” whereas a teacher “seeks out company, can handle pressures and distractions and prefers interacting with students to manipulate materials or ideas,” to the point where these attributes are seen as competing with one another.⁹ Finally, they outline what they call the “divergent rewards model,” wherein research and teaching are seen to have such different expectations and obligations that they are motivated by quite differing reward systems, such that the two roles are in constant tension.

On the other hand, Hattie and Marsh suggest, there are also some countervailing forces. The first of these is the widespread belief amongst faculty that good teaching requires one to have an active research agenda – what they call the “conventional wisdom model.” Thus, they quote one study which reported that 90% of academics surveyed believed that an active research interest is essential if a person is to be a good university teacher and that if a faculty member stops doing

research, then he or she “begins to repeat himself and eventually loses touch with both the young and the world around him.” Equally, in her research on student attitudes at a large Australian university, wherein she interviewed students ranging from first-year undergraduates to doctoral students, Neumann (1994) found that students who were exposed to faculty research in the classroom perceived that their courses were more up-to-date and therefore found them more intellectually stimulating than those courses where faculty rarely talked about their own research.¹⁰ However, interestingly enough, the relationship does not seem to work in the other direction – Hattie and Marsh report that only 29% of faculty questioned in the large-scale survey they analyzed agreed that a good teacher must also do research.

If the conventional wisdom model is the first way in which Hattie and Marsh believe that research and teaching may be seen to be linked, the second countervailing force is what they call the “G model.” This model suggests that the abilities underlying great teaching and those underlying great research are similar and that, therefore, there is an inherent link between these two activities, such that they feed off and reinforce one another – thus, both require a high commitment (perseverance, dedication, hard work), a high degree of creativity (imagination, originality, inventiveness), an ability to investigate sources, and a level of critical analysis.

Who should be the focus of the teaching-research nexus?:

So, many leading educational lights, then, seem to be arguing today that better integrating teaching and research is an important thing to do if undergraduates’ experiences in college are to be enriched. In thinking about the relationship between teaching and research, however, I believe that there are a number of matters we must consider. The first of these is what we actually mean by better connecting research and teaching, for this is not as self-evident as it may seem. In particular, we must ponder the following question: does teaching and research excellence need to be combined in the person of each individual faculty member or does it need to be combined merely in the body of the institution as a whole?

This is an important distinction. Thus, if we accept that not all faculty will or can be both excellent researchers and teachers but we nevertheless strive for the ideal that a great university is a place wherein both excellent research and teaching take place, then the focus of our concerns to bring research and teaching together is that of the individual student. In particular, the focus is the individual student and his/ her experience whilst in college and how he or she can be exposed to both excellent teaching and excellent research by different faculty members. This raises questions about how research universities as institutions should take advantage of their research expertise to enrich the quality of their teaching programs and how they can better engage and interest their researchers in the teaching and learning enterprise. It also raises questions about how involving students in faculty research – or at least giving them some exposure to it – enriches their undergraduate education experience and whether it makes them better prepared for whatever they do after they graduate, whether that is in terms of a career or in terms of being better citizens and more curious about the world. Such questions force us to think, then, about how we not only can give students an opportunity to be exposed to excellent teaching but also how we can give them an understanding of what excellent research is, what is its purpose, what skills students may acquire through engaging in research, and how they can then apply these skills in their own life, whether in the short-term for purposes of writing better term papers or class assignments or in the long-term for being more engaged and aware citizens.

One way in which this can be done is through providing more opportunities for undergraduate students to engage in primary research so that they may learn by doing. One of the first organized programs to seek to do this was unveiled in 1969 when the Massachusetts Institute of Technology introduced its Undergraduate Research Opportunities Program (UROP).

This program was designed to allow students to work with faculty members on an independent project. Under this scheme, students propose their own projects and find faculty sponsors. They receive either hourly wages or academic credit for doing so. There is also a UROP Research Mentor Program that links students just commencing their project with more experienced students. About 80 percent of MIT students conduct at least one UROP project before graduating and nearly 50 percent of students conduct more than one UROP project. More than 45 percent of MIT faculty participate in the program each year.¹¹ A number of other universities have copied the MIT model, including: Boston University; the University of California, Irvine; the University of Michigan; the University of Minnesota; the University of Illinois, Urbana-Champaign; and Imperial College London. Of course, UGA's very own CURO is similar. Whereas faculty may assume that participating in such an activity would be a huge consumer of their limited time, interestingly enough such inquiry-based learning actually has an element of reciprocity, for many faculty have found that they can learn from students at the same time that students are learning from faculty, as student perspectives give them different insights on their own research and how they might talk about it to students.

Whereas one interpretation of how to better meld teaching and research leaves us with a focus upon the individual student, a second interpretation results in a quite different center of attention. Thus, if we strive to have all faculty be both excellent researchers and teachers, then the focus changes from that of the individual student to that of the individual faculty member. In particular, it leads to different sets of questions about how the university, as an institution, can facilitate faculty development and create mechanisms whereby individual faculty can better combine teaching and research within their own daily lives on campus and what that might mean both for them and for the students with whom they interact. In other words, it forces us to ask how can faculty as individuals be encouraged to use their research to enhance their teaching, and vice versa, and how might the university be structured differently to enable this? For instance, should Ph.D. students be evaluated on both their teaching and their research before being awarded their degree? Or should a faculty member be given time off to hone their teaching skills in the same manner in which faculty use sabbaticals for research?

If who should be the focus of our attempts to better meld teaching and research – student or faculty member – is one question that we must ponder, a second concerns what we even mean by the terms “teaching” and “research” and how our understandings of them may impact what we see as both the current state of affairs and a more desirable future. Thus, as Jenkins et al. point out, these two terms are not as straightforward as they may at first appear to be in the oft-repeated binary of “teaching versus research.” Rather, they are terms that are up for grabs and subject to discursive contest and to definition in particular ways. Hence, Jenkins et al. detail how, in the context of the UK's Research Assessment Exercise, which determines how much central government funding different universities will receive and for what purpose, the term “research” is specifically defined as “original investigation undertaken in order to gain knowledge and understanding.” Such an official definition of research as “original knowledge,” they highlight, is also the basis of the US Council on Undergraduate Research's definition of what constitutes undergraduate research: “An inquiry or investigation conducted by an undergraduate student that makes an original, intellectual, or creative contribution to the discipline.” It is important, then, to recognize that definitions of “teaching” and “research” are historically, culturally, and even disciplinary specific – provocatively, for instance, Jenkins et al. suggest that some of the bright line differentiation between teaching and research, with research referring to “original knowledge production” and teaching to its dissemination, largely reflects the practices of research in the natural sciences, with their focus upon experimentation.

By way of contrast, Jenkins et al. detail how critically deconstructing the language with which we talk about what happens on a modern university campus can alter how we think about what it is we are doing and, perhaps more importantly, should be doing. Hence, they quote Ernest Boyer (he of Boyer Commission fame) who argued that use of the term “scholarship” helps move consideration of what a modern university education may involve “beyond the tired old teaching versus research debate.”¹² Rather than subscribe to this worn dualism, Boyer instead distinguished between what he called the “four scholarships” of discovery, application, integration, and teaching. Significantly, such terminology has caught on in some institutions. Thus, the UK’s Southampton Solent University has increasingly come to use the term “advanced scholarship” for what faculty are supposed to do, defining this to mean “the creation of new knowledge, or the critical reinterpretation and transfer of existing knowledge.” Moreover, the university has developed a catalogue of ways in which faculty can engage in “advanced scholarship,” ways which all result in a visible output in the public domain, which all carry peer esteem, which all contain an aspect of innovation or originality, and for which they are rewarded in various different ways. These include: research and practice-based activities (like producing commissioned reports or presentations, published articles in refereed journals, creative writing, and production of scientific, technological or creative artifacts); involvement with professional, statutory, and regulatory bodies which help develop policy relating to the professions or which involves being an officer of a professional body or engaging in some kinds of consultancy; developing links with the business, public, and voluntary sector; contributing to the local, regional, and international economies through working on development plans, incubator units, environmental assay, market assessment, urban regeneration projects, and economic impact studies; leadership in the community through membership of local strategic partnerships or local Health Authorities; being engaged in knowledge transfer outside the classroom through participating in various teaching company schemes, patent filings, and external educational partnerships; and myriad others.¹³ What this suggests, then, is that couching what we do in the language of “excellence in scholarship” rather than “excellence in teaching” and/ or “excellence in research” radically transforms how we might envision the modern university.

A third set of questions involves how the evolving environment within which departments and universities must function – an environment where resources appear to be drying up – shapes efforts to develop the “teaching-research nexus” and perhaps excludes certain avenues. In particular, as universities have increasingly had to rely upon part-time and temporary faculty who teach large numbers of undergraduates and who have little to no expectation of doing any research, or as some have even begun adopting the model of having “research faculty” and “teaching faculty” within the same department, there is a danger that the divide between teaching and research may be exacerbated at the very moment when, we are being told, narrowing this divide is becoming ever more important.

Finally, there are different ways of conceptualizing how research and teaching might be linked. Hence Griffiths (2004) has suggested that there are four different types of linkages between them, namely:¹⁴

- 1) Teaching can be *research-led*, in the sense that the curriculum is structured around subject content, and the content selected is directly based upon the specialist research interests of faculty. Such research-led teaching is often based on a traditional “information transmission” model, wherein the emphasis tends to be on understanding research findings rather than research processes and limited emphasis is placed on maximizing the potential positive impacts of teaching on research;
- 2) Teaching can be *research-oriented*, in the sense that the curriculum places emphasis as much on understanding the processes by which knowledge is produced as on learning the

codified knowledge that has been achieved. Here careful attention is given to the teaching of inquiry skills and on acquiring a “research ethos” and the research experiences of faculty are brought to bear in a more diffuse way;

- 3) Teaching can be *research-based*, in the sense that the curriculum is largely designed around inquiry-based activities, rather than on the acquisition of subject content. In such an approach the experiences of faculty in processes of inquiry are highly integrated into the student learning activities, the division of roles between teacher and student is minimized, and the scope for two-way interactions between research and teaching is deliberately exploited; and
- 4) Teaching can be *research-informed*, in the sense that it draws consciously on systematic inquiry into the teaching and learning process itself.

How, then, might we better integrate teaching and research?:

Having posed some questions about what we might mean by better integrating teaching and research and whether talking about the modern university in such terms is even fruitful, in the final part of my presentation I do want to talk about some practices wherein we might collectively try to develop a more holistic and less compartmentalized model of the educational experience for both students and faculty. For myself, I can point to some concrete things that I have tried to do to bridge the gap. I offer these merely as examples of how I have thought about how my research and teaching are interconnected, rather than as “best practices.”

In seeking to better blend teaching and research, one of the things that I have thought important to do is to write a number of articles on the scholarship of teaching and, more specifically, on how to use in the classroom some of the research which I have conducted. For instance, drawing upon a piece of research I did concerning a very significant strike by the United Auto Workers in 1998 I wrote a paper for a teaching-oriented Geography journal to outline how exploring industrial disputes could serve as a basis for teaching about the economic geography of the United States.¹⁵ Likewise, I have written a bit upon methodology and how various qualitative research methodologies may be taught in the classroom. Perhaps more significantly, I wrote a research monograph which itself had its origins in the Economic Geography course that I have taught since arriving at UGA in 1992. Having developed the course around the topic of “Geographies of Globalization” and having had the benefit of classroom discussion with over a decade’s worth of students who had taken the course (as well as being unable to find a textbook that I particularly liked on this topic!), I was approached by Blackwell Press to write a book exploring the many facets of globalization – I am assuming that Blackwell had been trawling various university course catalogues to see what people had been teaching and whom they might approach to write for them.¹⁶ Anyway, having completed the book I now use it in my class, which I like to think of as closing the circle, as it were.

I have also been involved in directing undergraduate student research projects. Thus, I served as the adviser to a student involved in the CURO program, who wrote a thesis upon tourism in Croatia which came out of her participation in a service-learning study abroad program in which I was involved in that country in 2002. I was also fortunate to mentor a high-achieving high school student from Clarke Central High School who was participating in UGA’s “Young Dawgs” Program, in which local high school seniors are paired with faculty on campus so as to learn about research skills and other aspects of university life – a program which, unfortunately, seems to have fallen victim to budget cuts.

These are some examples from my own career, but there are myriad others to which we could point, both as a means of exposing students to both excellent teaching and research and as

a means whereby these talents might be combined in individual faculty. To conclude, then, I will just highlight some others in the few minutes I have left, recognizing that the possibilities of adopting any of them will likely vary by discipline. However, in doing so I want to draw heavily upon a set of “practical tips” published by the Institute for Higher Education at Griffith University in Brisbane, Australia which I think are quite good. Given that I am not a believer in trying to reinvent the wheel, I think it is worth quoting them at length here.¹⁷

- 1) Draw on personal research in designing and teaching courses.
 - a. Incorporate current research directly into the curriculum as the focus of an entire course or part thereof;
 - b. Refer to your own experience of tackling “real world” problems in your research as illustrative examples to help students understand ideas, concepts and theories; and
 - c. Illustrate the values, practices and ethics of your discipline by having faculty members, including graduate students, discuss their current research projects.
- 2) Place the latest research in the field within its historical context in classroom teaching.
 - a. Contextualize discussions of current research findings by referring to some of the discredited theories of the past and the passionate debates of the present; and
 - b. Demonstrate the provisional nature of knowledge and its dynamic and evolving nature with an historical perspective showing how current policies and practices have evolved from earlier practices.
- 3) Design learning activities around contemporary research issues. Ask students to explore cutting-edge research problems or to suggest solutions to current real world problems based on their knowledge of the fundamentals of the discipline. Variants of this activity include asking students to:
 - a. Investigate the reporting of the status of a current research question in the discipline by comparing media reporting of a study with the official report;
 - b. Analyze the methodology and argument presented in a journal article setting out recent research findings; and
 - c. Conduct a small-scale literature review, leading to a conclusion about the current state of knowledge and further questions to be addressed.
- 4) Teach research methods, techniques and skills explicitly within programs.
 - a. Develop students’ understanding of research methodologies during laboratory classes;
 - b. Design research methodology courses that provide opportunities to apply research skills to authentic research problems; and
 - c. Design assessment tasks within subjects that provide students with opportunities to learn different methods and skills associated with key contemporary research issues.
- 5) Build small-scale research activities into undergraduate assignments, for students at all levels can benefit from small-scale research activities that can often be carried out in groups. This mirrors the research culture of working in research teams rather than conducting individual research.
 - a. Ask students to analyze research data from existing “real world” projects;
 - b. Provide students with a research question which requires them to conduct a small-scale literature review, decide on methodology, gather data, write up results and reach conclusions; and

- c. Offer capstone courses that focus on a major project utilizing the research skills and disciplinary knowledge acquired in previous semesters.
- 6) Involve students in departmental research projects.
 - a. Give students a self-contained project within a larger project;
 - b. Organize students to act as research assistants to higher degree research students or faculty members; and
 - c. Organize site visits to university research centers.
 - 7) Encourage students to feel part of the research culture of Departments.
 - a. Inform undergraduate students about the research interests and strengths of staff in the Departments in which they are studying;
 - b. Refer to colleagues' areas of interest and achievements and, where possible, invite them to speak to students about their work; and
 - c. Encourage undergraduate and graduate students to attend research seminars by visiting scholars, give papers at conferences, and host student conferences.

One example of how this has been implemented structurally has come from University College London, where first-year Geography students are required to interview a faculty member about his/ her research.¹⁸ In this model, students are divided into small groups and allocated a faculty member. They are then given three of the faculty member's representative pieces of writing, together with their CV. Having read these materials the students then develop an interview schedule, conduct an interview, and write up a 1,500 word report on the objectives of the faculty member's research, how that research relates to their earlier studies, and how the faculty member's research relates to his or her teaching, other interests, and Geography as a whole.

- 8) Infuse teaching with the values of researchers so as to encourage students to understand and aspire to researchers' values like objectivity, respect for evidence, respect for others' views, tolerance of ambiguity, and analytical rigor, by:
 - a. Modeling researchers' values in classroom interactions;
 - b. Talking about the process that researchers go through before their work is published and the number of revisions typically involved; and
 - c. Providing structured learning experiences that require students to develop these values, such as providing research articles presenting opposing arguments on the same topic and asking students to analyze their validity and draw a conclusion.

The above, then, provides eight ways in which we can ponder how to better link teaching and research. To this, though, I would like to add one more, based upon my own experience of having been involved in service-learning projects in Croatia and Tanzania, namely:

- 9) Engage with the community beyond the university's walls through various service-learning and service-provision activities. For example, working with groups off campus and helping with community-oriented research can be a tremendous way to mix research with pedagogy. This can be a great two-way street – students learn by serving the research needs of the community. These can be more formal or less formal arrangements. On the less formal side of things faculty might have their students work on some kind of community education project, maybe conducting oral histories of local people which are then used to develop a play for the community concerning significant local events. On the more formal side of things, these kinds of arrangements may become institutionalized. For example, here at UGA in my own Department we have

the Athens Urban Food Collective, which is a joint UGA/community effort to learn about and engage in interventions around issues of urban hunger in Athens. In signing up for the course GEOG 4890/6890 (Athens Urban Food Collective Service Learning) students can engage with the community whilst learning about issues of hunger, the environmental science behind food production (they run some community gardens), the sociology of how community groups engage in political organization, and matters of conservation and sustainable development, amongst other things. Again, drawing from Geography, at Syracuse University there is a Community Geographer.¹⁹ Created in September 2005, the Community Geographer “provides a service to, and serves as a resource for, community and neighborhood groups, social service agencies, faith-based agencies, nonprofit organizations, and community coalitions that would like to use GIS mapping to address a community concern but lack the financial resources or technical capacity. [The Community Geographer] assists community partners to frame research questions, create, collect, manage, analyze, and interpret geographic data, and use geographic information to create positive community change.” Although this person is a staff member, there are a number of ways in which undergraduates and graduate students can get involved and, in so doing, not only transcend the border between the campus and the community but also that between research and teaching.

So, in concluding what I hope to have done today is to problematize some of the issues concerning what we mean about better merging research and teaching in the modern research university and, perhaps, to have given you something to mull over during the next couple of days here in Unicoi.

Thank you.

Endnotes

1. J. Hattie and H.W. Marsh (1996) “The relationship between research and teaching: A meta-analysis.” *Review of Educational Research* 66.4: 507-542.
2. R.Y. Ebied and M.J.L. Young (1974) “New light on the origin of the term ‘Baccalaureate’.” *Islamic Quarterly* 18, 3-7.
3. The Oxford Movement was a 19th century association of High Church Anglicans who argued that some of the mystical Catholic traditions which had been disparaged during the Reformation now be included in Anglican liturgy and theology.
4. J.H. Newman (1853) *The Idea of a University*. Reissued by Yale University Press, 1996.
5. A. Flexner (1930) *Universities: German, English, American*. New York: Oxford University Press.
6. *Reinventing Undergraduate Education: A Blueprint for America’s Research Universities*. A report by the Boyer Commission on Educating Undergraduates in the Research University
7. A. Jenkins, M., Healey, and R. Zetter (2007) “Linking teaching and research in disciplines and departments.” Report for the Higher Education Academy, United Kingdom.
8. Hattie and Marsh, *ibid*.
9. Here Hattie and Marsh quote K. Eble (1976) *The Craft of Teaching* (New York: Jossey-Bass), p. 19.
10. R. Neumann (1994) “The teaching-research nexus: Applying a framework to university students’ learning experiences.” *European Journal of Education* 29.3: 323-339.

11. C. A. Merkel (2003) "Undergraduate research at the research universities." *New Directions for Teaching and Learning* 93: 39-53.
12. See E.L. Boyer (1990) *Scholarship Reconsidered: Priorities of the Professoriate*. Report for The Carnegie Foundation for the Advancement of Teaching.
13. For a longer list, see R. Collins and A. Palmer (2004) "Perceptions of rewarding excellence in teaching: carrots or sticks?" Report for The Higher Education Academy, York, UK. Available at www.heacademy.ac.uk/assets/documents/resources/resourcedatabase/id394_perceptions_of_rewarding_excellence.pdf
14. Griffiths, R. (2004) "Knowledge production and the research-teaching nexus: The case of the built environment disciplines." *Studies in Higher Education* 29.6: 709-726, as quoted in A. Jenkins and M. Healy (2005) "Institutional strategies to link teaching and research." Report for The Higher Education Academy, York, UK. Available at www.heacademy.ac.uk/assets/documents/research/Institutional_strategies.pdf
15. A. Herod (1999) "Using industrial disputes to teach about economic geography." *Journal of Geography* 98.5: 229-241.
16. A. Herod (2009) *Geographies of Globalization: A Critical Introduction*. Chichester, UK: Wiley-Blackwell.
17. Posted at www.griffith.edu.au/gihe/pdf/gihe_tipsheet_web_rbl.pdf. [Adapted from Baldwin, G. (2005): "The teaching-research nexus: How research informs and enhances learning and teaching in the University of Melbourne." Melbourne: The University of Melbourne. Available in electronic form from: <http://www.cshe.unimelb.edu.au>; and Blackmore, P. and Fraser, M. (2007) "Researching and teaching: Making the link." In P. Blackmore and R. Blackwell (eds.), *Towards Strategic Staff Development in Higher Education*. Maidenhead, UK: McGraw-Hill International, pp. 131-141.]
18. C. Dwyer (2001) "Linking research and teaching: A staff-student interview project." *Journal of Geography in Higher Education* 25.3: 357-366.
19. For more information, visit www.communitygeography.org