Learning, Teaching, and Researching Biblical Studies, Today and Tomorrow

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The scope of my address is at the same time both absurdly ambitious and simple to state. It is an examination of what we are doing—or think we are doing—with our students, in the academic study of the Bible at every level, from the beginning undergraduate to the most advanced researcher. It is a questioning of the rationales and the processes of learning, teaching, and research. And it is motivated by an anxiety that in all our great technical and methodological advances in our knowledge and understanding of the Bible we may have forgotten to keep these questions of our underlying purpose alive.

Almost everyone in this room is a teacher of the Bible—for some, the teaching of students is more or less the whole of their daily task; for others it may be a necessary duty and distraction from what they regard as their real work. And yet, when we come together in our congresses of biblical scholars, many of us seem to feel we are on holiday and manage to slough off the teaching business altogether (apart from a couple of sessions). The truth is actually more ugly than that: there is in some quarters an underlying belief that teaching is an activity that is inferior to research. Those who can, research; those who can't, teach. No presidential addresses, delivered by scholars who have made their name in research, have ever been devoted to teaching, as far as I know. I am aiming to set teaching on the research agenda of every biblical scholar, to make sure it is firmly embedded in the program of the Society of Biblical Literature, and to signal to our students that they form part of our core business.

I am, of course, not the first or the only teacher of biblical studies to be advocating the program I am sketching in this address, and I know that much of what I have to say will not be news to many of you. Many intuitively good teachers are

already doing all the things I will have to recommend, and in some quarters the happy *eschaton* of "tomorrow" has already dawned. But I still think it would be good to focus on the teaching of our subject, to scrutinize it and to theorize it, and to imagine a tomorrow better than today.

The reason I connect our *research* with teaching is twofold: (1) I shall be arguing for the tearing down of the traditional divide between teaching and research, and for the incorporation of research into the program of every student in higher education. (2) What we teach our students today is, more or less, what they will research tomorrow if they go into full-time research and enter the profession of biblical scholars. There will indeed always be people who will strike out on new paths of their own, but on the whole the questions students learned to examine as undergraduates and as graduate students will be the kinds of questions they examine their whole life long—that is what they have been trained to do. In our undergraduate classrooms as well as in our graduate seminars we are day by day shaping the future of the discipline, and that is why strategic thinking about our discipline must begin with a reexamination of what goes on in our classrooms.

I say I am concerned with teaching, since that is the familiar term, but it is not so much teaching that I care about, but learning.[1] I try to avoid the term "pedagogy," since that fixes the gaze on the teacher, who is the pedagogue, not on the learner. I want in fact to advocate a shift of focus in our educational theory and praxis from the teacher to the student. If there is no learning, there is no education; if the students are not actually learning, there is no point in having a teacher.

Everything I have to say revolves around one phrase:

1. Student-centered Learning

It's an oddly redundant phrase, for what else could learning be but student-centered? The phrase comes into being, of course, as a contrast to the traditional educational method of teacher-centered learning. Traditionally, the teacher has been at the center, in the forefront, at the front of the room (as in this room, where I have been given the role of the traditional teacher). The teacher is active; the students (like you tonight, I apologize) are essentially passive and receptive. The teacher fills the previously empty heads of the pupils (unlike yours) with knowledge. The student-centered model, on the other hand, puts in the foreground the needs, capacities, interests, and learning styles of the students, makes the teacher

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[1] A good deal of excellent work on teaching biblical studies actually screens out the learners to a greater or lesser degree through focusing on the activity of the teacher. The reader of the following resources might like to examine to what extent it is the student's activity that is the object of attention: Mark Roncace and Patrick Gray, eds., *Teaching the Bible: Practical Strategies for Classroom Instruction* (SBLRBS 49; Atlanta: Society of Biblical Literature, 2005); and, by the same editors, *Teaching the Bible through Popular Culture and the Arts* (SBLRBS 53; Atlanta: Society of Biblical Literature, 2007); and the Wabash Center's journal, *Teaching Theology and Religion*.

into a facilitator of the students' learning, and makes students responsible for their own learning. This is not perhaps a very modern view; already Plutarch said: "The mind is not a vessel to be filled, but a fire to be kindled" (*Mor.* 1.3 [*On Listening*]).[2]

The change from a teacher-centered model to a student-centered one is the biggest upheaval in educational theory and practice that has happened in my lifetime. For me it happened in a moment when I woke one morning vowing to stop teaching biblical studies and start teaching students. I had always done my best to present to my students the most up-to-date and authoritative knowledge about the topic for the day, in the most clear and comprehensible way I could, of course, but guided by the demands of the subject matter. I was teaching the *subject*. My tattered lecture notes on the Psalms, for example, are mute testimony to my earliest concerns with the content of Psalms research, a privileging of the scholarly tradition. There are all the annotations on the Hebrew text, in an amazing variety of colored inks, of the ideas of Weiser and Kraus and Dahood, with condensations of the latest articles in the *Journal of Biblical Literature* and *Vetus Testamentum*, with more marginal notes and layers of tradition than a rabbinic Bible. My task, as I saw it for my first decade of teaching, was to convey to my students the latest thinking of scholars on the Psalms, to fill their heads with the best and the most recent research.

Teaching *students* was a totally new enterprise. Now I needed to discover, each week afresh, what the class already knew, what interested them, how they went about learning, and how they differed from one another. It has been well said that

> [t]he most important factor influencing learning is what the learner already knows. Ascertain that and teach . . . accordingly. . . . Subject matter content . . . is always, and can only be, learned in relation to a previously learned background of relevant concepts, principles in a particular learner.[3]

It took me the rest of my career to gain any kind of proficiency at this new style of teaching, and I never became as good at it as I had been at the old style of lecturing and expounding. But at least the seats in my classroom were reconfigured so that students looked at one another, not at me, engaged with one another rather than with me alone, and I turned from being the "sage on the stage" to the "guide by the side."[4] This was just in time, for I had begun to reflect on the value of a life spent

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[2] Plutarch imagines a man who, "going to his neighbour's to borrow fire and finding there a great and bright fire, should sit down to warm himself and forget to go home; so is it with the one who comes to another to learn, if he does not think himself obliged to kindle his own fire within and inflame his own mind, but continues sitting by his master as if he were enchanted, delighted by hearing. Such a one, although he may get the name of a philosopher, as we get a bright color by sitting by the fire, will never clear away the mould and rust of his mind, and dispel the darkness of his understanding by the help of philosophy."

[3] David P. Ausubel, Joseph D. Novak, and Helen Hanesian, *Educational Psychology: A Cognitive View* (2nd ed.; New York: Holt, Rinehart & Winston, 1978), 163–64.

[4] For the phrase, see Alison King, "From Sage on the Stage to Guide on the Side," *College Teaching* 41 (1993): 3–35.

teaching people things they had subsequently forgotten—and was in danger of being overwhelmed by dark and dangerous thoughts.

2. The Theory of Student-centered Learning

I shall be brief in spelling out the educational theory supporting student-centered learning, since I did not arrive at my practice through theory, and in any case I believe that theory is best understood as reflection on practice, not as reasoning prior to practice. Enough to say that the practice of student-centered learning is well supported by formidable theoretical frameworks. The most important of them is the constructivist theory of learning, first developed by the Swiss epistemologist Jean Piaget.[5]

Learners construct their own knowledge, Piaget argued, via two means: assimilation, through which they incorporate new knowledge into their already existing framework, and, more rarely, accommodation, in which they revise their frameworks in the light of new knowledge. I may be able to memorize (temporarily) discrete and unrelated facts,[6] but I will learn something only if I can fit it into my already existing frameworks of knowledge, or, exceptionally, if I reconfigure my existing framework into a new shape in order to accommodate the new fact.

This activity of reformulating old knowledge and generating new knowledge, constructing knowledge by connecting new ideas and material to old ideas and material, and making meaning for ourselves, is the path to remembering; we remember best what we have come to know for ourselves.

Learning does not require a teacher. But learners learn faster and better if they have someone who can see how they can capitalize on the knowledge they already have, who can edge them forward into the next arena where they can expand their knowledge, their zone of proximal development. That was the term of the Russian psychologist Lev Vygotsky (1896–1934), who defined the lower limit of that zone as what the learner can do *without* help and its upper limit as what the learner can do *with* help.[7]

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[5] Jean Piaget, *Logique et connaissance scientifique* (Encyclopédie de la Pléiade 22; Paris: Gallimard, 1967); idem, *The Psychology of Intelligence* (Paterson, NJ: Littlefield, Adams, 1960). On the theory, see, e.g., D. C. Phillips, ed., *Constructivism in Education: Opinions and Second Opinions on Controversial Issues* (Ninety-ninth Yearbook of the National Society for the Study of Education; Chicago: University of Chicago Press, 2000). See also Noel Entwistle, *The Impact of Teaching on Learning Outcomes in Higher Education: A Literature Review* (Sheffield: Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom, Universities' Staff Development Unit, 1992).

[6] See also A. L. Brown, J. Bransford, R. Ferrara, and J. Campione, "Learning, Remembering, and Understanding," in *Handbook of Child Psychology: Formerly Carmichael's Manual of Child Psychology* (ed. Paul H. Mussen; 4 vols.; 4th ed.; New York: Wiley, 1983), 3:77–166; M. C. Wittrock, "Generative Processes of Comprehension," *Educational Psychologist* 24 (1990): 345–76.

[7] His formulation was this: "the distance between the actual developmental level as deter-

But teachers bring their own baggage into classrooms, and classrooms and schools and educational processes are inherently political and not remotely value-free. A third strand in the theory of student-centered learning is the concept of "critical pedagogy," inspired by the work of the Brazilian educationist Paulo Freire, especially in his book *Pedagogy of the Oppressed*.[8] Here he encouraged students to think critically about their experience of education, identifying and resisting the elements in it that reinforce the power structures of their society.

3. Learning Skills versus Knowledge

One ideal for the practitioner of student-centered learning, effectual also for the removal of existential doubt about the value of one's life and work, is to resolve to teach students nothing they can forget. I mean, to teach them how to do things, to enable them to acquire skills rather than knowledge. I think of how I taught my children to ride a bicycle, to make bread, to use a computer. However rusty they may become at these skills, they will never forget them. And that is because they were participants in the learning activity, which became threshold experiences for them, moving them up through their zone of proximal development.[9]

In the classroom, if our students learn how to go about finding information, rather than just learn information we set before them, it will be a transferable skill they can apply through all their life. If we have a class structure where students mentor other students and show them how to become a biblical critic, saying as well as doing, they will be learning more effectively. If they practice writing three hundred words on the kingdom of God—or, to be more extreme, fifty words on the God of the OT—as if for an encyclopedia, and critique each other's work, they will have a skill they will use over and over again.

4. Knowledge versus Understanding

Another useful contrast is that between knowledge and understanding. Too many courses are choked with information or knowledge. In a classic formulation:

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mined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (L. S. Vygotsky [Vygotskij], *Mind in Society: The Development of Higher Psychological Processes* [ed. Michael Cole et al.; Cambridge, MA: Harvard University Press, 1978], 86).

[8] Freire, *Pedagogy of the Oppressed* (trans. Myra Bergman Ramos; New York: Seabury, 1973).

[9] Cf. the term "threshold concept" in educational theory; see "Threshold Concepts: Undergraduate Teaching, Postgraduate Training and Professional Development: A Short Introduction and Reference List," www.ee.ucl.ac.uk/~mflanaga/thresholds.html.

"Rabbit's clever," said Pooh thoughtfully.
"Yes," said Piglet. "Rabbit's clever."
"And he has a brain."
"Yes," said Piglet. "Rabbit has a brain." There was a long silence.
"I suppose," said Pooh, "that's why he never understands anything."[10]

Information can be passed on to you by someone else; but understanding is something you have to achieve for yourself.

If you have knowledge, you can

<div align="center">

name
describe
list
state
give an outline of
give an account of
give an example of
summarize

</div>

But if you understand, you can

<div align="center">

explain
give reasons for
give reasons against
find connections between
discuss the issue of
show the purpose of
state the meaning of
show the importance of
state the results of
draw conclusions

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It is a revolutionary classroom where understanding, rather than knowledge, is the goal.

5. Learning Styles

Every student is different, but in the typical classroom they are treated as if they were all the same. If the class hour is spent listening to the teacher's voice, some students will be bored because the pace is too slow and others will become anxious because they are being left behind.[11] As well, if the lecture is the principal

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[10] A. A. Milne, *The House at Pooh Corner* (London: Methuen, 1928), 128.

[11] Too little arousal leads to boredom, too much to anxiety, according to D. O. Hebb, "Drives and the C.N.S. (Conceptual Nervous System)," *Psychological Review* 62 (1955): 243–54. His analy-

mode of delivery of the course, those who learn through what they hear will do well, and those who learn from what they see will not do well, even though the two kinds of student might be equals, intellectually speaking.

The matter of learning styles has been very thoroughly researched, yet it is a rare program where the learning preferences of students are catered to. No teacher I know of in our field (I don't know all teachers!) attempts to discover the preferred learning styles of students before trying to teach them, and unless the teacher is somehow naturally gifted to offer a variety of teaching methods some students will invariably be disadvantaged.

One widely adopted analysis of learning styles is the VARK (Visual, Aural, Read/Write, and Kinesthetic) model of Neil Fleming.[12] The four styles he identifies are described in the following chart.

Visual learners	tend to learn best from diagrams, visual displays; may prefer to sit at the front of the class in order to see the teacher's body language clearly; profit from teachers who use gestures and picturesque language
Auditory learners	tend to learn best through lectures, discussions; may find their understanding benefits from reading aloud
Read/write learners	tend to prefer information displayed as words; such students favor PowerPoint, the Internet, lists, handouts, dictionaries, thesauri, quotations, and words
Kinesthetic learners	tend to learn through moving, doing, and touching

Now most people (60 percent) have multimodal learning styles (you can find out what your own style is on Fleming's quick online questionnaire), and don't fail to learn if their own most favored styles are not in use. Yet 40 percent are severely hindered if they are not free to learn in their own way. So the teacher not only needs to know who is in the classroom but also should be devising a variety of learning projects that enable all students to benefit. Students should of course be encouraged to expand their repertory of learning styles and not remain content with the styles they instinctively prefer.[13]

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sis was modified by M. J. Apter, *Reversal Theory: Motivation, Emotion and Personality* (London: Routledge, 1989).

[12] See his website at www.vark-learn.com.

[13] Another very influential analysis of learning styles is that of Peter Honey and Alan Mumford, who distinguish activists, reflectors, theorists, and pragmatists (*The Manual of Learning Styles* [3rd ed.; Maidenhead, Berkshire: Peter Honey, 1992]; and *Using Your Learning Styles* [3rd ed.; Maidenhead, Berkshire: Peter Honey, 1995]).

I, for example, would benefit from developing a more visual learning style. I panic when I pull off the highway for a coffee and cannot decipher the signs in time to choose which lane I should go into. It takes me—for I am a dedicated read/write learner—four times as long to understand those signs as to understand the bare words: Fuel, Food, Cars, Trucks.

6. Outcomes

Another important feature of a student-centered approach is the provision of "outcomes" for each course of study, whether a whole degree course or a unit that lasts just a semester. An "outcome" is a statement of what all students will be able to do on successfully completing the course—what the student will be able to understand, explain, evaluate, and apply. The focus is on the student's achievement. It is a statement not of what the student will *know*—though of course there will be an increase in knowledge—but of the capacities, skills, and know-how that the student will be able to deploy. Stating outcomes is fair to students, since it gives them some assurance of the benefit of the course to them. It is also helpful to teachers, since it compels them to think through what the purposes and intentions of their courses are.

Typically, outcomes are couched in the following form: At the end of a course, the student will be able to . . . . The chart below offers a sample of what a statement of outcomes might look like.[14]

Outcomes for the Biblical Studies Course/Program as a Whole

Name of Outcome	*By the end of the course, the student will/will be able to*
Broad Understanding	have a broad understanding of the Bible in its historical setting and in the modern world
Detailed Knowledge	have acquired a detailed knowledge of the content of several biblical books
Analytical Skills	be adept in analytical and critical thinking, with the ability to compare and contrast, identify key issues, themes and arguments
Evaluative Skills	evaluate ideas and arguments for validity or adherence to standards
Problem-Solving Skills	deploy a variety of tools and methods to address a problem with which one is confronted

[14] This statement was drawn up for our Department of Biblical Studies in Sheffield in 2000, in preparation for the national Teaching Quality Assessment in 2001. All the outcomes here were specified by the university's generic statement of learning outcomes.

Oral Skills	make effective oral presentations, engage in discussion and argument
Written Skills	use clear and correct written English, use appropriate academic language, and create a variety of written reports
Numeracy Skills	handle many kinds of non-textual material, including tables, symbols and icons, and use the internet and a variety of computer software for word processing, data handling and presentations
Presentational Skills	make a formal presentation to a group, using presentation software where appropriate
Subject-Specific Skills	deploy the range of skills and knowledges appropriate for a graduate in Biblical Studies, including methodological, historical, textual and written skills
Collaborative Skills	work together with others in preparing, presenting or evaluating a project
Creativity and Imagination	give evidence of creative approaches to problems and imaginative presentation of materials
Research Awareness	identify a range of research resources and be aware of differing levels of research depth
Cultural Context	situate Biblical Studies within a broader cultural and intellectual context
Professional Values	display the intellectual qualities of a graduate, such as respect for accuracy, fairness in handling the views of others, insistence on evidence before making a judgment, sympathy with the value systems of other cultures while being clear about one's own values, concern for the broader human implications of the subject of study
Adaptability	feel competent in a changing world and implement change in one's own work and thinking
Varying Competences	operate at various levels of complexity and set oneself realistic goals
Self-Awareness and Personal Development	reflect on the educational process and other life experiences in a creative way
Research-Informed Learning and Teaching	appreciate the value of access to professional and sustained research in any area of learning

Each outcome results from a distinctive set of cognitive activities of which students have had experience. We could draw up a table of verbs that give evidence of those activities.

knowing	define, describe, identify, label, list, name, outline, reproduce, recall, select, state, present, extract, organize, recount, write, measure, relate, match, record
comprehension	interpret, translate, estimate, justify, clarify, defend, distinguish, explain, generalize, exemplify, infer, rewrite, summarize, discuss, perform, report, present, indicate, find, represent, formulate, contrast, classify, express, compare, recognize, account
application of knowl-edge/understanding	apply, solve, demonstrate, change, compute, manipulate, use, employ, modify, operate, predict, produce, relate, show, select, choose, assess, illustrate, verify
analysis	recognize, distinguish, evaluate, analyze, differentiate, identify, infer, outline, point out, relate, select, separate, divide, compare, contrast, justify, resolve, examine, conclude, criticize, question, diagnose, categorize, elucidate
synthesis	arrange, assemble, organize, plan, prepare, design, formulate, construct, propose, present, explain, modify, reconstruct, relate, revise, summarize, account for, report, alter, argue, order, select, manage, generalize, derive, synthesize, enlarge, suggest
creativity	originate, image, begin, design, invent, initiate, state, create, pattern, elaborate, develop, devise, generate, engineer
evaluation	judge, evaluate, assess, discriminate, appraise, conclude, compare, contrast, criticize, justify, defend, rate, determine, choose, value, question, measure

We shouldn't imagine, however, that all courses with stated outcomes will involve student-centered learning. It is easy enough for a traditional teacher to respond to demands to state the outcomes of a course by drawing up a list of what the teacher believes the student will be able to do at the end of the course. A statement of an outcome is bogus if students have not actually practiced and had experience of the skill in question. In any case, the very notion of "outcomes" is to some extent problematic, since it deflects attention from the even more important issue of process and makes knowledge and knowledge acquisition out to be more predictable and assured than it can possibly be (which is another story).[15]

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[15] See Ronald Barnett, *Realizing the University in an Age of Supercomplexity* (Buckingham: Society for Research into Higher Education and Open University Press, 2000), 171.

What should be the outcome of a whole program in biblical studies? Everyone in the field, and every institution offering such a program, should ask this question every year. Without an answer to this question—of the most extreme generality, I admit—we really shouldn't be let loose on students. If we don't know what our program is *for*, how can we expect them to?

It cannot be that at the end of the program students' heads will be as full of the latest scholarly knowledge about the Bible as it is possible for them to become within the time. It has to be something about what they are able to do now that they have studied the Bible in depth. My proposal for a total outcome is along these lines: Students will be able to think like biblical scholars. That is, after all, all that we know how to do, the only generic skill we have in common. What else do we have to pass on to our students?

As one practitioner puts it, "Today's educator should aim not simply to produce more scientists but rather to get *all* students to learn to think about science like a scientist."[16]

How, then, we might well ask, do biblical scholars think? You might put it differently, but I don't think we would much disagree on the following: They have learned to approach the Bible from a standpoint of critical distance, even while, in most cases, they are deeply aware of the Bible's influence on themselves. They respect rationality even when the subject of their study and their own environment makes them open to the subjective. They are scrupulous about evidence-based argumentation in the face of less cerebral opinions about matters of faith and religion. They are committed to fairness and courtesy in an intellectual sphere in which hostility and distortion are not unknown.

If our students are able to think like that, and know how it is they are thinking, then we can be sure that they have achieved the outcomes we desired.

7. The Teacher as Facilitator

Teachers who become facilitators of student learning have to learn a new set of skills for themselves.[17] Below is an exemplary table contrasting the activities of the traditional teacher with those of the teacher who has become a facilitator:

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[16] C. Wieman, "Professors Who Are Scholars: Bringing the Act of Discovery to the Classroom," www.reinventioncenter.miami.edu/Conference_04/Wieman/Presentation.htm.

[17] H. Bauersfeld, "The Structuring of the Structures: Development and Function of Mathematizing as a Social Practice," in *Constructivism in Education* (ed. Leslie P. Steffe and Jerry Gale; Hillsdale, NJ: Lawrence Erlbaum, 1995). Interesting also is Karen M. Lauridsen, "'The Mind Is Not a Vessel to Be Filled but a Fire to Be Kindled': On the Supervision Process and Supervision Training at the Aarhus School of Business, Aarhus University," www.asb.dk/fileexplorer/fetchfile .aspx?file=9396.

Traditional Teacher	Facilitator
tells	asks
lectures from the front	guides and supports from the back or side
answers according to the textbook or curriculum	guides student into forming a personal conclusion
transmits knowledge	enables student's learning
class is mostly monologue	class is mostly dialogue
focus is on content	focus is on learner's activity
learner is relatively passive	learner is relatively active
executes prior plan for class	adapts and reassesses as the class progresses
ideal student is a sponge, absorbing and retaining	ideal student is a carpenter, building new structures of knowledge from prior knowledge and new ideas

It is not a simple matter to transform oneself from teacher to facilitator, as one author acknowledges:

> [T]here is an urgent need for all programmes of higher education . . . to be geared to developing the skills of autonomous learning. . . . To reorient higher education . . . in this direction is a tremendous challenge. It is a concept that is foreign to most educators. It has not been part of their training. . . . It requires a redefinition of their role away from that of transmitter and controller of instruction to that of facilitator and resource person to self-directed learners. It is frightening. They do not know how to do it.[18]

Teachers turned facilitators will not be short of occupations, though: instead of lecturing, pontificating and generally showing off, they may find themselves

circulating	motivating
redirecting	watching
questioning	moderating
assessing	diagnosing
guiding	troubleshooting
directing	observing
validating	encouraging
moving	suggesting
monitoring	modeling
challenging	clarifying[19]

[18] Malcolm S. Knowles, "Preface," in *Developing Student Autonomy in Learning* (ed. David Boud; London: Kogan Page, 1981), 8.

[19] Jamie McKenzie, "The WIRED Classroom (Cont.)," *Educational Technology Journal* 7/6 (March 1998), http://fno.org/mar98/flotilla2.html.

If students take responsibility for their own learning and become independent learners, it does not mean that they will be left to their own devices. There are still important roles for the teacher, who remains a critical factor in the learning process,

- providing learners with resource materials;
- whetting learners' appetites to learn;
- providing learners with chances to test out their learning;
- giving learners feedback on their progress;
- helping learners to make sense of what they have learned;
- stimulating interaction among the students themselves.[20]

8. How Students Actually Learn Best

If we care about student learning, we will inevitably want to know what are the optimum circumstances for student learning. Most students say that they learn best

- at their own pace
- at times and places of their own choosing
- often with other people around, especially fellow learners
- when they feel in control of their learning.

9. Social Learning

Fellow learners are important for most independent learners. They contribute to the learning process by

- helping each other to keep a sense of perspective;
- explaining difficult ideas and concepts to each other;
- debating issues informally or in a formal debate;
- helping each other to find out which resource materials work best;
- learning from each other's mistakes.[21]

The research evidence shows that students working in cooperative groups make better progress than students working individually or in competitive groups.[22] Some educationists even claim that knowledge is essentially constructed in a social

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[20] See, e.g., Phil Race, *The Open Learning Handbook: Promoting Quality in Designing and Delivering Flexible Learning* (2nd ed.; London: Kogan Page, 1994).

[21] The points in §§8 and 9 are derived from Phil Race, "A Fresh Look at Independent Learning," www.city.londonmet.ac.uk/deliberations/eff.learning/indep.html.

[22] Steven McGee, "Designers Should Encourage Participation in Team Research," http://vdc .cet.edu/entries/team.htm, citing D. W. Johnson and R. T. Johnson, "Cooperation and the Use of Technology," in *Handbook of Research for Educational Communications and Technology* (ed. D. H. Jonassen; New York: Simon & Schuster Macmillan, 1996), 1017–44.

context and only secondarily appropriated by individuals in a process known as "collaborative elaboration."[23]

10. Cascade Learning

Our university has as one of its mottoes, inscribed on an open book on its coat of arms, *Disce Doce,* "teach, learn."[24] The official interpretation is, of course, that teachers teach and students learn. But I have always wanted to deconstruct that opposition and think of it as the dual duty of all members of the university, both faculty and students, to learn and to teach. Which of its academic staff has stopped learning? Shame on them if they have. Should not "*doce*" be addressed to them as much as to students? And "*disce*" to students? Why should anyone think that students should not be teachers? If by their second year students are not in a position to be teaching first-year students (in some respect or another) what, pray, have they learned in their first year?

11. The Inside-out Classroom

Let's hear a word about the inside-out classroom (more often called the upside-down classroom), meaning an invitation to reconsider what, in the learning experience, goes on—or could go on—inside and outside our classrooms. In the most traditional model, the classroom is for the passing on of information, the space outside the classroom for student exercises, conferring with peers, reading, and so on. What if all the routine instructional material were moved outside the classroom, to Internet resources, podcasts, and written texts, and the classroom became the social space for learning? With the teacher as facilitator of the group's learning activity, the (relatively) noisy classroom would become a site of serious learning instead of drowsy note taking. If indeed the lecture was once an acceptable medium for conveying information (though it was never very good for promoting critical thought or changing attitudes),[25] it has surely been largely superseded by the more flexible mechanisms available today electronically for the transmittal of

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[23] See Peggy van Meter and Robert J. Stevens, "The Role of Theory in the Study of Peer Collaboration," *Journal of Experimental Education* 69 (2000): 113–27; J. G. Greeno, A. M. Collins, and L. B. Resnick, "Cognition and Learning," in *Handbook of Educational Psychology* (ed. D. Berliner and R. Calfee; rev. ed.; New York: Macmillan, 1996), 15–41.

[24] The motto *disce, doce, dilige* can be traced to *Piers Plowman,* Passus 13, line 137 ([William Langland], *Piers Plowman: The B Version. Will's Visions of Piers Plowman, Do-Well, Do-Better and Do-Best* [ed. George Kane and E. Talbot Donaldson; rev. ed.; London: Athlone, 1988], 493).

[25] See Donald Bligh, *What's the Use of Lectures?* (5th ed.; Exeter: Intellect, 1998), esp. 3.

information—which students can use outside the classroom at their own pace and in settings of their own making.

12. Learning in the Digital Age

It is said that everyone born after 1985 thinks differently from older people and speaks a different language.[26] That is because they were "born digital,"[27] and grew up in a world where computers were ubiquitous. Early this year I was a guest in a classroom in Los Angeles of such "digital natives" studying a chapter of the Hebrew Bible, each with a laptop, seamlessly connected to the resources of the Internet throughout the class like an external hard drive for their brains, everyone bringing all kinds of material into the classroom, filtered of course through their own experience of the upsides and downsides of the Internet and through their own sense of what was relevant to the classroom. They needed no lecture, no closely defined program of study; they had only to be let loose, and behold! more angles of vision than any teacher or facilitator could have devised were before us.

The Web as a brain extension will perhaps put paid to the old fetish of memorization. There are still those among us who require of their students astonishing feats of memorization, though they themselves would never go to the supermarket without a written shopping list and have all the family birthdays and phone numbers safely implanted in their cell phones. And students consequently (or, on their own account) think memorization meritorious and esteem teachers for examinations that require nothing but memorization. The top-ranked professor on that salutary site Rate My Professors, when I last looked, received this review:

> Easy beyond belief. All test questions are given to you prior to the test, just need to memorize. Entertaining teacher, will laugh during class.

Along with the fixation on grades, which represents the commodification of learning, in which teachers themselves are sometimes complicit, there is plainly a massive misunderstanding of what education is and can be. The deliberate memorization of unrelated facts is an unhealthy practice, unworthy of an institution of higher education and best left to *idiots savants*. Perhaps the next generation, having

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[26] The U.S. census is said to show that in 2003 computer usage by those born in 1985 was about 100 percent, whereas by those born only five to seven years earlier it was 75 to 80 percent (Don Kasun, "Why Web 2.0 Is Important, Whether You Like It or Not," http://blogs.msdn.com/dankasun/archive/2007/09/14/why-web-2-0-is-important). I am not sure that the statistics support this view, however, judging by the data at www.census.gov/population/www/socdemo/computer/2007.html.

[27] See John Palfrey and Urs Grasser, *Born Digital: Understanding the First Generation of Digital Natives* (New York: Basic Books, 2008).

grown up with the superfluity of data the Internet provides, will be the first to recognize that all that really matters is not the data but what we do with the data.

13. Inquiry-based Learning

What are we putting in the place of the information transmittal that passes for teaching in many of our institutions?[28] When the learning process of the student takes center stage, inevitably the student is conceived of as embarking on a voyage of discovery,[29] drawing on previous personal experience and prior knowledge. The teacher as facilitator proffers an issue, a problem, a realm of study that the learner will personally investigate with the support of the teacher.[30] The term for this learning model is *inquiry-based learning* (IBL).[31] Inquiry tasks invite exploration and are best if they are open-ended: the solutions in inquiry-based learning are not predetermined. The best research or inquiry questions pique the learner's curiosity, creating what researchers call intrinsic motivation—which is what students experience with their extracurricular hobbies and interests—as over against extrinsic motivation, like the hope of attaining good grades.[32]

It is by no means a matter of turning the whole learning business over to the unaided student. I recall a class on the Pentateuch where, having decided that it should be directed by student interest, I began the first class by inviting my students to tell me what it was that they wanted to know about the Pentateuch. After ten painful minutes of silence, some brave person remarked that it would be good to know something about the origins of the Pentateuch. Everyone breathed a sigh of relief, except me, who knew that the students weren't remotely interested in such a

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[28] The report of the [Ernest L.] Boyer Commission on Educating Undergraduates in the Research University noted: "The inquiry-based learning urged in this report requires a profound change in the way undergraduate teaching is structured. The traditional lecturing and note-taking, certified by periodic examinations, was created for a time when books were scarce and costly. The delivery system persisted into the present largely because it was familiar, easy, and required no imagination. But education by inquiry demands collaborative effort" (Robert W. Kennedy, *Reinventing Undergraduate Education: A Blueprint for America's Universities* [Stony Brook, NY: SUNY Press, 1998], 16).

[29] "Discovery learning" is a term sometimes used for inquiry-based learning. It is frequently associated with the name of Jerome Bruner (b. 1915), the U.S. educational and cognitive psychologist, though John Dewey (1859–1952) was a precursor.

[30] A much-visited site for the theory and practice of inquiry-based learning is based at the University of Sheffield, in its Centre for Inquiry-Based Learning in the Arts and Sciences (CILASS), at www.shef.ac.uk/cilass/.

[31] See, e.g., Michael Prosser and Keith Trigwell, *Understanding Learning and Teaching: The Experience in Higher Education* (Buckingham/Philadelphia: Society for Research into Higher Education and Open University Press, 1999).

[32] Namsoo Shin and Steven McGee, "A Research Question Should Pique Learners' Curiosity," http://vdc.cet.edu/entries/motivation.htm.

topic but had vaguely remembered that this was one of the items that every course on every book of the Bible had to contain. I would have done better to ask them, What do you already know about the Pentateuch? and start from there. The teacher will indeed often be hard-pressed to devise meaningful and interesting inquiries to set students inquiring after; but the satisfaction for both teacher and students will be a great reward.

It is not a matter either of adopting inquiry-based learning as the one teaching method for a whole course or not using it at all. There is no reason why small-scale inquiries should not be embedded in otherwise traditional teaching programs, as part of a seminar or coursework. Nor is it an approach that should be saved up for the later phases of students' courses when they have already acquired a body of knowledge about the subject. Inquiry-based learning works well for lower as well as higher levels of study, and develops students' understanding of subject knowledge that is new to them, not just of knowledge they are already familiar with.[33]

14. A Sample of Inquiry-Based Learning

Here is a simple, small, inquiry-based learning project I offered to my class on the Psalms. Our topic was Psalm 2, which I gave them as a handout without any blank lines between the four strophes such as you will find in the RSV, for example. Their task was defined as the preparation for making a movie of the psalm.

PSALM 2: THE MOVIE

Mark out the scenes in the movie, and for each scene, identify

- LOCATION
- PERSONS PRESENT
- SPEAKER(S)
- ATMOSPHERE or MOOD

Working in pairs, students discovered, without great difficulty, that they could analyze the poem something like this:

Scene	Verses	Location	Persons	Speakers	Mood
1	1–3	earth	poet, kings	poet, kings	ironic
2	4–6	heaven	Yahweh, kings	Yahweh	derisive
3	7–9	Jerusalem	Israelite king, Yahweh, nations	Israelite king	assertive
4	10–12	earth	poet, kings, Yahweh, king	poet	didactic

[33] On the effects of inquiry-based learning on student motivation, see Angela Brew, *Research and Teaching: Beyond the Divide* (Basingstoke, Hants: Palgrave Macmillan, 2006).

There was always a satisfying buzz in the room when we did this project, everyone participated, everyone was in control of his or her own learning, everyone felt that they understood the poem and how it was structured.

It was time to move on to the next element in the project:

PSALM 2: WHAT IS GOING ON?

In the World of the Text
(where there are characters, narrators, and implied readers, all "fictions")

- What prior situation is envisaged?
- What happens and what is said?
- Who acts or speaks?
- With what intention?

In the Real World
(where there are real people, authors, and readers, ancient and modern)

- What is the author trying to achieve by means of the text?
- What are the intentions of those who try to preserve this text?
- What happens to readers/hearers (you, for example) when they read/hear the text?

As you can see, this project was quite structured even though open-ended. It was also almost wholly inductive, which is to say, it did not require students to consult resources other than the text itself. Inquiry-based learning can of course be heavily resource-dependent, though my own inclination, to be frank, is toward the inductive. I once wrote a paper, "Teaching and Learning the Psalms, Inductively; or, Keeping Gunkel and Friends out of the Classroom." In it I said the following:

> Now that I have given up teaching the Psalms, and turned to teaching my students instead, trying to enable them to progress in their own understanding of the Psalms, I can go a whole semester without so much as mentioning any of those worthy and sometimes quite brilliant scholars. I have gone to the other extreme, I know, but in keeping Gunkel and friends out of the classroom I have tried to put students' learning in the foreground and to privilege their own experimentation and their own progress with interpretation. Gunkel's questions, and those of the scholarly tradition, are not allowed to set the agenda in my classroom.

Others will take a different attitude to the scholarly past, no doubt.

15. Hindrances to Learning

The greatest hindrances to learning are not, as is commonly supposed, laziness or stupidity or fizzy drinks or even cognitive illusions,[34] but a set of emotional factors.[35] Among them we may note:

- General aversion to lectures, instructions, descriptions
- Desire for lectures, instructions, descriptions
- Aversion to authority
- Desire for authority
- Unwillingness to take risks
- Willingness to take in only precisely defined concepts
- Willingness to take in only pictures
- Fear of making mistakes
- Fear of failing
- Fear of consequences
- Fear of conflict with personal beliefs

I once tested out the extent of emotional factors at work in the classroom in a workshop I did with Dutch and British Hebrew Bible scholars on the topic "synchrony/diachrony."[36] My suspicion was that the topic carried, for some people at least, quite a lot of emotional freight, since it has been constructed as a set of oppositions that encode differing scholarly practices. People even define their life's work as a devotion to a method ("I'm a form critic"). So, inevitably, very much personal investment attaches to any discussion of the topic. In an attempt to uncover the feelings associated with this subject, I compiled a simple word-association test:

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[34] See Fred H. Groves and Ava F. Pugh, "Cognitive Illusions as Hindrances to Learning Complex Environmental Issues," *Journal of Science Education and Technology* 11 (2002): 381–90.

[35] See Coenraad van Houten, *Awakening the Will: Principles and Processes in Adult Learning* (Forest Row, E. Sussex: Adult Learning Network, 1995), 140–48. See also Eero J. Laine, "Emotional Hindrances in the FL Learning Situation: The Weak Self Concept," in *Equality in Language Learning: Proceedings of the 5th Nordic Conference of Applied Linguistics, Jyväskylä, Finland, June 4–7, 1987* (ed. Kari Sajavaara; Suomen soveltavan kielitieteen yhdistyksen [AFinLA] julkaisuja 45; Jyväskylä: University of Jyväskylä, 1987), 169–76.

[36] Clines, "Beyond Synchronic/Diachronic," in *Synchronic or Diachronic? A Debate on Method in Old Testament Exegesis* (ed. Johannes C. de Moor; OtSt 34; Leiden: Brill, 1995), 52–71; reprinted in my *On the Way to the Postmodern: Old Testament Essays, 1967–1998*, vol. 1 (JSOTSup 292; Sheffield: Sheffield Academic Press, 1998), 68–87.

Which words, if any, do you associate with the term "synchronic"?

rigorous	anxious
easy	fresh
rigid	confrontational
loose	welcome
novel	cumbersome
free	trendy
dangerous	unnecessary
exciting	traditional
cautious	primary
controlled	subjective
authentic	uninteresting
orderly	pacifying
modern	left
legitimate	right
penetrating	old-fashioned

On the opposite side of the handout, the list was repeated, but the rubric was different. It read, "Which words, if any, do you associate with the term diachronic?" Participants in the workshop were asked to mark any words that came into their minds as they thought of the concepts "synchronic" and "diachronic."

To score their answers I told them at the end that they should count the number of marks they had made on each side of the sheet, and should add the two scores together. The meaning of the scoring system was simple, I said. Any score higher than zero showed that one had an emotional relationship with the topic of the workshop, and not just an intellectual interest in it. Their emotional investment in "synchrony/diachrony" would almost certainly hinder their ability to deal with the subject dispassionately. But it was too late, now that the congress had begun, to do anything much about it, since handling emotional conflicts and tensions can be a long process. All that could be done at this stage was to recognize the noncognitive element in their approach to the subject. My announcement of the meaning of the scores was greeted with much surprise and mirth, but no one seemed to deny the force of the exercise.

16. Curriculum

Many discussions of teaching or pedagogy turn out to be discussions of curriculum.[37] It's an important topic, and it certainly has an impact on the student

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[37] This is the case, for example, with Dale B. Martin's *Pedagogy of the Bible: An Analysis and Proposal* (Louisville: Westminster John Knox, 2008).

learning experience, but in and of itself it often represents a deflection of attention from students to the professional concerns of teachers. What we include in our curricula and what we exclude from them are matters of our professional expertise; decisions about curriculum are generally driven by the subject matter and especially by our view of the subject matter, not by the needs of students. Do we situate our NT courses in a framework of early Christianity of the first and second centuries or teach courses on Romans, Galatians, and Luke, for example? That depends on our view of what the NT is—an instantiation of nascent Christianity or a closed canon of normative theological writings, for example.

A student-centered learning approach to curriculum asks an entirely different question: What do students want, what will benefit them, what outcomes are being sought by the curriculum? What is it that each student, including the average student and the weak and barely passing student, will be able to do when they complete the course?

I cannot tell you what the right answers will be for your students, and students themselves cannot answer such questions from a *tabula rasa*. If I go to buy a new computer or a new car, I need to be informed about the possibilities as well as to make my own choice. Students need to be constantly challenged about their expectations for their education and to learn to problematize all authoritative statements handed down to them—including what it is they really want. But, speaking generically, students have some sense of what they want to do with their experience of biblical studies, of what they want to become when they have left the institution; so they have an idea of what their courses can do for them in realizing their ambitions. Every time we factor into our curriculum design the students and their likely futures we are promoting student-centered learning. How different curricula look when student projects are work related or real-life related, when they address the questions and issues students will encounter when they leave the classroom rather than manipulating materials created by the scholarly tradition.

I often suggest what I call the "pub-test," the pub being in British life the default social setting in which people meet. In the pub, I warn students, they will hear four typical remarks about the Bible from people who are largely ignorant of it: (1) The Bible is full of myths and legends. (2) The Bible is anti-gay. (3) The God of the Bible is an ugly bully. (4) If you are studying the Bible, you must be a very religious person. A student or graduate in biblical studies will have on such occasions, if they are lucky, thirty seconds to set the record straight from a professional standpoint before the conversation moves on—to football. If they cannot pass the pub-test, they are not worthy, I aver, of a degree in biblical studies. Suppose a curriculum (partly, at least) dedicated to students preparing themselves in research mode to handle the popular ignorance and misconceptions that surround the Bible!

17. Introductions and Surveys

In a student-centered curriculum where the designed outcome is to enable students to think like biblical scholars, one characteristic feature of biblical studies courses that would be ripe for the axe is the introductory course or the survey. Biblical scholars of all persuasions are very much against superficiality and wide generalizations, and yet when they walk into the classroom, especially with the most impressionable beginning students, they are perpetually delivering themselves of exactly that kind of remark. Jonathan Z. Smith, last year's president, acidly comments: "We're really lying, and lying in a relatively deep fashion, when we consistently disguise, in our introductory courses, what is problematic about our work." We screen from our students the contested nature of all that we handle, and we teach them to believe that what really matters is the conclusion. Smith looks at what students underline in their books: it is always the punch lines, never the arguments, never the kind of work that makes us biblical scholars and not chat show guests proffering lazy opinions. They end up believing that things are either true or false, or else that everything is just a matter of opinion.[38]

A first-year seminar devoted to a single work would be a better introduction to the field, says Smith. I concur. If I were assigned to teach a NT introduction, I would spend the whole semester on Philemon, having students research all the critical issues for themselves and build up their own picture of Paul, Pauline theology, and early Christian society on the basis of this extraordinarily luminous and revealing text. I would have them learn on a "need to know" basis, remembering Carl Rogers's dictum, "The basic idea behind teaching is to teach people what they need to know,"[39] not stuffing their heads with as much knowledge as I can manage, but letting them find out what they need "just in time," like factories that don't stockpile raw materials but acquire them just when they will use them. And I can never forget the energy that was released in my beginners' Hebrew class when my students spent two hours just comparing the English versions of Psalm 23 with the Hebrew and discovered for themselves that even the usually Reasonably Satisfactory Version (RSV) was perpetuating the old Christianization "I shall dwell in the house of the Lord for ever" and that the New American Bible had unforgivably converted all the third person verbs to second person ("In green pastures you let me graze"). Finally on this point, a word against the myth of foundationalism, that students must at the beginning of their education in biblical studies acquire sound foundations on which they can then build. There is in fact, in my view, no foundation, no starting place, no agreed body of facts that students must begin by learning. There

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[38] Jonathan Z. Smith, "The Necessary Lie: Duplicity in the Disciplines," http://teaching.uchicago.edu/tutorial/jz_smith.shtml. It is reproduced as an Afterword in Russell T. McCutcheon, *Studying Religion: An Introduction* (London: Equinox, 2007).

[39] I have not been able to trace the source of this quotation.

is no right place to start, except the place where each student is, ramshackle and half-baked though their ideas may be.

18. Reinventing the Wheel

Does not the project of inquiry-based learning amount to little more than inviting students to reinvent the wheel?

> Discovery learning is simply re-inventing the wheel. The time spent in "discovering" could be better spent using the wheels that have already been designed.[40]

So an opponent of student-centered learning. But is there not something to be said for a project of reinventing wheels? Imagine a classroom where each student or group worked out for themselves solutions to the Synoptic Problem without reference to any textbook (it can be done). You would have a class of geniuses. Perhaps you already have a class of geniuses but you are not letting them have their heads and so you don't even realize it. After a week of inventing the wheel, perhaps they will move on to making fire, which will certainly brighten up your dreary monologic classroom.

19. The Student as Scholar[41]

You can see where all this has been leading. I am proposing a new view of education, both undergraduate and graduate, in which students are not the favored recipients of the largesse of scholars who let fall some crumbs of learning from their research workbenches. Rather, those students, once they have got themselves into an institution of higher education, have embarked on the same occupation as we who earn our livings from it. Raw and ignorant they may be, and not just on day one, but if they were not, they wouldn't need to come to university. If only we could ascribe to them the same motivations and ambitions as we recognize in ourselves we might even wean them from the childish fixation on grades and easiness. Nothing motivates students like involving them in research and so making them into professionals. Mine is not the only voice calling for a new vision. I quote four such voices:

> The main hope for realising a genuinely student-centred undergraduate education lies in re-engineering the teaching–research nexus.[42]

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[40] Charles P. Nelson, "More on Sage vs. Guide," http://secondlanguagewriting.com/explorations/Topics/constructivism.html.

[41] Alan Jenkins, Mick Healey, and Roger Zetter, *Linking Teaching and Research in Disciplines and Departments* (York: Higher Education Academy, 2007).

[42] P. Ramsden, "Strategic Management of Teaching and Learning," in *Improving Student Learning Strategically* (ed. C. Rust; Oxford: Oxford Brookes University, 2001), 1–10, here 4.

We are all researchers now. . . . teaching and research are becoming even more intimately related. . . . In a "knowledge society" all students—certainly all graduates—have to be researchers.[43]

In order to integrate undergraduate research most effectively into the learning experience, undergraduate education should focus on the "student as scholar" from the first to final year. President Hodge will offer a vision of the student as scholar, where "scholar" is defined in terms of an attitude, an intellectual posture, and a frame of mind derived from the best traditions of an engaged liberal education. Fulfilling this vision of the student as scholar will require a fundamental shift in how we imagine and structure the curriculum. In this new paradigm, the curriculum is learning-centered, providing intentional pathways that culminate in capstone experiences, peer-reviewed research papers, and creative presentations.[44]

Undergraduate research has been an effective educational model for many years, but establishing an effective, sustainable institution-wide undergraduate research program is still a highly challenging undertaking. Specific challenges include offering a meaningful research experience to a significant number of undergraduates, integrating research experience with students' overall undergraduate education, and providing the optimal mix of faculty leadership and administrative support to sustain a dynamic undergraduate research program. Using examples from quite different institutions—a private liberal arts college and a major state university—this workshop will offer participants specific strategies that can be adapted to their own institutions and help them identify barriers that still prevent research from reaching all undergraduates.[45]

20. The Joy of Facilitation

Here, finally, is a personal testimonial to the teacher's experience of the change from being a lecturer to becoming a facilitator. It comes from a field of study far remote from our own, but is relevant, I think you will find, at every point to our world and hits all the right notes:

[43] Peter Scott, "A Lot to Learn: We Are All Researchers Now," *Education Guardian*, January 8, 2002, p. 9 (education.guardian.co.uk/egweekly/story/0,,628918,00.html).

[44] David C. Hodge, President, Miami University, "The Student as Scholar in Research and Practice," keynote address at the 2007 meeting of the American Association of Colleges and Universities (www.aacu.org/meetings/undergraduate_research/index.cfm).

[45] Royce Engstrom, Provost, University of South Dakota, and Jeff Abernathy, Vice President for Academic Affairs, Augustana College, announcing a workshop entitled "Research and Creative Scholarship: An Integral Part of the Undergraduate Experience" at the 2007 conference of the AAC&U (American Association of Colleges and Universities) (www.aacu.org/meetings/undergraduate_research/index.cfm).

In lecturing I always thought in terms of "the students ought to know this about marine geology." . . . This was some bit of information, some fact, some kind of research, some discovery, some equation, some concept.

Now I had to think in terms of "the students ought to be able to do this." They ought to be able to observe keenly, compute accurately, reason cogently, describe results clearly, hypothesize, and to test hypotheses rigorously. They ought to be developing "a scientific habit of mind." . . .

To walk about a room and hear students talking to one another about the science I love thrills me. They are spending the entire hour talking to one another about science, about concepts, about methods, teaching one another, learning from one another. . . .

Another enjoyment was seeing these students show evidence of becoming scientists. That a student makes a good grade on an examination tells me little about how good a scientist he or she might be. But to read reports in which students give evidence of sharp observation, orderly thinking, and clear expression, is rewarding. I also feel more useful to them in developing these skills than I do in grading their examinations.[46]

Someone in the elevator on the day I gave this address said they were "looking forward to hearing your message." That was my message.

[46] Dean A. McManus, Professor of Oceanography, University of Washington, "Changing a Course from Lecture Format to Cooperative Learning," depts.washington.edu/cidrweb/resources/CooperativeLearning.html.