WICHITA STATE UNIVERSITY
DOROTHY AND BILL COHEN HONORS COLLEGE

HNRS 101
Introduction to the University

Faculty Handbook

2015

"Transformational teachers cultivate a curiosity that leads to scholarly work, indeed to lifelong patterns of learning."

-Thomas R. Rosebrough and Ralph Geist Leverett. *Transformational Teaching in the Information Age: Making Why and How We Teach Relevant to Students* (2011)

Preface

HNRS 101 Introduction to the University is a work-in-progress at Wichita State. Three faculty taught a new one-credit version of HNRS 101 in fall 2014 and helped to shape the course, to evaluate whether, to what extent, and in what ways Honors student need an introduction to the university.

For fall 2015, HNRS 101 meets for one hour per week and focuses on transition to the university culture, community engagement, and/creative inquiry.

Honors Introduction to the University should offer students and faculty the opportunity to explore and develop the four Honors pillars: intellectual, innovative, professional, transformative.

HNRS 101 students should be expected to:

- ❑ Explore and discuss what it means to be a college student and an honors student.
- ❑ Begin to develop a degree plan that includes Honors courses.
- ❑ Build connections on campus, including connections to faculty, peer mentors, and students in the class.
- ❑ Work effectively individually and in a group to develop topics of inquiry and/or a community engagement project.

This handbook is intended to help faculty begin to answer the question of how to support the development of Honors students in HNRS 101. It includes:

- ❑ a sample HNRS 101 syllabus,
- ❑ sample assignments, and
- ❑ a bibliography of instructor resources.

I hope that you will enjoy designing a course with readings and assignments that interest you. Thank you for continuing to shape the future of Honors at WSU. Your work with HNRS 101 is critical to supporting student success and creating intellectual community in Honors and beyond.

Kimberly Engber, Dean

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The Dorothy and Bill Cohen Honors College
Shocker Hall A118

Kimberly Engber, Dean
kimberly.engber@wichita.edu, 316-978-6459

Vanessa Stupay, Assistant to the Dean
vanessa.stupay@wichita.edu, 316-978-3375

Kitti Seavey, Honors Advisor
honors@wichita.edu, 316-978-6563

Honors Undergraduate Fellows:
Tracia Banuelos
Brae Bigge
HonorsUGFellow@wichita.edu, 316-978-3377

Section 1

Getting Ready

As you finish preparing your HNRS 101, here are some things to remember:

- After you organize the course and choose readings, please send a sample syllabus to honors@wichita.edu.

- Identify a librarian for your section and send the librarian a copy of your syllabus. Schedule a library visit or invite the librarian to visit your class sometime in the first few weeks to talk about library databases and subject area pages.

- Copy readings and other course materials. If you need assistance with duplication, please let the Honors office know one week in advance. In addition, you may place readings on reserve at the reserve desk on the 1st floor of the library. Most reserve readings will be made available electronically to students.

- Readings related to the history of the university and the qualities of scholar citizens are available in the Cohen Honors College office and can be placed on library reserve and available electronically to all HNRS 101 students.

- A class list is available on Blackboard; each section will have between 10 and 15 students. Contact the Honors office if you have any questions about your roster.

- Make certain your payroll information is up to date with the Assistant to the Dean.

Important Dates for Cohen Honors Fall 2015

- August 21st 5:30: Cheer for new students competing in the first "Clash of the Colleges" event at Cessna Stadium. Honors will host a tent with word games and chess.

- August 25th 11:00am Convocation will feature the Honors College. Please come to Koch Arena show your Honors spirit.

- August 26th 3:30pm: Honors College Induction Ceremony. Learn the Honors Pillars. Join the Honors Community in the Beggs Ballroom, 3rd floor RSC.

- The first Wednesday of each month starting at 4:00pm: the Honors College hosts monthly meetings required for all new Honors students in the Multi-Use Room in Shocker Hall. Please plan to attend our September 2nd meeting. Email honors@wichita.edu for an excused absence.

Section 2

Suggested Core Topics

HNRS 101 is a one-credit course for new college students. The goal is to promote lifelong learning. More specifically, instructors should aim to welcome students to the academic community and to foster their success by beginning to develop college-level critical and creative thinking skills. Remember that you are designing a syllabus for approximately fourteen 50-minute class sessions. This amount of time allows for several short assignments and one sustained project.

By the end of the semester, each student (or students working together as a group) should complete a project or portfolio.

- Differences between high school and college: Compare and contrast differences between high school and college. Showing up for class is the least that students should do. Most of learning will go on OUTSIDE of the classroom, not in it. Time commitment is much greater. Students have to take responsibility for their OWN learning. Issues of critical thinking and class participation transpire when students take risks, speak up in class, and ask questions.

  Often students feel intimidated by faculty office hours. Introduce students to the concept of office hours and help them to see the visit as an excellent resource for not only short term course specific content but also for long-term opportunities to establish connections with faculty. To promote such connections, some WSU 101 faculty assign students to interview one of their professors.

- Procrastination and Time Management: How can students find time to balance responsibilities of work, life and academic studies? Perhaps you can share your own strategies for maintaining a balance. In "Learning (Your First Job)" Robert Leamnson emphasizes the importance of establishing priorities, stating, "It's your priorities and not the clock that will determine the outcome of your college experience."[1]

- Academic Integrity/Values: Donald McCabe and Gary Pavela's "Ten (Updated) Principles of Academic Integrity"[2] provides a useful starting point for class discussion. As McCabe and Pavela maintain, "Prevention is a critical line of defense against academic dishonesty and is best undertaken after listening to students' perspectives and suggestions" (5).

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[1] Robert Leamnson, Ph.D. "Learning (Your First Job)" (2002) http://orgs.bloomu.edu/tale/documents/Leamnson_Learning_StudentsFirstJob.pdf

[2] McCabe, Donald L. and Gary Pavela. "Ten (Updated) Principles of Academic Integrity" *Change* (2004):1-7.

- Academic Research or Creative Thinking: This portion of the class may focus on a variety of research or creative activities: visual mapping, brainstorming, narrowing a topic, outlining, writing an argument, locating academic sources, creating an annotated bibliography, writing summaries of articles. Students might be required to gather all of these assignments into a research portfolio and to write a final paper.

- Diversity and Inclusion: Students join a diverse community at Wichita State and their ability not only to respect but to celebrate diversity is critical to success on campus and in future careers and communities. Activities in class using the "True Colors" tests and teaching materials encourage students to reflect on their own values and on how they perceive (or misperceive) others' actions. In addition, consider inviting staff from the Office of Diversity and Inclusion to speak to your class, or send students to interview the director and staff members about diversity.

- What does it mean to be an Honors student? Honors faculty have defined the qualities of an Honors student at WSU, and, in spring 2014, the Honors Student Advisory Board crafted a statement of purpose around these qualities. See Appendix III: Nature of the Honors College. What do these qualities mean to incoming Honors students? How do their expectations fit within the idea of a university?

  Consider how you might explore one of the Honors pillars with students throughout the semester. Assign readings about academic inquiry and what makes an educated person from Plato to Charles W. Eliot to Emory Lindquist to Harold Bloom.

Possible assignments might include asking students ask students to reflect in writing on the first day of class about what it means to be a college/university student. At the end of the semester, ask them reflect in writing again, without looking back at their first piece of writing. Then ask them to compare the two. How has their thinking changed? Why?

Section 3
Sample Syllabus and Assignments

The following sample syllabus offers suggestions for how an instructor might design the course.

The core goal of the Honors introduction to the university is to engage students in the college and university community. One way to do this is to ask them to engage in the two key processes of academic intellectual life: receiving information and creating "new" intellectual property, i.e., ideas which are new to them.

The main goal of a core HNRS 101 assignment is to provide an opportunity for students to reflect on their transition to college and to engage in writing or a project that is sustained by critical or creative thinking over at least several weeks. Faculty may choose to create a paper, portfolio, poster, or project assignment to address the core goal of the course.

The Common Read for Fall 2015 is Start Something That Matters, written by the founder of TOMS, Blake Mycoskie.

Sample Syllabus

HNRS 101 INTRODUCTION TO THE UNIVERSITY

Fall 2015

Course Times and Place
Tuesdays, 12:30-1:20
Shocker Honors Seminar Room

Instructor
Professor

Email:
Phone:
Office: Shocker Hall
Office Hours: 1:30-2:30 and by appointment

Peer Mentors
Honors Undergraduate Fellows
HonorsUGFellow@wichita.edu
Office: Shocker Hall

Reading and Materials

Bain, Ken "Messy Problems" from What the Best College Students Do (Library—Course Reserve)

Mycoskie, Blake Start Something That Matters (WSU Bookstore)

De Botton, Alain "Career Counselling" from The Pleasures and Sorrows of Work (Library—Course Reserve)

A journal or notebook

COURSE EXPECTATIONS:
1 credit hour class: The expectation of work in order to be successful for this 1-credit course is approximately 500 minutes of direct faculty instruction and approximately 2 hours of out-of-class student work each week, which includes practice work, writing, and assigned readings.

What is expected of you?

- Come to class prepared to discuss readings and assignments.
- Listen to others and wait for your turn to contribute to class discussions.
- Turn off personal electronic devices and put them away. They are distracting.
- Let your instructor know if you need to miss class. Contact another student or your peer leader for information about what you missed.
- Attend events across campus.
- Complete assignments on time.
- Check your @wichita.edu e-mail frequently to stay informed.
- Be thoughtful.
- Have some fun!

SPECIAL NOTES
If you have a physical, psychiatric/emotional, or learning disability that may impact your ability to carry out assigned coursework, contact the Office of Disability Services. Grace Wilkie Annex Room 150, (316) 978-3309 (voice), (316) 854-3032 (videophone)

WSU's Student Health Services is located on the 2nd floor in Ahlberg Hall. You can be seen for preventative care or for minor injuries. All services are low cost and confidential. For more information, go to www.wichita.edu/shs.

The WSU Counseling and Testing Center provides professional counseling services and administers tests. All services are low cost and confidential. 320 Grace Wilkie Hall, (316) 978-3440

- ❑ Get emergency information that you need by signing up for the Shocker Alert System. You will be notified of any emergency or weather alerts that affect the campus. Sign up at www.wichita.edu/alert.

SCHEDULE OF READINGS AND ASSIGNMENTS

Week 1 College: What is the difference?

In class writing or diagram/figure: What does it mean to be a college student? Or what does it mean to be innovative?

Week 2: What is Education ?

Assignment due:

- Watch DiLuzio "7 Steps to Creative Thinking" https://www.youtube.com/watch?v=MRD-4Tz60KE
- Read Andrew Delbanco "Origins" from College: What It Was, Is and Should Be
- Portfolio: Start your portfolio with a one-paragraph to one-page refection on your first week. This may be in writing or a diagram or sketch. Include a quote from DiLuzio or Delbanco anywhere in your reflection. Be prepared to discuss in class.

- **Reminders**

  August 21st 5:30 – Clash of the Colleges
  August 25th 11:00am - Convocation featuring Cohen Honors College (Koch Arena)
  August 26th 3:30pm - College Induction: Honors Pillars (Beggs Ballroom, RSC 3rd fl)

Week 3: Diversity and Inclusion

Assignment due:

- Be it or Find it Activity: Go to the Office of Diversity and Inclusion sometime in the week before class OR find an expert on Diversity and Inclusion on campus. Take some notes on what you learn about diversity and inclusion on campus and beyond. Come to class prepared to share what you learn. You may work with a partner on this activity.
- In class listen to Angela Lee Duckworth's TED talk on "grit": http://www.youtube.com/watch?v=H14bBuluwB8;
- Portfolio: After class, get your "grit" score: https://sasupenn.qualtrics.com/SE/?SID=SV_06f6QSOS2pZW9qR. Write a 1-page response about grit. As before, this response may be written or visual (diagram, sketch, etc.) if you prefer. Be prepared to discuss in class.

- **Reminder**

  September 2nd Honors Monthly Meeting: Be Intellectual Who is Who in Honors, Honors Curriculum and Developing an Honor Code

Week 4: Messy Problems

Assignment due:

- Read Ken Bain "Messy Problems" from What the Best College Students Do. Be prepared to discuss in class.
- Portfolio: Complete library scavenger hunt page 1 by class time today. You may do this assignment with others, but each student must turn in a completed assignment.
- Turn in Portfolio (10 points possible).

Week 5: Be Resourceful: Start Something That Matters

- Read Chapter 1 – 3 in Start Something That Matters. Be prepared to discuss.
- Portfolio: 1-page written or visual response to "More money, more problems" or "The elusive obvious"

Week 6: Keep It Simple: Start Something That Matters

- Read Chapter 4-5 in Start Something That Matters. Be prepared to discuss.
- Portfolio: 1- page response written or visual response to "Nonprofit 1.0" or "Striking a Balance."

Week 7: Carpe Diem: Start Something That Matters

- Read Chapter 6-7 in Start Something That Matters. Be prepared to discuss.
- Portfolio: 1-page written or visual response to "Carpe Diem."

- **Reminders**

  October 7 Monthly Meeting: Be Professional Get to know WSU. Counseling and Testing, Career Services, Writing Center.

  Make an appointment with your major college advisor *now* to plan courses for Spring 2016. If you don't, you may not be able to take advantage of priority enrollment on November 9th 8:00am.

Week 8: "Something" Brainstorming and Work Day.

- Think Ahead to Week 10 Portfolio. Find a lecture to attend outside of class.

Week 9: "Something" Brainstorming and Work Day.

Week 10: Academic Community

- Read: McCabe, Donald L. and Gary Pavela. "Ten (Updated) Principles of Academic Integrity" *Change* (2004):1-7 (PDF on Blackboard)
- Portfolio: Go to a lecture outside of class. 1- page response written or visual response.

Week 11: Why Work?

- Read De Botton "Career Counselling." Be prepared to discuss.
- Portfolio: 1-page written or visual response to the idea of work.
- Turn in Portfolio (20 points possible)

- **Reminder –** November Monthly Meeting: Be Innovative Get to know WSU. National Faculty Speaker- Carolyn Shaw; Panel: National Student Exchange, Study Abroad, Community Service Board, Student Government Association.

Week 12 -15: "Something" Presentations

COURSE POLICIES

Academic Integrity
Students are responsible for knowing and following the **Student Code of Conduct** and the **Student Academic Honesty** policies:

Code of Conduct at (http://webs.wichita.edu/inaudit/ch8_05.htm)
Academic Honesty at (http://webs.wichita.edu/inaudit/ch2_17.htm)

Students who commit acts of academic dishonesty in this course will automatically fail the assignment or fail the course, at the instructor's discretion. No exceptions will be made to this policy. It is up to the student to understand and follow standards of academic honesty, appropriate use and citation of materials created by others, and other standards for academic work. If you have questions about any of this, ask your instructor. Claiming to not understand the standards of academic integrity will never be an acceptable excuse.

Notice of Nondiscrimination
Wichita State University does not discriminate in its programs and activities on the basis of race, religion, color, national origin, gender, age, sexual orientation, marital status, political affiliation, status as a veteran, genetic information or disability. The following person has been designated to handle inquiries regarding nondiscrimination policies: Executive Director, Office of Equal Employment Opportunity; telephone (316) 978-6791

Blackboard
The Blackboard system is available for you to access through your MyWSU login. This is where you will find all of your assignments posted, be able to contact your instructor and access additional resources that will help you succeed in this course. You should try to log on to Blackboard at least once a week to view important announcements, access course content and check the status of your grade. Students have free access to computers in the Ablah Library and in various student computing labs around campus.

Writing Center
For help with planning and writing papers, go to the Writing Center in Lindquist Hall Room 601: www.wichita.edu/writingcenter.

Grading
Attendance in all classes is mandatory. Late assignments will be penalized for each day late.

- Attendance and Participation 20%
- Portfolio 30%
- Common Read Project and Presentation 40%

Grading Rubrics

Class Participation

Adapted from Susan Ambrose, History
Eberly Center for Teaching Excellence, Carnegie Mellon University

	A (18-20 points)	B (16-17 points)	C (14-15 points)	D/R
Frequency and Quality	Attends class regularly and *always contributes* to the discussion by raising thoughtful questions, analyzing relevant issues, building on others' ideas, synthesizing across readings and discussions, expanding the class' perspective, and appropriately challenging assumptions and perspectives	Attends class regularly and *sometimes contributes* to the discussion in the aforementioned ways.	Attends class regularly but *rarely contributes* to the discussion in the aforementioned ways.	Attends class regularly but *never contributes* to the discussion in the aforementioned ways.

Group Presentations

Adapted from Susan Ambrose, History
Eberly Center for Teaching Excellence, Carnegie Mellon University

Criteria **Levels of Achievement**

	Sophisticated (3 points each)	Competent (2 points each)	Not Yet Competent (1 point each)
Research/Proposal			
Quality (e.g. use of varied sources, evaluated and validated sources, accurate information)	Information is accurate; resources are legitimate; resources are varied when appropriate	Information is mostly accurate with only a few minor errors; one resource may be questionable; resources good but not varied enough	Information is unreliable and/or inaccurate; resources are not valid
Content of Presentation			
Effective slides (e.g. coherent, logical progression, well organized, include main points not details, "tell a story")	Slides clearly aid the speaker in telling a coherent story	For the most part slides are helpful in telling the story with only a few glaring problems	Slides interfere with the story

Communication			
Clarity (e.g. explains ideas well, integrates with slides, clear introduction and conclusion, obvious transitions, doesn't use jargon, demonstrates knowledge of key points, responds well to questions)	Presentation is coherent, with clear introduction, transitions, language use, and conclusion; speaker demonstrates intimate knowledge of the subject	Presentation is coherent for the most part, but missing 1 or 2 important elements	Presentation lacks coherence
Style (e.g. speaks in sentences, clear enunciation, fluent delivery, well paced, maintains eye contact, fits time requirement, clearly practiced)	Presentation is polished, speaker uses sentences, enunciates well, is fluent in the delivery, maintains an effective pace and eye contact, doesn't run over allotted time	Presentation is polished, for the most part, but missing 1 or 2 important elements	Presentation is not polished
Self-Evaluation			
Analysis of group process and individual role within it	Clearly articulates what worked well and why, what did not work well and why, and ways to increase effectiveness and efficiency of group process in the future, considering self as well as others	Discusses only two of the three; discusses group without discussing self; discusses self without discussing group	Does not articulate any of the three – what worked well and why, what didn't work well and why, how to improve

Section 4

Working with the Library

Faculty can work closely with a library liaison in planning content *according to individual class needs* to best serve the class. This collaborative effort with the library encourages students to get to know the library, welcomes students to schedule appointments with the library liaison in advance, and encourages students to experience research as a process. A possible library scavenger hunt is included in Appendix II.

The following are the information competencies that can be reasonably expected out of a one-credit orientation class. This takes into account the more complex competencies that are a part of the English 102 classes that have a more substantial research component.

Students are expected to:

1. Understand what types of material are catalogued online.
2. Know how to read a citation; know what kind of thing the citation refers to.
3. Understand the difference between the Ablah library online catalog and databases; know when it's appropriate to use one or the other.
4. Know how to find a book.
5. Know how to submit a request to Interlibrary Loan.
6. Know how to preview a source for credibility and relevance.
7. Know how to cite a variety of sources including a book and an academic journal article.
8. Know how to get research help in the library and online.

Section 5

Expected Outcomes

The goal of HNRS 101 is to provide students with a sense of what college is about. In providing students with academic credit, we can expect them to take the class seriously. There are several specific outcomes that we hope to achieve:

- Foster critical thinking. While we do not believe that one hour a week is sufficient to teach critical thinking, providing an additional site for such reflection reinforces its role in academic life.
- Foster creative thinking.
- See oneself as part of an academic community. National research on retention and success in college has shown that students who make an attachment to a particular individual on campus are more likely to "make the most of college."
- Promote academic integrity. Increases in the level of plagiarism nationally suggest that students do not understand the values behind the rules.
- Promote community engagement whether on campus or beyond.
- Achieve higher retention and graduation rates in Honors and from the 1st to the 2nd year in the university.

Measuring Outcomes.

- Faculty who teach this course should be surveyed to see what they gain from this experience.
- Library faculty who work with the course should be surveyed to compare this model to the past and to evaluate whether their professional expertise and strengths are fully utilized in this model.
- Honors student engagement should be measured when the university administers the National Survey of Student Engagement.

Appendix: Instructor Resources

Appendix I

Nature of the Honors College: Charter

Preamble
We, the students and faculty who value the life of the mind, the execution of good work for its own sake, and the common threads uniting every discipline; who share a passion for rigor over ease, for creativity over uniformity, for debate over compliance, for inquiry over recitation, for knowledge over ignorance, for wisdom over conceit; and who aspire to enlivened minds, to connected understanding, to professional collegiality, to innovative collaboration, to inspired action, to distinguished service, to enriched lives, and to self-determination; do hereby establish an Honors College at Wichita State University.

The Honors College shall dedicate itself to the following pursuits:

Developing *a sense of community* and common identity among its members;
Cultivating an *intellectual* ethic among its members, including:

a. A contribution to the knowledge in one's chosen discipline;
b. A value of and interest in the knowledge in other disciplines;
c. A mastery of cognitive, transferable, and practical skills;
d. A commitment to curiosity and lifelong learning;

Cultivating a *professional* ethic among its members, including:

e. A passionate pursuit of long-term goals;
f. A high degree of personal integrity and ethical conduct;
g. A value of respectful, productive working relationships;
h. A sense of common purpose and meaning;

Cultivating an *innovative* ethic among its members, including:

i. A creative approach to solving problems;
j. A capacity for identifying unaddressed challenges and needs;
k. A willingness to accept risk and ambiguity in proposing solutions;
l. A facility with borrowing from several disciplines and identifying connections between them to find interdisciplinary solutions;

Cultivating a *transformational* ethic among its members, including:

m. An urge to make a positive impact on the community and in the world;
n. An open-minded embrace of diversity in backgrounds, values, and perspectives;
o. A marriage of deliberation and decision in taking action;
p. An understanding of the importance of inspiring others.

Appendix II

How Tests Make Us Smarter

JULY 18, 2014

By HENRY L. ROEDIGER III

TESTS have a bad reputation in education circles these days: They take time, the critics say, put students under pressure and, in the case of standardized testing, crowd out other educational priorities. But the truth is that, used properly, testing as part of an educational routine provides an important tool not just to measure learning, but to promote it.

In one study I published with Jeffrey D. Karpicke, a psychologist at Purdue, we assessed how well students remembered material they had read. After an initial reading, students were tested on some passages by being given a blank sheet of paper and asked to recall as much as possible. They recalled about 70 percent of the ideas.

Other passages were not tested but were reread, and thus 100 percent of the ideas were re-exposed. In final tests given either two days or a week later, the passages that had been tested just after reading were remembered much better than those that had been reread.

What's at work here? When students are tested, they are required to retrieve knowledge from memory. Much educational activity, such as lectures and textbook readings, is aimed at helping students acquire and store knowledge. Various kinds of testing, though, when used appropriately, encourage students to practice the valuable skill of retrieving and using knowledge. The fact of improved retention after a quiz — called the testing effect or the retrieval practice effect — makes the learning stronger and embeds it more securely in memory.

This is vital, because many studies reveal that much of what we learn is quickly forgotten. Thus a central challenge to learning is finding a way to stem forgetting.

The question is how to structure and use tests effectively. One insight that we and other researchers have uncovered is that tests serve students best when they're integrated into the regular business of learning and the stakes are not make-or-break, as in standardized testing. That means, among other things, testing new learning within the context of regular classes and study routines.

Students in classes with a regimen of regular low- or no-stakes quizzing carry their learning forward through the term, like compounded interest, and they come to embrace the regimen, even if they are skeptical at first. A little studying suffices at exam time — no cramming required.

Moreover, retrieving knowledge from memory is more beneficial when practice sessions are spaced out so that some forgetting occurs before you try to retrieve again. The added effort required to recall the information makes learning stronger. It also helps when retrieval practice is mixed up — whether you're practicing hitting different kinds of baseball pitches or solving different solid geometry problems in a random sequence, you are better able later to discriminate what kind of pitch or geometry problem you're facing and find the correct solution.

Surprisingly, researchers have also found that the most common study strategies — like underlining, highlighting and rereading — create illusions of mastery but are largely wasted effort, because they do not involve practice in accessing or applying what the students know.

When my colleagues and I took our research out of the lab and into a Columbia, Ill., middle school class, we found that students earned an average grade of A- on material that had been presented in class once and subsequently quizzed three times, compared with a C+ on material that had been presented in the same way and reviewed three times but not quizzed. The benefit of quizzing remained in a follow-up test eight months later.

Notably, Mary Pat Wenderoth, a biology professor at the University of Washington, has found that this benefit holds for women and underrepresented minorities, two groups that sometimes experience a high washout rate in fields like the sciences.

This isn't just a matter of teaching students to be better test takers. As learners encounter increasingly complex ideas, a regimen of retrieval practice helps them to form more sophisticated mental structures that can be applied later in different circumstances. Think of the jet pilot in the flight simulator, training to handle midair emergencies. Just as it is with the multiplication tables, so it is with complex concepts and skills: effortful, varied practice builds mastery.

We need to change the way we think about testing. It shouldn't be a white-knuckle finale to a semester's work, but the means by which students progress from the start of a semester to its finish, locking in learning along the way and redirecting their effort to areas of weakness where more work is needed to achieve proficiency.

Standardized testing is in some respects a quest for more rigor in public education. We can achieve rigor in a different way. We can instruct teachers on the use of low-stakes quizzing in class. We can teach students the benefits of retrieval practice and how to use it in their studying outside class. These steps cost little and cultivate habits of successful learning that will serve students throughout their lives.

Henry L. Roediger III is a professor of psychology at Washington University in St. Louis and a co-author of "Make It Stick: The Science of Successful Learning."

A version of this op-ed appears in print on July 20, 2014, on page SR12 of the New York edition with the headline: How Tests Make Us Smarter.

Appendix III

Deep Learning vs. Surface Learning: Getting Students to Understand the Difference
By: Maryellen Weimer, PhD

NOVEMBER 19, 2012

Sometimes our understanding of deep learning isn't all that deep. Typically, it's defined by what it is not. It's not memorizing only to forget and it's not reciting or regurgitating what really isn't understood and can't be applied. The essence of deep learning is understanding—true knowing. That's a good start but it doesn't do much to help students see the difference between deep and surface learning or to help persuade them that one is preferable to the other.

Those differences are further obscured and rendered unimportant when teachers use superficial measures (e.g. multiple-choice questions that test recall) to assess understanding. Why do students memorize isolated facts that they don't really understand? Because, in many courses, that approach has rewarded them with good or at least decent grades. Until teachers stop relying on questions that can be answered with details plucked from short-term memory, there isn't much chance that students will opt for the deep learning approaches.

Most teachers (especially those who read a blog like this) recognize that test formats directly affect the choice of study strategies. We are committed to preparing questions that require higher level thinking skills. Our students discover they can't answer those questions with the easy information bits they've memorized and so they start studying differently. The problem is that without teacher guidance, students end up selecting deep learning strategies more by accident and less by design. That challenge is answered by knowing what constitutes a deep learning strategy.

In an article reporting on the success of certain test question formats to promote higher-level thinking skills, faculty researcher Kathrin Stanger-Hall includes a list of study strategies characteristic of surface and deep learning. Because students can be physically active (doing things) but without much cognitive involvement, her list differentiates between cognitively passive learning behaviors and cognitively active ones. She includes references to the literature justifying this distinction. Below are some samples from each list. The full list can be accessed via this article: www.lifescied.org/content/11/3/294.full

Cognitively passive learning behaviors (surface learning approaches)
I came to class.
I reviewed my class notes.
I made index cards.
I highlighted the text.

Cognitively active learning behaviors (deep learning approaches)
I wrote my own study questions.
I tried to figure out the answer before looking it up.
I closed my notes and tested how much I remembered.
I broke down complex processes step-by-step.

Lists that are this behaviorally focused do oversimplify complex processes like deep learning, but they are still enormously helpful at making clear what deep learning might look like when you try to do it. Researcher Stanger-Hall included both kinds of behaviors on a survey that she had students complete at the beginning, during and at the end of the course. Her students identified which of the behaviors they were using as they prepared for course exams. It's a creative assessment technique she used to document whether having to answer some test questions not formatted as multiple-choice questions changed the approaches students said they were using to study. Her data show that it did. (Look for highlights from this study in an article in the December issue of *The Teaching Professor.*) Not only did students in the experimental group use more of the deep learning approaches, but their exam scores were significantly better than those in the control group. When you can show students that certain approaches to studying improve exam scores, you've given them a compelling reason to try them out.

A final thought

Maybe I've been writing this blog for too long. I'm starting to repeat points made in previous posts. But it is terribly important that in explicit and concerted ways we make students aware of themselves as learners. We must regularly ask, not only "What are you learning?" but "How are you learning?" We must confront them with the effectiveness (more often ineffectiveness) of their approaches. We must offer alternatives and then challenge students to test the efficacy of those approaches. We can tell them the alternatives work better but they will be convinced if they discover that for themselves.

Reference: Stanger-Hall, K. F. (2012). Multiple-choice exams: An obstacle for higher-level thinking in introductory science classes. *Cell Biology Education—Life Sciences Education,* 11 (3), 294-306.

Appendix IV
Library Scavenger Hunt
HNRS 101 Library Scavenger Hunt

Learning Outcomes
After this scavenger hunt, you will be able to:

- identify places in the library where you can ask questions.
- locate the library research guide for your major.
- reflect on your experience using some of the library's resources.
- locate and preview sources for research and reflection.

Researching - *The WSU Libraries has a lot of quality resources, both print and electronic, that will help you with your research.*

- Go to the Reading Room, and look at the shelves of new books. Choose one that interests you and write down the title of the book and the author's name.

Asking Questions - *You never have to feel embarrassed about asking questions in the library - that's what we're here for! You can ask anyone for help and we'll either work with you to answer your question, or point you to someone that can provide more in-depth help.*

- Find the Reference Desk in Ablah Library. Introduce yourself to the librarian and ask him or her to show you how to find the research guide for your major. Then ask: Is there a research guide that will help you find information about current scientific research on learning or creative thinking? Write the answer here:

- Go to a computer and find the Ablah Library research guide for your major. Find the name of the librarian for that area. Write down the librarian's name and contact information (click on his/her name for email address). If you'd like, you can send the librarian an email saying "Hi" and asking him/her any questions you have about the WSU Libraries or your subject area. Be sure to write down the name of the subject guide here as well:

- Choose one of the resources listed on the guide, click on the link to open it, and look around. Think about how that resource might help you with a research paper or project in that subject area, and write a few comments about your thoughts.

- Find five articles written in the last five years about learning or creative thinking. Type or write a list of these articles in MLA or APA format.

- Choose one article to preview. Write a few comments below about why you chose this article.

Locating Books – Go to the Ablah Library Online Catalog and find the Journal of Mammalogy. Locate the call number of the books where this can be found. You can either write this number down or use the option to text it to your phone. Go locate this set of books in the library. What color are the spines of these books? (Note: Please do not remove books from the shelves.)

Locate the books that have call numbers that start with DT 45 through DT 62. What do you think is the theme among these books?

Studying - *Ablah Library is more than just books. The library is a great place to study or just take a break. We have dedicated quiet areas when you need to study by yourself and lots of rooms that can be used for study groups.*

- Visit the study room booking page by going to http://wichita.libcal.com and clicking on "Ablah Library Group Study Rooms" in the Room Bookings box on the right side of the page. Read the policy and click continue. Then fill out the booking details form and submit it. Write down here what you used for your "group name" (something like HNRS 101 and your instructor's name). Also write down the time and date of your reservation. (**Note:** Consider booking for a time when you know you have an exam for one of your courses. Ask some of your classmates if they would join you for a study group.)

Need help? Stop by Ablah Library or contact a librarian:
http://libraries.wichita.edu/ablah/