Letter of Transmittal:

This report summarizes the initiatives and activities of the Academy for Teaching and Learning (ATL) during the period June, 2004 – May, 2005 and outlines ATL goals and objectives for the period June, 2005 through May, 2006.

Scott Simkins, Interim Director, Academy for Teaching and Learning
A. Executive Summary

1. Purpose and mission of the Academy for Teaching and Learning (ATL)

The Academy for Teaching and Learning (ATL) is a campus-wide resource for faculty members that:
- increases faculty knowledge of the factors that affect student learning (knowledge),
- encourages scholarly teaching grounded in research on student learning, (application) and
- promotes the scholarship of teaching and learning, including classroom-based research, assessment of learning outcomes, public sharing of effective teaching practices, and basic research on teaching and learning issues (scholarship).

The ATL’s activities are aimed at:
- increasing faculty members’ knowledge base in the area of teaching and learning,
- promoting the development of innovative teaching pedagogies and assessment practices that promote student learning.
- building community by bringing faculty together regularly to discuss and share issues related to teaching and learning, in both formal and informal ways.
- increasing recognition and faculty rewards for engaging in activities that enhance student learning and promote the scholarship of teaching and learning.
- promoting the successful implementation of FUTURES and University Studies initiatives.

2. Broad overview of significant accomplishments

The first full academic year of the ATL was focused on developing an intentional and coherent set of activities aimed at meeting the ATL’s initial short-term objectives. These objectives included:
- Developing and implementing a year-long new faculty orientation program
- Developing and implementing activities supporting the 2004-2005 interdisciplinary theme, Focus on Learning, and the FUTURES initiative.
- Increasing faculty awareness of the ATL and its activities
- Increasing faculty participation in faculty development activities related to teaching/learning

Among the most significant accomplishments related to these objectives:
• Implementation of the “First Thursday” orientation series highlighting invited guest speakers leading discussions on topics relevant to new faculty, including promotion and tenure guidelines, research and grant-writing, effective teaching, and work/life balance.

• Sponsorship of a variety of faculty development workshops led by nationally-recognized workshop presenters on topics related to University Studies and FUTURES, including interdisciplinary teaching and learning, program and course assessment, critical thinking, and cooperative learning.

• Development of first annual Teaching Showcase highlighting innovative teaching practices of NC A&T faculty. The Teaching Showcase was held in conjunction with the FUTURES retreat and included a poster session, workshops, and a resource fair.

• Leadership of more than 75 faculty members in the development of 25 University Studies courses during summer, 2005. The ATL director is leading weekly large-group workshops and coordinating the overall course development process.

• Development and updating of an ATL web site with links to current ATL activities, programs, and resources and the creation of an ATL listserv for dissemination of information related to ATL activities.

• Plans to develop a Faculty Learning Community as a follow-up to the New Faculty Lunch Series

• Management of the Title III Faculty Development Grant Program, subsidizing a wide variety of faculty development efforts, including participation in teaching/learning and disciplinary conferences and workshops, international faculty development activities, and short courses.

• Collaboration in developing the Carnegie Scholar application for Assistant Professor Karen Hornsby, who was selected to participate in the 2005-2006 Carnegie Scholar program.

3. Goals for the upcoming year

The major goals for the upcoming year include:
• Continue and promote ATL activities initiated during 2004-2005, especially the new faculty orientation series
• Expand activities to promote teaching/learning
• Increase knowledge of ATL activities within and beyond the university
• Increase efficiency of ATL management
• Increase collaboration with University Studies and Arts and Sciences Deans

ATL activities will be focused on maintaining the full set of activities implemented during 2004-2005 and adding additional targeted activities that are consistent with the mission of the ATL, FUTURES, and University Studies. Thus, the ATL will continue to focus on the development of new A&T faculty members, while continuing the development of last year’s cohort of new faculty members by providing them an opportunity to participate in a new Faculty Learning Community focused on developing classroom assessment techniques.
and collaborative learning strategies. In addition, the ATL plans to support the interdisciplinary theme – *Focus on Learning* – by organizing ongoing faculty development workshops and a special end-of-year celebration featuring a nationally-recognized workshop leader/scholar in the learning sciences. This celebration will complement the annual *Teaching Showcase*, inaugurated this academic year. This year will also see the development of Faculty Learning Communities aimed at spurring in-depth study of specific topics related to teaching and learning and continuing development, piloting, and assessment of new University Studies courses. I hope to increase the visibility of the ATL through expanded public relations efforts and the development of an ATL newsletter and ATL discussion listserv, while forging new relationships with the new University Studies and Arts and Sciences deans and deepening ongoing relationships with ITT staff. Finally, I hope to develop new technology-enhanced administrative processes to facilitate more efficient management of ATL activities and develop better accountability of faculty involvement in those activities.

**B. Overview of the Academy for Teaching and Learning**

1. **Strategic comments regarding unit’s place/role in the University and Futures**

   The Academy for Teaching and Learning continues to play a key role in the development and implementation of the new University Studies curriculum, a key element of the FUTURES initiative that will be implemented in fall, 2006. The ATL is active in a number of initiatives that will enhance the quality of the University Studies curriculum.

   - The ATL Director is overseeing the development of 25 new Foundation-level and Thematic-Cluster courses during summer, 2005. This course development project involves over 75 faculty members and the expenditure of more than a quarter-million dollars in faculty support. In addition to weekly workshops focusing on developing learning objectives, effective teaching pedagogy, and assessment strategies for continual improvement, faculty teams are developing course materials (syllabi, course descriptions, formative and summative assessment plans, learning artifacts, rubrics, and active-learning techniques for their courses) to be used by faculty members who will be teaching the course in the future. All of this material will be available for public analysis and comment. In addition to learning more deeply about effective teaching strategies, these faculty are also forming effective “communities of practice” that will continue to meet, share, and assess their work long beyond the summer course development project.

   - Faculty development workshops during the 2004-2005 academic year focused on topics central to University Studies curriculum development:
     - Milt Hakel, Bowling Green State University, “Focus on Learning,” May, 2004 – outlining the importance of recent knowledge from the
learning sciences and use of this knowledge to enhance learning in the classroom.

- Richard Carp, Appalachian State University, “Interdisciplinary Teaching and Learning,” November, 2004 – leading a seminar on interdisciplinary teaching and how to promote interdisciplinary learning in courses.


- Ed Neal, University of North Carolina at Chapel Hill, “Promoting Critical Thinking,” April, 2005 – leading a workshop of how to enhance the critical thinking of our students.

- Barbara Millis, University of Nevada-Reno, “Collaborative Learning,” May, 2005 – leading faculty in four workshops centered on collaborative learning techniques, including how to effectively employ collaborative learning, how to sequence collaborative learning activities in courses, collaborative classroom assessment techniques, and the use of games in teaching.

- The ATL supports the development of additional teaching awards, including awards recognizing exemplary (1) interdisciplinary teaching and learning, (2) use of technology to promote student learning (3) teaching by an adjunct faculty member, and (4) teaching by a graduate assistant. Recommendations for these teaching awards were developed in consultation with the ATL Advisory Board. Both interdisciplinary teaching and adjunct faculty teaching will play significant roles in the new University Studies curriculum and these awards are incentives to promote enhanced teaching and learning.

The ATL will continue to provide ongoing faculty development in the areas of teaching and learning as the university continues to transform itself into a “student-centered, interdisciplinary university.” In order for this vision to become reality, faculty members will need to understand what it means to learn and teach in an interdisciplinary manner, develop curricula, content, and pedagogies that promote interdisciplinary teaching and learning, develop assessment strategies that help determine whether interdisciplinary objectives are being met, and use the assessment results to better align the curriculum, content, and pedagogy with stated student learning outcomes. The ATL, through the mentoring of junior faculty, development of faculty learning communities, interactive, hands-on workshops, and ongoing discussions of issues related to teaching and learning, in collaboration with Deans and department chairs in Schools/Colleges across campus, will continue to provide faculty with new tools and strategies needed to broaden and enhance the learning environment at NC A&T State University for both faculty and students.
2. Academy for Teaching and Learning structure

The Director of the Academy for Teaching and Learning reports directly to the Provost. The ATL Advisory Board, comprised of faculty members representing each School/College, serves in an advisory capacity to the Director, participates in ATL activities, and ensures effective communication with the rest of the university community. The ATL Advisory Board meets monthly with the ATL Director. The organizational structure of the ATL is illustrated below.

![Organizational Structure Diagram]

**Director**

The current director of the ATL has been serving in an “interim” capacity since the reorganization of the ATL in January, 2004.

**ATL Advisory Board**

Each Dean recommends one full-time faculty member from his/her School/College to serve on the ATL Advisory Board. ATL Advisory Board members:

- offer advice/suggestions to the Director on ATL center direction, initiatives, and activities, as well as university-wide initiatives, policies, and procedures that affect teaching and learning.
- assist the Director in reviewing/assessing teaching portfolios submitted for university-level teaching awards
- participate in and lead/direct ATL activities.
- promote effective dissemination of ATL communication to faculty, staff, and administrators
- function as ambassadors for the ATL and the teaching and learning mission of the university.

The ATL Advisory Board members for 2004-2005 were:

- Doris Fultz   School of Agriculture and Environmental Sciences
- Michael Roberto   College of Arts and Sciences
- Alice Stewart   School of Business and Economics
- Alan Bugbee   School of Education
- Keith Schimmel   College of Engineering
Ayanna Boyd-Williams    Graduate School
Pat Shelton    School of Nursing
Craig Rhodes    School of Technology
John Felts    Library

These Advisory Board members will also serve during the 2005-2006 academic year. A term limit and rotation schedule for Advisory Board members will be determined during fall, 2005.

ATL Administrative Assistant

Tamara Goode serves as the ATL Administrative Assistant; Tamara’s time is shared with Mary Mims, Special Assistant to the Provost.

C. Progress toward Key Goals (June, 2004 through May, 2005)

Goal 1: actively promote the professional development of new faculty members.

This was a key strategic goal during 2004-2005. New faculty members represent the future of NC A&T State University and provide an opportunity for revitalizing the teaching/learning environment on the campus.

Indicators of progress toward goal:

- The ATL sponsored twelve monthly “First Thursday” lunch meetings with speakers focusing on topics relevant for new faculty: professional expectations for promotion and tenure, writing for publication, balancing professional and personal responsibilities, teaching with technology, mentoring, plus sessions aimed at acquainting new faculty with the services, people, and layout of the campus. A full schedule of the New Faculty Lunch Series is provided below:

<table>
<thead>
<tr>
<th>Orientation Aug 9</th>
<th>Opening Day Events</th>
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<tbody>
<tr>
<td>Lunch August 19</td>
<td>Focus On The Arts</td>
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<tr>
<td>Bus Tour Aug 26</td>
<td>Scenic And Historical Bus Tour Of Greensboro And Campus</td>
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<tr>
<td>Lunch Sept 2</td>
<td>Getting To Know NC A&amp;T Administrators</td>
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<tr>
<td>Lunch Sept 9</td>
<td>Getting To Know Your A&amp;T Library</td>
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<td>Lunch</td>
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<tr>
<td>Oct 7</td>
<td>An Overview Of FUTURES And Univ. Studies</td>
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<tr>
<td>Nov 4</td>
<td>What The Best University Teachers Do - Learning From Award-Winning Teachers At A&amp;T</td>
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<tr>
<td>Dec 8</td>
<td>Using Technology Effectively To Promote Student Learning – Perspectives From Faculty Who Use Technology In Their Classes</td>
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<tr>
<td>Jan 20</td>
<td>The Scholar/Professor: What Successful Scholars Do – Writing And Publishing Ideas And Tips For Success</td>
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<td>Feb 17</td>
<td>Supporting Your Research - Developing Successful Grant Proposals</td>
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<tr>
<td>March 24</td>
<td>Dewayne Wickham – Institute For Advanced Journalism Studies</td>
</tr>
<tr>
<td>April 21</td>
<td>The Year In Review, The Year Ahead</td>
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- Attendance figures (overall and by school) for each of the lunches is provided in the Appendix (and file appendixa.xls). An attendance sheet was used to take attendance at each event; Tamara Goode oversaw this. There is likely some undercounting of attendance, as sometimes faculty members forget to sign the attendance sheet when they arrive. What the attendance list highlights is the overall distribution of attendance. There is a clear pattern in the data: in each school/college there are a few faculty members who attended nearly every event but there are also a number of new faculty members who attended few of the events. No School/College is ensuring that all their new faculty attend the orientation series consistently. Overall, the School of Education had the most consistent representation at the New Faculty Lunch Series, while the College of Arts and Sciences had the least consistent representation. The other Schools/Colleges fall in between.

Note: Some of the faculty members listed in the attendance table are tenure-track, others are adjuncts. Some have been at A&T for a number of years as adjuncts and are new tenure-track faculty. A few of the faculty members were new to A&T during the spring, 2005 semester. Next year we will take greater care to (1) differentiate between tenure-track and adjunct faculty, (2) indicate when the faculty arrived at A&T, and (3) ensure that all faculty members sign in for each activity. Greater clarification (for Deans and department chairs) is needed as to whether the new faculty orientation series is focused only on tenure-track faculty or all new faculty; also, how to treat new tenure track faculty who have been at the university for a number of years serving as adjunct faculty.
• New faculty evaluations of the year-long program indicate very high satisfaction with the program and recommended few changes in the structure of the program. The most beneficial sessions were those on research and grantsmanship, scholarship and the tenure process, effective teaching practices, campus tour, and an introduction to library services – topics that were directly related to faculty members’ success. Recommendations for 2005-2006: (1) add a social gathering early in the year for new faculty members to get to know each other better (dinner + happy hour); (2) an overview of contract-renewal/tenure portfolios early in the year to prepare for end-of-year reports; (3) more time for new faculty members to talk with each other and share experiences.

Goal 2: Implement activities that promote the interdisciplinary theme, “Focus on Learning,” and aid in the implementation of both the FUTUREs and general education revision initiatives.

The ATL was responsible for developing and implementing activities to promote the interdisciplinary theme, “Focus on Learning,” throughout the 2004-2005 academic year. ATL activities linked scholarly research on student learning with pedagogical innovation, introduced faculty members to classroom and program assessment activities, and increased faculty understanding of issues related to interdisciplinary teaching and learning.

Indicators of Progress:

• A listing of (1) ATL-sponsored workshops highlighting the interdisciplinary theme and (2) the ATL-led summer 2005 University Studies course development initiative was included in section B.1 (first and second bullet item). The workshops featured nationally-recognized presenters in the areas of the learning sciences, interdisciplinary teaching and learning, assessment, critical thinking, and collaborative learning, while the University Studies course development project includes more than 75 faculty members developing 25 new courses. More than $250,000 was allotted to support this course/faculty development effort.

• Copies of the text, How People Learn: Brain, Mind, Experience, and School, were given to all faculty members at the start of the 2004-2005 academic year, serving as a reference text for the year’s activities. Many of the activities listed above referenced this text. Another objective was to use this text as the basis for campus-wide reading/discussion groups; however, only a very small number of faculty members participated in these discussion groups. During 2005-2006 I will use concepts from this text as the basis for a three-part workshop series focusing on Preconceptions, Expert vs. Novice Learning, and Metacognition.

• The ATL initiated the first annual Teaching Showcase: Sharing Our Best Work in April, 2005. Held in conjunction with the annual FUTURES retreat, the full-day Teaching Showcase included a poster session highlighting sixteen
teaching projects of NC A&T faculty members, prizes in three areas (innovative teaching and learning, interdisciplinary teaching and learning, and teaching with technology), teaching workshops, and resource/information tables. Approximate attendance: 100 faculty and staff.

- The ATL led teaching workshops for new graduate student Teaching Assistants at the start of the fall and spring semesters. These workshops introduced graduate students to current research on teaching and learning and provided advice on implementing effective teaching strategies in the courses they will be assisting with.

**Goal 3: increase awareness of the ATL and its function in ongoing professional development for faculty members.**

By increasing communication, visibility, and campus involvement, the ATL seeks to increase awareness of ATL resources and activities to promote ongoing faculty development.

Indicators of success:

- Development of an ATL web page with links to current programs and activities, resources on teaching and learning, and information about Faculty Development Grants and university teaching awards. The ATL web page is located at: [http://www.ncat.edu/~atl/](http://www.ncat.edu/~atl/) (fall, 2004)
- Development of an ATL listserv targeting teaching faculty (spring, 2005). This listserv functions as a one-way announcement list. Previously the ATL relied on the Supervisors’ Listserv for dissemination of information; however, information frequently was not passed down to department chairs or faculty. This summer I will be adding a two-way ATL discussion list for faculty members to engage in dialogues on teaching/learning issues and share information directly with each other.
- Developing working partnerships with groups interested in teaching and learning issues, such as the graduate school (TA training), University Studies (course development workshops), and the Honors Program (faculty workshops).

**Goal 4: The ATL will encourage greater faculty engagement in hands-on professional development through the promotion of Faculty Learning Communities and ongoing workshops and informal discussions of teaching/learning-related topics.**

The ATL seeks to promote the development of a scholarly intellectual climate by encouraging campus-wide dialogue and discussion of effective teaching practices. Specifically, the ATL will serve as a catalyst for the development of *Faculty Learning Communities* (FLCs) and an informal *Brown Bag Lunchtime Teaching*
Collaboratory. These activities were tested during spring, 2005 but will be implemented more formally in fall, 2005.

Indicators of Success:

- A Teaching Collaboratory was scheduled in April, 2005 focused on the topic of *Classroom Incivility*. However, the session was cancelled due to insufficient interest. I plan to have a series of monthly topics for the fall semester in place prior to the start of the 2005-2006 academic year. Teaching Collaboratory sessions are intended to bring faculty together to discuss/share practical classroom issues affecting the teaching/learning process.

- At the final New Faculty Lunch program I made new faculty aware of a Faculty Learning Community that will be starting in fall, 2005 – *CATs and CoLTs* – focusing on classroom assessment techniques (CATs) and Collaborative Learning Techniques (CoLTs). Registration for this FLC will begin in late summer and will be limited to junior faculty (this is a follow-up to the New Faculty Lunch Series).

- Sandrea Williamson has approached me about starting a Faculty Learning Community on *Critical Thinking*. We will be meeting over the summer to develop the criteria for participation in this FLC. Anticipated start date: fall, 2005

**D. Most Significant Accomplishments**

1. Learning

Many significant learning-related activities are outlined in section C above. In addition to these ATL initiatives and activities, the most significant accomplishments of the ATL during 2004-2005 include:

- Management of Title III Faculty Development Grant program – The ATL took over management of the Title III Faculty Development Grant program, previously administered by Charles Williams, Assoc. VC for Academic Affairs. Through May, 2005 this program has supported faculty development activities for more than 70 faculty members, including participation in teaching/learning conferences, short courses/workshops, and international faculty development workshops. Faculty Development Grant Awards provided approximately 70% of requested funds, with additional funds supplied by academic departments and schools/colleges. A portion of the Title III funds were targeted to support faculty attendance at (1) UNC TLTC annual conference (10 faculty members), (2) Lilly South Conference on College Teaching (10 faculty members), and (3) Library staff professional development (16 staff members).

- Increased role for ATL Advisory Board – ATL Advisory Board members reviewed University-level teaching award portfolios and made recommendations to the Chancellor for NC A&T’s UNC Board of Governors
Teaching Award recipient. In addition, Advisory Board members helped create an award criterion rubric and advised the ATL Director on the development of additional teaching awards.

- ATL collaboration in development of Carnegie Scholar application – the Director of the ATL encouraged and worked closely with Karen Hornsby in the development of a Carnegie Scholar application. Karen was one of 21 faculty members selected for the 2005-2006 Carnegie Scholar program; over 300 faculty members from across the world applied for participation in this program.

- Appalachian State University Course Development Workshop – Five faculty members participating in the University Studies course development project during summer, 2005 also participated in a week-long ATL-supported faculty development program at Appalachian State University. NC A&T faculty members worked with three faculty members from the Interdisciplinary Studies Program housed in Watauga College, a residential live/learn facility, to develop interdisciplinary University Studies courses. This NCAT/ASU partnership was the result of a fall, 2004 workshop led by Richard Carp, Chair of the Interdisciplinary Studies Program at ASU.

- ATL Dean Candidates – Two of the ATL-sponsored workshops/seminars (Richard Carp, Joseph Graves) produced two of the four finalists for the University Studies Dean position.

- ATL, ITT Collaboration – Close cooperation between the ATL and ITT (in particular, Pat Chatt) to develop and deliver training for Blackboard and CRITERION during the new faculty orientation and throughout the academic year. ITT also participated in the Teaching Showcase in April, 2005.

- Online Teaching Resources – A variety of online teaching/learning resources are now available to faculty via the ATL web site: The National Teaching and Learning Forum, The Teaching Professor, and POD Essays on Teaching. These online resources provide faculty with new teaching ideas every month.

- UNCTLTC Collaboration – As a result of the ATL director’s participation in the UNC Teaching and Learning with Technology Collaborative, the UNC TLTC made a campus visit to NC A&T in January, 2005 to survey ITT-related resources and initiatives and a regional MERLOT workshop was hosted here in March, 2005.

- ATL-inspired University Teaching Awards banquet celebrating teaching award recipients from each School/College and the work of the ATL Advisory Board.

2. Discovery

   a. Research Awards Received

   *Implications of STEM Discipline Research for Instructional Innovation and Assessment in Economic Education* (National Science Foundation, CCLI-DUE 0411037), with Dr. Mark Maier, Glendale Community College (CA) 
   Funding Period: September, 2004 – August, 2007
Collegiate Learning Assessment Project
One of 25 colleges/universities selected nationwide to participate in four-year longitudinal study of student learning. Using measures developed by Council for Aid to Education’s Collegiate Learning Assessment, the study will assess the "value-added" effects of college and university attendance on three fundamental outcomes of liberal education: critical thinking, analytic reasoning, and written communication.
Sponsoring organizations: Council for Aid to Education, Lumina Foundation, AAC&U

b. Scholarly Productivity

Refereed Publications:


Teaching Newsletters

*National Teaching and Learning Forum*, December, 2004 – Story on Just-in-Time Teaching (JiTT) featuring Simkins presentation at IS-SOTL conference, October, 2004 (see below); also reprinted in *Tomorrow’s Professor* (Center for Teaching and Learning, Stanford University) listserv.
  • http://ctl.stanford.edu/Tomprof/postings/615.html

Work in Progress


Development of *JiTTEcon* web site supporting recent NSF-funded project (with Mark Maier)

c. Professional growth and development

Professional Presentations
Presenter, “Roundtable Discussion: UNC Content Management System,” The University of North Carolina Teaching and Learning with Technology Conference, Raleigh, NC (March, 2005)

Invited Presenter, “Just-in-Time Teaching: Using Web-based Assignments to Inform and Modify Classroom Teaching ‘Just-in-Time,’” Lilly South Conference on College and University Teaching, Greensboro, NC (February 2005)


Presenter and Session Chair, “Just-in-Time Teaching: Using Web-based Assignments to Inform and Modify Classroom Teaching ‘Just-in-Time,’” International Society for the Scholarship of Teaching and Learning, Indiana University (October, 2004)


Additional Professional/Intellectual Development

- 2004 Annual Professional and Organizational Development Network in Higher Education (POD) Conference, October, 2004, Montreal, CA
- Case Study Teaching in Science National Conference, University of Buffalo, September, 2004
- Faculty Learning Communities New Developers’ Institute, Miami University, Oxford, OH, June, 2004

3. Engagement

a. Professional Service

- National Science Foundation Panel Review, CCLI-DUE, Washington, DC, February, 2005
- Reviewer, Journal of Economic Education
- Board Representative, University of North Carolina Teaching and Learning with Technology Collaborative, 2004 – present
b. Service to the University

• Executive Committee, University Studies Committee (previously General Education Core Curriculum Review Committee)

Ongoing Activities
  o Bi-weekly Committee/Executive Committee Meetings
  o Leadership of University Studies development and implementation process
  o University Studies web site development and maintenance

Specific Activities
  o Town Hall meetings to update university community and present proposed University Studies curriculum structure.
  o Faculty Senate approval of general education preamble, learning objectives and curriculum model, as well as the name change from General Education to University Studies.
  o Meetings with all departments on campus to outline the impact of proposed University Studies curriculum structure and thematic clusters on departmental programs.
  o Development of Thematic Clusters and Cluster Teams.
  o In conjunction with the Academy for Teaching and Learning, hosting faculty development workshops on interdisciplinary teaching, learning and assessment.
  o Selection of University Studies Faculty Roundtable members. This faculty group will work with the University Studies Dean to oversee development, assessment, and administration of the University Studies curriculum.
  o Town Hall Meetings outlining thematic clusters.
  o University Studies faculty and University Studies Dean candidates selected, interviewed, and hired.
  o Faculty Senate approval of Foundation-level University Studies courses and the overall structure of the UNST program (overall credit hours, Foundation courses, and 12 credits of UNST electives).
  o University Studies course development - seventy-seven faculty members are working in teams to develop/revise twenty-five University Studies courses during summer, 2005. The teams are working with the Academy for Teaching and Learning to develop course materials, student-centered teaching strategies, and formative/summative assessment plans for the courses they are developing. Some of these courses will be offered as pilot courses during the 2005-2006 academic year.

• Chancellor’s Commission on the Intellectual Life of the University, Fall, 2004 – present
• Dean’s Council, Spring 2004 - present

c. Service to the Community

• Lead volunteer, 4th Saturday, Potter’s House Soup Kitchen, Greensboro Urban Ministry
• Treasurer, Western Guilford High School Band Boosters
• Church volunteer, various ministries, St. Paul the Apostle Catholic Church

E. Goals for the Upcoming Academic Year

1. New/Revised Programs – Short Term Horizon

a. Continue Focus on New Faculty Orientation Program

Encourage ongoing faculty development and community-building for new full-time, tenure-track faculty through:

• Continuation of activities initiated in 2004-2005:
  o extensive new faculty orientation during the week prior to the start of the fall semester (obtain email accounts and parking permits, workshop in functionality of Blackboard and Criterion, introduction to Division of Research and Economic Development resources)
  o “First Thursdays” lunches/workshops throughout academic year (topics to include: funded research opportunities, University Studies overview, library resources, instructional technology, promotion and tenure guidelines, etc.).
• Development of new faculty reading/discussion groups focused on new faculty issues

b. Support Interdisciplinary Theme – Focus On Learning Activities

Transform the campus teaching environment by focusing on meeting institutional needs related to FUTUREs and the general education revision process, developing a culture of intentional teaching linked to learning science research, increasing faculty engagement in the scholarship of teaching and learning, and increasing the “publicness” of scholarly teaching.

• Three-part workshop series on main concepts from How People Learn: Brain, Mind, Experience, and School, during fall, 2005 semester
• Development of Interdisciplinary Faculty Learning Communities
  o CATs and CoLTs – focused on classroom assessment and collaborative learning techniques. Junior faculty only.
  o Critical Thinking – Sandrea Williamson will lead this group.
  o Other Possibilities: Problem-Solving – Exploring How Students Solve Problems Across the Disciplines
• End-of-academic year workshop/celebration of “Focus on Learning” – including nationally-recognized workshop leader linked to learning sciences and teaching pedagogy (e.g. Dianne Halpern, immediate past president of the Am. Psychological Association).

c. Develop Technologies to Make ATL Operation More Efficient

• Faculty Development Database – develop a central database of faculty involvement in faculty development activities. This database could be used to develop end-of-year reports for faculty and departments on participation in faculty development activities (which can then be used to document teaching portfolios, end-of-year reports, promotion and tenure packages, and post-tenure review portfolios).
• Improved Registration Process For ATL Activities – Currently this is done via email and manual development of attendance lists, which is inefficient and time-consuming. In cooperation with ITT, seeking a web-based process for faculty self-enrollment in ATL activities and development of back-end database for use with faculty development database.

d. Expand Ongoing Faculty Engagement in Teaching/Learning Process

Continue to increase faculty participation in ongoing, sustained faculty development activities with the goal of increasing student learning outcomes, enhancing teaching pedagogy, effectively implementing instructional technology, and increasing participation in the scholarship of teaching and learning.

• Develop Faculty Learning Communities (FLCs)
• Implement monthly Teaching Collaboratory – informal, yet structured, discussion of practical teaching/learning issues
• Expand Teaching Showcase – increase faculty participation to 24 teaching posters, increase attendance at workshops, and increase vendor/resource presence at poster session
• Expand Univ. Studies course development project – extend University Studies course development beyond summer, 2005 project via Carnegie KEEP toolkit and Blackboard community – develop ongoing communities of practice
• Increase leadership of NC A&T faculty in the scholarship of teaching and learning
  o Increased use of A&T faculty as workshop providers
  o Targeted Title III support for participation in national teaching/learning conferences

e. Increase Campus Communication about Teaching/Learning
• Develop and implement electronic ATL Newsletter – providing commentary on innovative teaching/learning, research results, samples of resources available to faculty, book reviews, showcase of A&T faculty
• Develop and implement ATL discussion listserv – complement to recently-developed ATL announcement listserv; this listserv would allow faculty to share ideas directly with other faculty members on issues of teaching/learning

f. Expand Recognition of Teaching Excellence

Implement additional teaching awards developed in consultation with ATL Advisory Board. Each award would include a plaque and a monetary reward of $500.
  o Excellence in Teaching Award – Adjunct Faculty
  o Excellence in Teaching Award – Interdisciplinary Teaching and Learning
  o Excellence in Teaching Award – Teaching with Technology
  o Excellence in Teaching Award – Graduate Teaching Assistant

g. Oversee Lumina/CAE Assessment Project

The ATL will take a leadership role in the oversight of the Lumina/CAE assessment project over the next three years. The ATL will work together with University Admissions and Institutional Assessment staff to coordinate activities associated with this project.

h. Increase Public Relations

Work more closely with Mable Scott to promote ATL activities and programs beyond the university.

i. Increase Cooperation with ITT

The Director of the ATL worked with Pat Chatt, ITT, to develop and deliver training for new faculty during the 2004-2005 academic year. I would like to see even more training opportunities available for faculty in 2005-2006; in particular, software training for Adobe Acrobat, Macromedia Flash and Dreamweaver, Microsoft Office products, and other educational software. Currently, this is a significant void in the faculty development resources available to faculty.

2. New/Revised Programs – Longer-Term Horizon

• Enhance faculty reward structure for evidence of scholarly teaching – increase faculty awareness of the scholarship of teaching and learning, encourage funded research of teaching/learning projects, require explicit teaching
portfolios as part of tenure/promotion package, increase understanding among new faculty of how to incorporate research interests in teaching. Overall, make the reward for demonstrable innovation and effective teaching explicit and intentional.

- Develop ATL Scholars program – provide summer support for development of innovative teaching pedagogies, assessment projects, curricular revision, as the basis for carrying out institutional mission and promoting external funding for teaching/learning-related projects.
- Develop ATL Associates program – provide course-release support during the academic year to help support the mission and activities of the Academy for Teaching and Learning and conduct research on learning-related issues.
- Faculty development programs for adjunct faculty – implementation of University Studies program will necessitate use of large number of adjunct faculty who may require new skills to promote interdisciplinary teaching/learning, formative assessment of learning, and innovative, student-centered teaching pedagogies.
- Teacher training for graduate student Teaching Assistants – formalize and extend current basic teacher training for graduate students, in conjunction with graduate school faculty and staff. ATL to serve in supervisory capacity.

3. Challenges/Opportunities Ahead

As the ATL expands programs and activities, a number of challenges and opportunities will arise, both in the short-term and in the longer-term. The list below highlights a variety of important issues that are likely to require attention.

- The implementation of the University Studies curriculum, new faculty with joint appointments, and the development of new interdisciplinary programs will require increasing proactive coordination with the Deans of University Studies and Arts and Sciences. New Deans in each of these units provide an opportunity for new growth and collaboration.
- Listed in E.1.c. above, development of ATL-activity registration programs and a comprehensive faculty development database system are needed to manage and track faculty participation in ATL activities and programs.
- Additional staffing – as programs and activities of the ATL expand, will need to consider adding staff to oversee programs, conduct workshops, and lead faculty development initiatives.
- Additional space – as programs and activities of the ATL expand, expansion of ATL space will become a necessity. Ideal situation would be new building/space with offices, storage, seminar rooms for workshops, and support staff.
- Determination of centralized database/software repository and maintenance – determining a single source for maintenance and bill-paying for university-wide databases and software.
• Increased support for instructional technology – including technical support for Blackboard and instructional design support for faculty using Blackboard for face-to-face and online instruction.
• Does it make sense to include oversight of Blackboard and Distance Learning with other academic resources, rather than under ITT? These are complementary with the activities and initiatives of the ATL, yet often we work at cross purposes.

4. Personal Development

Continual improvement in the ATL is aided through ongoing professional development of the Director. Participation in high-quality professional conferences related to teaching/learning and faculty development provide opportunities for presenting scholarly work, obtaining new programmatic ideas and building professional relationships. A number of A&T workshop presenters have resulted from relationships developed at professional meetings.

• International Society for The Scholarship Of Teaching and Learning Conference (IS-SOTL), The Scholarship of Teaching and Learning: Commitment, Community, and Collaboration, October, 2005, Vancouver, Canada.
• 25th Annual Lilly Conference on College Teaching, November, 2005. This is the most important national conference focused on teaching and learning. I will be presenting at this conference.
• Lilly South Conference on College Teaching, February, 2006. This conference is a regional sibling of the national Lilly Conference located here in Greensboro. I will be assisting Ray Purdom, Director of the Teaching and Learning Center at UNC-Greensboro, with arrangements for this conference and will be presenting there as well.

5. Key indicators of progress

The ATL is completing its first full year of formal programming. The data collected this year will form a baseline for measuring future progress. The primary indicator of progress at present is the development of a formal set of ATL programs and initiatives, outlined in the first part of this document and the active engagement of faculty in a wide variety of ATL-led initiatives – new faculty orientation, teaching/learning workshops, the Summer Teaching Institute, University Studies course development, and a variety of other activities.

In the past, teaching and learning activities have been ad hoc and intermittent. With the creation of a revised ATL in January, 2004, there is a renewed focus on
teaching and learning-related issues at the university, with faculty development activities carried out in an intentional way to promote ongoing faculty development and increase student learning. In the coming years, growth and progress of ATL activities will be measured by:

- Increased participation of faculty in the new faculty orientation program.
- Increased numbers of presentations by/participation of faculty in regional and national teaching/learning conferences, as well as disciplinary conferences on teaching/learning.
- Increased faculty participation in sponsored research related to teaching/learning projects.
- Increased participation of faculty in on-campus workshops, discussions, faculty learning communities, and Teaching Showcase poster sessions.
- Continuing development of University Studies courses and development of self-sustaining communities of practice.
- Increased numbers of awards for teaching/learning.
- Development of formal criteria and rewards for documented scholarly teaching and scholarship of teaching/learning in contract-renewal, promotion, tenure, and post-tenure review decisions.
- Increased awareness and intentional integration of teaching/learning issues in curriculum development, program review, and course assessment.

Many of the activities listed above are new, so actual numbers of faculty involved is one baseline measure of progress that will be used to measure future success. However, simply measuring numbers of faculty participating in workshops, Faculty Learning Communities, and other ATL activities does not fully measure the impact of ATL activities in meeting ATL objectives, in particular that of changing the campus environment and faculty attitudes regarding teaching/learning. A continuing challenge will be to develop indicators to measure these qualitative changes in the intellectual environment of the university.

If successful, ATL activities will result in noticeable changes in both the quantity and quality of initiatives aimed at improving student learning and teaching effectiveness. This type of improvement will be visible in new courses being developed, experiments with interdisciplinary and team-based teaching, increased classroom-based research on student learning, and the development of innovative assessment practices, such as the use of student portfolios. In addition, case studies can be used to document changes that occur over time - in teaching pedagogy, curricular design, assessment activities, and alignment with overall learning objectives. Focus groups, especially those involving new faculty members, will also provide useful formative feedback for improving ATL services for new faculty members and meeting their continuing needs as they develop professionally.
Overall, a variety of formative assessment techniques will be necessary to measure the impact and success of ATL initiatives and to suggest improvements in future ATL activities. While raw numbers provide some measure of program impact, more “micro-level” assessment data is needed to determine how effective ATL activities are in changing faculty teaching behavior and student learning outcomes. The development of this type of quantitative and qualitative assessment data will be an important ATL priority during the upcoming years.

APPENDICES (also provided as separate files)

a. Attendance Information: New Faculty Lunch Series

b. Published Articles:


c. National Teaching and Learning Forum article, Tomorrow’s Professor posting

d. FUTURES Report 2005 focus on ATL
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**Total Events:** 12
## Maximum Number of Events = 12

### New Faculty Lunch Series - Attendance by School/College

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Factors Affecting the Location of Payday Lending and Traditional Banking Services in North Carolina

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Abstract
Payday lending is a relatively new and fast growing segment of the “fringe banking” industry. This paper offers a comparative, descriptive analysis of the location patterns of traditional banks and payday lenders. Utilizing a dataset at the Zip Code Tabulation Area level in North Carolina, we perform negative binomial regressions and find evidence supporting some, but not all, common assertions about the location patterns of both types of institutions. A key finding is that after controlling for many covariates, race is still a powerful predictor of the locations of both banks and payday lenders.

Keywords: Payday lending; Fringe banking; Location analysis

JEL classification: C21; L89; R10

The authors would like to thank Reginald Wilkerson for his assistance and Michael Stegman and Robert Faris for their aid in obtaining the data. We also thank Lawrence Morse, two anonymous referees, and the attendees of the 2004 Southern Regional Science Association meetings for helpful comments.
1. INTRODUCTION AND BACKGROUND

During the last decade the U.S. has experienced dramatic growth in the number of non-bank lenders that offer relatively small, short-term, high-interest “payday” loans to credit-constrained borrowers. These loans are simply cash advances backed by a personal check that is held by the payday lender for future deposit or by electronic access to a borrower’s bank account. Although no federal data on payday lending is available, industry reports indicate that the payday loan industry has grown from a few hundred outlets in the mid-1990s to more than 20,000 nationwide in 2001, generating between $10 and $20 billion in annual loan volume and over $2 billion in fee revenue.¹

As this type of non-bank lending has grown, consumer advocacy groups such as the Consumer Federation of America (CFA) and the U.S. Public Interest Research Group (PIRG) have voiced concerns about the lending practices within the industry, citing exorbitant interest rates and predatory lending practices that appear to be targeted at military families and uneducated, minority, or low-income borrowers (CFA/PIRG 2001). In response, these advocacy groups have waged a national campaign to encourage state and federal officials to enact laws regulating the interstate operation of payday lenders, cap finance charges, and limit rollover borrowing. Critics of payday lending also argue that the proliferation and location of payday lenders is evidence of the failure of the Community Reinvestment Act (CRA), originally enacted in 1977 (and revised in 1995), “to encourage depository institutions to help meet the credit needs of the local communities in which they are chartered.”² Specifically, they claim that traditional banks have not met their CRA responsibilities, especially in low-income neighborhoods, allowing payday lenders to fill the resulting financial services vacuum.³

Against this backdrop, our interest is in exploring what accounts for the growth of payday lending, and in particular where this growth has occurred. Are payday lenders opportunistic predators, locating disproportionately in low-income and minority neighborhoods in order to prey on unsuspecting borrowers, or are they simply niche lenders responding to unmet demand?⁴ Sorting out these competing claims is difficult, but is also critically important for analyzing and making policy decisions related to this

¹ See Ernst, Farris, and King (2003); Stegman (2003); Consumer Federation of America and U.S. Public Interest Research Group (2001); and Tanoue (2000). Many of the national estimates of payday loan volume and fee income are produced by Stephens, Inc., a Little Rock, Arkansas, investment firm that researches the payday loan industry.
² 12 U.S.C. 2901
³ Avery et al. (1997) fail to find evidence supporting this claim. They conclude that while the number of banking offices in low- and moderate-income areas fell significantly from the late 1980s through the mid-1990s, it is likely “a response to excess capacity” (p. 723) rather than a strategic decision to “benefit more affluent consumers at the expense of lower-income communities” (p. 707).
industry. However, rigorous analyses of the payday lending industry are few in number. Stegman and Faris (2003) provide arguably the most comprehensive analysis of the payday lending industry, but even they ultimately fail to distinguish between demand- and supply-side factors in determining the growth and location of payday lenders. More research is needed to better understand the factors affecting this industry in order to provide policy makers with better information to guide their policymaking decisions.

Our approach in this paper is to systematically analyze the geographic location of payday lenders in North Carolina in an effort to explore the characteristics that make a geographic area likely to attract this type of lender. In particular, our analysis focuses on differences in demographic and socioeconomic characteristics that are frequently cited by consumer advocacy groups as causal factors in the location of payday lenders. In addition, recognizing that payday lenders serve as both a substitute for and complement to traditional banking services, we compare the results from our geographic analysis of payday lenders to those obtained for traditional banks. We are particularly interested in determining whether there are characteristics of geographic areas that uniquely influence the location of payday lenders relative to traditional banks. The particular questions that we seek to address include the following.

- Is there empirical support for the claims made by consumer advocates such as the CFA regarding the location of payday lenders with regard to race, income, education, public assistance, and military bases?

- Are the factors driving the geographic location of payday lenders different from those underlying the location of traditional banks?

- Is there geographic complementarity or substitution between traditional banks and payday lenders?

While our analysis will not settle the issue of whether payday lenders engage in predatory lending or are simply responding to demand for this type of service, our results shed additional light on current views of the payday lending industry and add to the growing pool of knowledge about this industry.

2. DATA SET CONSTRUCTION

To our knowledge, only one study (Kolb 1999) has formally examined the factors that determine the location of payday lenders within a geographic area, but that study focused on only a single city. State banking officials, payday industry supporters, and consumer advocacy groups also occasionally collect and analyze payday lending industry

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5 Stegman and Faris (2003) provide a detailed description of the payday lending industry, particularly in North Carolina.

6 Kolb found concentrations of payday lenders in minority, working-class, moderate-income neighborhoods in Charlotte, North Carolina.
data, but in most cases these analyses focus on simple data summaries that fail to take into account the interrelationships among factors affecting the location of payday lenders. Our statistical analysis attempts to sort out the factors influencing the location of payday lenders by systematically controlling for socioeconomic and demographic relationships that may be present in the data.

Following Stegman and Faris (2003), our analysis focuses on payday lending and traditional banking data from North Carolina. Like Kolb, we explore the relationship between the location of banks and payday lenders and demographic/socioeconomic indicators across geographic areas; however, our analysis covers the entire state, dramatically expanding the number of observations and increasing the variability of the data. By including all the regions of the state, we believe that our results better represent the factors that affect the location of payday lenders and traditional banks and provide more general results.

Payday lending data from North Carolina are particularly useful for analyzing the payday lending industry. The North Carolina state legislature enacted legislation in 1997 allowing businesses to engage in “post-dated or delayed deposit check-cashing transactions” in the state but let the legislation expire in August 2001. As part of the legislative review of this legislation, the North Carolina Commissioner of Banks carried out extensive surveys of licensed North Carolina payday lending and check-cashing businesses in 1999 and 2000 (NC Commissioner of Banks 2001). Data from this survey contain detailed information on the types of operations undertaken by individual companies (e.g., check-cashing only, payday lending only, both) as well as the number and characteristics of payday loan transactions by these companies. Information from this survey was merged with North Carolina Commissioner of Banks data listing individual check-casher (including payday loan) locations and names to create a master list of businesses providing payday lending services (with locations, by zip code) and operating in North Carolina.

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7 Given the lack of federal payday lending regulations, state-level data provides the best information about the payday lending industry. Payday lenders are subject to a patchwork of state regulations that differ in their scope and depth. See Consumer Federation of America and U.S. Public Interest Research Group (2001, Appendix A) for a state-by-state listing of payday lending regulations.

8 As a result, North Carolina currently does not authorize payday lending. The original payday lending provision was included in North Carolina General Statute §53-281. Currently, payday lenders in North Carolina operate under no specific state regulation, acting as affiliates of out-of-state banks.

9 This survey data was obtained from Robert Faris on May 29, 2003. Stegman and Faris (2003) use transaction volume data from this survey in their analysis of the payday lending industry. Because this data is collected at the company rather than location level, we use only information on the type of activity in which each location engages.
in 2000.\textsuperscript{10} The resulting list was edited to remove inactive and recently opened locations (within last few months of 2001) using a comprehensive license list (with name and license number) provided to us by the North Carolina Commissioner of Banks.

Data on the location of traditional banks was obtained from the Federal Deposit Insurance Corporation (FDIC) web site, which allows users to query its database for a listing of all banks (and locations) in operation in a particular state and opened before a specific date.\textsuperscript{11} In June, 2003 we obtained location information for all banks operating in North Carolina that were open prior to January 1, 2001. One potential issue is that the banking data does not include banks that were open prior to 2001 but that closed between 2001 and 2003; however, this effect is likely to be minimal. We removed several types of offices that are not consumer banking offices and assigned both banks and payday lenders to the zip codes in which they were located. Note that some zip codes are assigned to a specific building or shopping center. In these cases the institution was assigned to the zip code of the surrounding area to allow for matching with data obtained from the U.S. Census Bureau. Zip codes in both data sets were double-checked and corrected using GIS software.

Our analysis focuses on factors that are correlated with the location of payday lenders and traditional banks, in particular demographic and socioeconomic characteristics of population groups within geographic areas. We obtained 2000 census data on a variety of demographic and socioeconomic variables from the U.S. Census Bureau’s Census 2000 Summary File 3 (SF3).\textsuperscript{12} Numerical descriptive statistics summarized at the Zip Code Tabulation Area (ZCTA) level were used. ZCTAs are designed to roughly approximate zip code delivery areas.\textsuperscript{13} The Census Bureau also creates ZCTAs corresponding to parklands, lakes, etc. that are not covered by a zip code; these areas were deleted from the data set. In addition, two zip codes were deleted that contained population but, curiously, no data on incomes and a few other key variables. These two zip codes corresponded to UNC Charlotte and Wake Forest University. Finally, 21 other anomalous ZCTAs reporting fewer than 100 residents were removed from the data set. The final data set contains observations for 760 ZCTAs. Table 1 contains a detailed description of the variables used in our analysis. Ultimately, the Census data was merged with the payday

\textsuperscript{10} The NC Commissioner of Banks survey was conducted in 2001 and included payday-lending data from 2000. The North Carolina Commissioner of Banks keeps a current listing of licensed check-cashers on its web site (http://www.banking.state.nc.us/cc/checkcas.htm); to develop a list of licensed check-cashers operating in 2000 we used the web service www.archive.org to obtain the list of check cashier locations and names that appeared on the North Carolina Commissioner of Banks’ web site on February 19, 2001.

\textsuperscript{11} Available at: http://www2.fdic.gov/idasp/main.asp.

\textsuperscript{12} SF3 contains detailed information from the census “long form,” collected from a 1-in-6 sample and weighted to represent the total population.

\textsuperscript{13} ZCTAs sometimes differ from traditional zip codes. Simply put, each ZCTA is built by aggregating census blocks whose address are all of the same ZIP code. In most instances the ZCTA code equals the ZIP Code for an area. For more information, consult http://www.census.gov/geo/ZCTA/zcta.html.
lending and traditional banking data to develop a master data set organized by Zip Code Tabulation Area.

TABLE 1
Variables Used in the Study

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| GINI:    | A measure of income inequality, the Gini coefficient was calculated using income frequencies in SF3 variable P52 and total income data in P54. Method: Using midpoints of the income ranges, estimates of cumulative relative income were calculated for each range, as well as cumulative relative number of households. The estimated cumulative relative incomes were corrected based on the known total income in the ZCTA. The area under the cumulative income/household curve was approximated using two methods: The “right method” overestimates this area: \( \sum (\text{cumincome}_i - \text{cumpop}_{i-1}) \text{cumincome}_i \)

The “left method” underestimates this area: \( \sum (\text{cumpop}_i - \text{cumpop}_{i-1}) \text{cumincome}_{i-1} \)

These two estimates were averaged to get a more precise estimate of the area under the curve. This area was subtracted from the total area of the triangle under the equal income line (.5), and then divided by this area to compute the Gini coefficient. |
| LOG POP: | Natural logarithm of the total population in the ZCTA. |
| HISP:    | Percentage of individuals in the ZCTA responding as “a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish Culture or origin regardless of race” (OMB definition, 1997). |
| WHITE:   | Percentage of individuals in the ZCTA responding as white, but not Hispanic. |
| BLACK:   | Percentage of individuals in the ZCTA responding as Black, African American, or Negro, but not Hispanic. |
| HIGHLIED:| Percentage of individuals in the ZCTA reporting their highest level of educational attainment as “Some College” or greater. |
| LOG MED IN: | Natural logarithm of median household income in the ZCTA. |
| PUB ASST: | Percentage of households in the ZCTA who report receiving some kind of public assistance income. |
| PERC URB: | Percent of the population in the ZCTA living in an area defined by the U.S. Census Bureau as being an urbanized area. |
| HOMOWN: | Percentage of households in the ZCTA that are owned by those residing within. |
| MARRY: | Percentage of individuals fifteen and older who report being currently married. |
| AXXY: | Age ranges: Percentage of individuals between the ages XX and YY in the ZCTA: A2229, A3039 |
3. METHODOLOGY

We use the resulting data set to investigate the relationship between payday lender (or bank) location and demographic/socioeconomic characteristics across ZCTAs in North Carolina. Given that the dependent variable is a count variable, we use Poisson regression to analyze these relationships. Poisson regression relates dependent variable count data (in this case the number of payday lenders or banks located in a ZCTA) to a vector of independent variables, which here includes a variety of demographic and socioeconomic variables. We carry out separate analyses for payday lenders and banks. For small changes in the independent variables, the estimated coefficients of the Poisson regression model represent the proportionate change in the expected number of payday lenders (or banks) in a ZCTA. We estimate a more general extension of the Poisson model, the negative binomial model, to obtain more accurate estimates of the standard errors of the coefficients when there is over-dispersion in the data.\(^{14}\) The resulting models are estimated by maximum likelihood techniques using LIMDEP statistical software. In addition, we report two pseudo R-squared measures and an additional goodness of fit measure common for Poisson studies.

Because these data contain explicit spatial relationships, ideally one should use a regression technique that accounts for possible spatial interaction between ZCTAs. At the present time, there is no method for properly estimating spatial regressions with count data (Anselin 2003). Although several attempts have been made to develop approximate solutions, how close these approximations come to the “correct” answer is not well understood.\(^{15}\) If a moderate or large amount of spatial correlation exists, the failure to account for this in the estimation will lead to a type of omitted variable bias. Our exploratory analyses of the data suggest that little residual spatial autocorrelation is present and is unlikely to be causing significant bias in the estimates of our models.\(^{16}\)

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14 By definition, the Poisson distribution has a variance equal to its mean. Over-dispersion describes a case in which the variance exceeds the mean.

15 For example, the Prevention Research Center (part of the Pacific Institute for Research and Evaluation) has developed an iteratively-reweighted GLS method (Gruenewald 2004). Christensen, Møller, and Waagepetersen (2000) developed a Bayesian MCMC approach including relative distance as a covariate.

16 For example, we calculate the spatial correlation (Moran’s I) on the residuals from the negative binomial regressions and examine log-linear OLS models, including a spatial lag variable [see Cameron and Trivedi (1986, 1998) and McCullagh and Nelder (1989) for discussions of approximate OLS models to consider when Poisson models become intractable]. Both exercises indicate minor negative spatial correlation, although we cannot determine whether this correlation is statistically significant. The results for the spatial OLS models indicate that the inclusion of a spatial lag variable has little effect on the values of the estimated coefficients in the model. Contact the authors for details.
4. RESULTS

Table 2 provides a statistical summary of the top decile of ZCTAs for both payday lenders and banks (per capita). For each ZCTA, the number of payday lenders and banks was divided by the population of the ZCTA and the resulting per-capita values ranked from high to low. Means and standard deviations of a variety of data for the ZCTAs representing the top ten percent of these values are reported in the table. The first column reports statistics for the top ten percent of ZCTAs with the highest density of banks per capita, while the second column reports statistics for the top ten percent of ZCTAs with the highest density of payday lenders per capita. Comparing across columns, note that for the ZCTAs with the highest density of payday lenders, there are fewer banks per capita, a higher percentage of minorities, lower education levels, a higher percentage of people in the military, more people receiving public assistance, a younger population, and more recent immigrants and others who are less likely to speak English compared to the ZCTAs with the highest density of banks. In addition, the table makes it clear that payday lenders are disproportionately located in urban areas, where population densities are highest. These results are consistent with those published by CFA/PIRG (2001) and the popular press. However, simply looking at means of the data gives us an incomplete picture of the role these demographic and socioeconomic variables play in determining the location of payday lenders or banks in a geographic area. To look at the interrelationships among these variables and their effect on the location of payday lenders and banks, we turn now to regression analysis.

The results of the negative binomial regressions are presented in Tables 3 and 4. The pseudo R² measures in each case are quite high; the models provide an excellent fit to the data. With respect to the estimated coefficients, in both regressions the percentage of housing units within a ZCTA classified as urban and the (log of) population are both positive, but both are statistically significant only in the payday lender equation. The population coefficient estimate for banks is less than one, while the population coefficient for payday lenders is greater than one, suggesting that banks locate in a more decentralized manner while payday lenders concentrate in high population ZCTAs.

In these regressions we also included the (log of the) number of payday lenders in the bank regression and the (log of the) number of banks in the payday lender regression. We wanted to determine whether there was an overall complementarity or substitutability between these financial institutions. Given that the coefficients on these variables are both positive, each type of institution tends to locate in similar ZCTAs, ceteris paribus. This may reflect an omitted variable, such as the occurrence of shopping or commercial areas within a ZCTA. The GINI coefficient is positive and significant for both regressions. Both types of financial institutions are more likely to be located in areas where

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17 For robustness purposes, we ran these regressions omitting these variables. The qualitative nature of the results was unaffected. We used the log form, converting all ZCTAs with values of zero to 0.5 before taking the natural logarithm.
there is more income inequality, *ceteris paribus*. An ex-post explanation for this finding is that zip codes with retail

<table>
<thead>
<tr>
<th>Variable</th>
<th>Top Decile: Banks per Person*</th>
<th>Top Decile: Payday Lenders per Person*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks/10,000 Population</td>
<td>11.90</td>
<td>4.06</td>
</tr>
<tr>
<td>Payday Lenders/10,000 Pop.</td>
<td>0.83</td>
<td>3.88</td>
</tr>
<tr>
<td># of Banks</td>
<td>5.41</td>
<td>7.89</td>
</tr>
<tr>
<td># of Payday Lenders</td>
<td>1.11</td>
<td>7.00</td>
</tr>
<tr>
<td>Population</td>
<td>6,499.00</td>
<td>21,235.09</td>
</tr>
<tr>
<td>GINI Coefficient</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>% Hispanic (Any Race)</td>
<td>2.80</td>
<td>5.02</td>
</tr>
<tr>
<td>% White (Not Hisp.)</td>
<td>75.61</td>
<td>59.56</td>
</tr>
<tr>
<td>% Black (Not Hisp.)</td>
<td>19.84</td>
<td>32.08</td>
</tr>
<tr>
<td>% Am. Indian (Not Hisp.)</td>
<td>0.26</td>
<td>1.06</td>
</tr>
<tr>
<td>% Asian or PI (Not Hisp.)</td>
<td>0.62</td>
<td>1.06</td>
</tr>
<tr>
<td>% With less than HS Ed.</td>
<td>22.96</td>
<td>26.19</td>
</tr>
<tr>
<td>% High School Grads.</td>
<td>28.63</td>
<td>29.75</td>
</tr>
<tr>
<td>% with Some College</td>
<td>25.70</td>
<td>26.85</td>
</tr>
<tr>
<td>% With 4 Year Degree</td>
<td>15.47</td>
<td>12.06</td>
</tr>
<tr>
<td>% With &gt; 4 Year Degree</td>
<td>7.24</td>
<td>5.15</td>
</tr>
<tr>
<td>Median HH Income</td>
<td>36,250.05</td>
<td>33,575.17</td>
</tr>
<tr>
<td>Per Capita Income</td>
<td>20,388.69</td>
<td>17,282.71</td>
</tr>
<tr>
<td>% In Military</td>
<td>0.24</td>
<td>1.33</td>
</tr>
<tr>
<td>% Labor Force Part.</td>
<td>59.14</td>
<td>62.43</td>
</tr>
<tr>
<td>% Unemployed</td>
<td>7.33</td>
<td>6.68</td>
</tr>
<tr>
<td>% Rec. Public Assistance</td>
<td>2.93</td>
<td>4.07</td>
</tr>
<tr>
<td>% &lt; Poverty Income</td>
<td>14.19</td>
<td>16.60</td>
</tr>
<tr>
<td>% with 1 to 1.5 pov. Inc.</td>
<td>9.65</td>
<td>10.62</td>
</tr>
<tr>
<td>% with 1.5 to 2 pov. Inc.</td>
<td>10.03</td>
<td>10.31</td>
</tr>
<tr>
<td>% in Urban Area</td>
<td>36.86</td>
<td>64.08</td>
</tr>
<tr>
<td>% Households Owned</td>
<td>55.10</td>
<td>57.45</td>
</tr>
<tr>
<td>% Married</td>
<td>58.54</td>
<td>55.51</td>
</tr>
<tr>
<td>% Speak English Poorly</td>
<td>1.70</td>
<td>3.21</td>
</tr>
<tr>
<td>% Age 22-29</td>
<td>10.31</td>
<td>11.73</td>
</tr>
<tr>
<td>% Age 30-39</td>
<td>13.81</td>
<td>15.01</td>
</tr>
<tr>
<td>% Age 40-49</td>
<td>14.55</td>
<td>14.53</td>
</tr>
<tr>
<td>% Age 50-59</td>
<td>12.52</td>
<td>10.97</td>
</tr>
<tr>
<td>% Age 60+</td>
<td>22.55</td>
<td>17.36</td>
</tr>
<tr>
<td>Recent Immigrant, 5 years</td>
<td>1.21</td>
<td>2.34</td>
</tr>
<tr>
<td>Recent Immigrant, 5-10 yrs.</td>
<td>0.57</td>
<td>0.99</td>
</tr>
<tr>
<td>Population Density</td>
<td>692.19</td>
<td>753.61</td>
</tr>
</tbody>
</table>

* Deciles contain 76 ZCTAs each
TABLE 3
Negative Binomial Regression Results: Banking Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Value</th>
<th>Standard Error</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-5.155</td>
<td>3.012</td>
<td>0.087</td>
</tr>
<tr>
<td>PERC URB</td>
<td>0.002</td>
<td>0.001</td>
<td>0.260</td>
</tr>
<tr>
<td>LOG POP</td>
<td>0.859</td>
<td>0.049</td>
<td>0.000</td>
</tr>
<tr>
<td>LOG PAYDAY LENDER</td>
<td>0.294</td>
<td>0.091</td>
<td>0.001</td>
</tr>
<tr>
<td>GINI</td>
<td>3.186</td>
<td>0.909</td>
<td>0.000</td>
</tr>
<tr>
<td>BLACK</td>
<td>-0.008</td>
<td>0.003</td>
<td>0.001</td>
</tr>
<tr>
<td>HISP</td>
<td>0.004</td>
<td>0.009</td>
<td>0.680</td>
</tr>
<tr>
<td>HIGHED</td>
<td>0.009</td>
<td>0.005</td>
<td>0.053</td>
</tr>
<tr>
<td>LOG MED IN</td>
<td>-0.094</td>
<td>0.288</td>
<td>0.743</td>
</tr>
<tr>
<td>PUB ASST</td>
<td>-0.008</td>
<td>0.025</td>
<td>0.759</td>
</tr>
<tr>
<td>A2229</td>
<td>-0.017</td>
<td>0.007</td>
<td>0.016</td>
</tr>
<tr>
<td>A3039</td>
<td>-0.004</td>
<td>0.007</td>
<td>0.599</td>
</tr>
<tr>
<td>HOMOWN</td>
<td>-0.012</td>
<td>0.003</td>
<td>0.000</td>
</tr>
<tr>
<td>MARRY</td>
<td>-0.016</td>
<td>0.007</td>
<td>0.030</td>
</tr>
<tr>
<td>MIL</td>
<td>-0.015</td>
<td>0.006</td>
<td>0.021</td>
</tr>
<tr>
<td>Dispersion</td>
<td>0.13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Regression Diagnostics:

- Number of observations: 760
- Log likelihood function:* -1217.206
- Restricted log likelihood:* -1250.163
- Chi squared:* 65.913
- Degrees of freedom:* 1
- Prob(ChiSq > value)* 0.0000000
- R-squared P: .8089
- R-squared D: .7438
- Overdispersion tests: g=mu(i) 2.653
- Overdispersion tests: g=mu(i)^2 4.212

* The restricted log likelihoods compare the Poisson model (restricted to mean=variance) to the negative binomial. The χ² test evaluates the appropriateness of the negative binomial model.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Value</th>
<th>Standard Error</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.040</td>
<td>6.209</td>
<td>0.867</td>
</tr>
<tr>
<td>PERC URB</td>
<td>0.015</td>
<td>0.002</td>
<td>0.000</td>
</tr>
<tr>
<td>LOG POP</td>
<td>1.292</td>
<td>0.099</td>
<td>0.000</td>
</tr>
<tr>
<td>LOG BANK</td>
<td>0.778</td>
<td>0.157</td>
<td>0.000</td>
</tr>
<tr>
<td>GINI</td>
<td>3.542</td>
<td>1.748</td>
<td>0.043</td>
</tr>
<tr>
<td>BLACK</td>
<td>0.011</td>
<td>0.004</td>
<td>0.009</td>
</tr>
<tr>
<td>HISP</td>
<td>0.015</td>
<td>0.014</td>
<td>0.280</td>
</tr>
<tr>
<td>HIGHED</td>
<td>-0.025</td>
<td>0.009</td>
<td>0.004</td>
</tr>
<tr>
<td>LOG MED IN</td>
<td>-1.659</td>
<td>0.611</td>
<td>0.007</td>
</tr>
<tr>
<td>PUB ASST</td>
<td>-0.078</td>
<td>0.049</td>
<td>0.110</td>
</tr>
<tr>
<td>A2229</td>
<td>0.018</td>
<td>0.012</td>
<td>0.147</td>
</tr>
<tr>
<td>A3039</td>
<td>-0.013</td>
<td>0.014</td>
<td>0.358</td>
</tr>
<tr>
<td>HOMOWN</td>
<td>0.015</td>
<td>0.009</td>
<td>0.081</td>
</tr>
<tr>
<td>MARRY</td>
<td>0.016</td>
<td>0.012</td>
<td>0.201</td>
</tr>
<tr>
<td>MIL</td>
<td>-0.011</td>
<td>0.011</td>
<td>0.341</td>
</tr>
<tr>
<td>Dispersion</td>
<td>0.185</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Regression Diagnostics:

- Number of observations: 760
- Log likelihood function*: -649.074
- Restricted log likelihood*: -670.448
- Chi squared*: 42.75
- Degrees of freedom*: 1
- Prob[ChiSqd > value]*: 0.0000000
- R-squared P: 0.7934
- R-squared D: 0.7867
- Overdispersion tests: g=mu(i): 4.54
- Overdispersion tests: g=mu(i)^2: 7.140

* The restricted log likelihoods compare the Poisson model (restricted to mean = variance) to the negative binomial. The \( \chi^2 \) test evaluates the appropriateness of the negative binomial model.
districts in North Carolina often contain pockets of both high and low-income neighborhoods. Thus, areas with many retail establishments (banks, payday lenders, or other) are likely to have high-income inequality.

A particularly interesting result is that even when income, urban-ness, income-inequality, and education are controlled for, the coefficient on the percentage of blacks within a ZCTA is negative and significant in the bank regression and positive and significant in the payday lender regression. The results are consistent with those presented in Table 1 and support the commonly-held view that payday lenders tend to locate in minority areas (and banks don’t). Also striking is how close these coefficients are to 0.01. Because the black race variable is measured in percent, these coefficients tell us that, ceteris paribus, a one percentage point increase in the black population will reduce the number of banks by one percent and increase the number of payday lenders by one percent. Note, however, that the coefficient on the Hispanic variable was not statistically significant in either the bank or payday lending regression models; however, the sign and size of the coefficient on this variable in the payday lender regression is similar to that of the black race variable.

The results for the education variable are as expected. We included the percentage of people in a ZCTA who have a four-year degree or higher education level (HIGHED) in our regression models and find that this variable is positively related to the number of banks in a ZCTA and negatively related to the number of payday lenders.

As a measure of income, we use the natural log of median household income. This variable does not help predict the number of banks in a ZCTA, but shows a negative relationship with the number of payday lenders. Similarly, the percentage of households receiving some type of public assistance income exhibits no relationship with the number of banks located in a ZCTA, but has a negative relationship with the number of payday lenders. These results are consistent with other research that has shown payday lenders locating not in the poorest neighborhoods but neighborhoods populated by the working poor.

The coefficients on the age variables confirmed our beliefs that banks tend to locate in areas with older residents, while payday lenders locate in areas with a younger clientele who are more likely to use their services. The p value of the coefficient of the 22-29 age group variable in the payday lender equation is a bit too high to be confident of a relationship but is signed as expected. The estimates for the home ownership and marriage variables in each regression model, however, are surprising. Their signs are the opposite of what might be expected – both marriage and home ownership have a positive relationship with the number of payday lenders in a ZCTA and a negative effect on the number of banks.

Finally, the signs of the coefficients on the military variable in each regression are noteworthy. A negative and significant coefficient on this variable in the bank regression may indicate that banks are “crowded out” from military areas by the military credit
unions. It was expected that we would find a positive relationship between the percentage of people in a ZCTA that reported being in the military and the number of payday lenders in that ZCTA. The resulting negative – although statistically insignificant – coefficient on the military variable was surprising to us (and runs counter to claims made by the CFA/PIRG) but may also indicate a type of crowding out. Many military bases in North Carolina are surrounded by pawnbrokers and other types of fringe banking services. Since payday lenders are a more recent phenomenon, perhaps they face comparatively more competition than in other areas.

Overall, the regression results suggest that demographic and socioeconomic factors drive the location of payday lenders and traditional banks in quite different ways. In particular, ZCTAs with higher minority concentrations, younger populations, lower median incomes, and lower education levels are associated with a higher number of payday lenders, ceteris paribus, and a lower number of banks.

5. SUMMARY AND CONCLUSIONS

At the outset of this paper we posed a series of questions that our analysis would address: (1) whether the analysis supports claims made by consumer advocacy groups about the factors affecting the location of payday lenders, (2) whether the factors driving the location of traditional banks and payday lenders differ, and (3) whether there is spatial complementarity or substitution between traditional banks and payday lenders. In general, our results appear to confirm many of the general claims made about the location of payday lenders – payday lenders tend to locate in urban areas with relatively higher minority concentrations, younger populations, and less-well-educated citizens. However, we find that homeownership and marriage rates are positively related to the number of payday lenders in a ZCTA, while public assistance rates are negatively related to the number of payday lenders. Both of these results run counter to perceived views about payday lenders preying on financially unsophisticated and vulnerable borrowers.

As noted above, the estimated relationship between traditional bank locations and socioeconomic/demographic factors often differs markedly from that of payday lenders, yet there is a strong positive relationship between the number of payday lenders in a ZCTA and the number of traditional banks in the same geographic area. This result suggests that there is a strong complementarity between the quantity of traditional and non-traditional banking services in an area.

Overall, our location analysis is consistent with the claims made by consumer advocacy groups regarding the payday lending industry, although the analysis does not answer the question of whether payday lenders consciously locate in geographic areas to “take advantage” of unsuspecting borrowers or simply to meet the demands of the consumers located there. Clearly, more research needs to be done to sort out the relative roles of demand- and supply-side factors responsible for the growth and location of payday lenders. On the supply-side, consumer groups continue to push for greater payday lending restrictions, while federal regulatory agencies such as the Federal Reserve, the Office
of the Comptroller of the Currency, and the Office of Thrift Supervision have recently taken legal action against federally-chartered lenders that enlist payday lending partners. In addition, federal agencies are updating CRA regulations in response to these concerns. On the demand side, banks and other private-sector groups are promoting financial literacy programs and experimenting with innovative services that compete directly with those of payday lenders. Whether such initiatives will reduce the role of payday lending and increase the availability of affordable credit to low-income and minority neighborhoods remains to be seen. Our analysis suggests that policymakers should continue to pay attention to the relative geographic distribution of banks and payday lenders and make greater efforts to understand the underlying factors that lead to the disparities that surface in our data. Prudent policy decisions depend critically on this information.

REFERENCES


"This approach lets us get into students minds," says Simkins, "it helps make their thinking visible." "It changes the character of the classroom," he continues. "The comments we are responding to are 'their stuff,' not my stuff from lectures or stuff from the book; so there's a different kind of involvement and a different level of involvement."

Tomorrow's Professor Msg.#615 JUST IN TIME TEACHING

Folks:

The posting below is an editorial on Just in Time Teaching (JiTT) by James Rhem, executive editor of the National Teaching and Learning Forum. It is number and is #26 in a series of selected excerpts from the National Teaching and Learning Forum newsletter reproduced here as part of our "Shared Mission Partnership." NT&LF has a wealth of information on all aspects of teaching and learning. If you are not already a subscriber I urge you to consider becoming one. You can check it out at [http://www.ntlf.com/]

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Regards,
Rick Reis
reis@stanford.edu

UP NEXT: Contests motivate top students in large courses

Tomorrow's Teaching and Learning

------------------------------------ 1,369 words --------------------------------------

JUST IN TIME TEACHING

James Rhem

A quick and dirty description of "Just In Time Teaching" (JiTT) compares it to putting the "Study Questions" once found at the end of textbook chapters up on the Web. But there's a lot more to it. For one thing, the affect generated by JiTT differs markedly from that associated with a student pondering study questions alone in the dorm. The questions and exercises posted for students on the Web before each class meeting become the grist for that class meeting, not a quiz per se or a tidying up of understanding before getting on with the dispensing of another huge chunk of content. In this pedagogy, student questions, student understanding (and misunderstanding), student learning become the focus of instruction, and dialogue replaces lecture.

Mechanics

The mechanics of JiTT appear overtly simple: professors post a number of queries (commonly called "warm ups") on a course web site prior to each class meeting. Students must log on and post replies to these by a certain deadline (usually a few hours before class). Professors review the student replies before class and make the understanding, partial understandings and complete misunderstandings the focus of the class meeting. Indeed, the concepts being explored and the students grappling with understanding replace traditional lectures in JiTT, according to Scott Simkins, professor of economics at North Carolina A&T and an enthusiast of the pedagogy.

Simkins and colleagues from Indiana University-Purdue University Indianapolis (IUPUI) presented stories of how they are using this approach successfully in a number of disciplines at the inaugural meeting of the International Society for the Scholarship of Teaching and Learning in Bloomington, Indiana last October. Currently, under sponsorship from an NSF grant, Simkins is examining a number of pedagogical approaches previously funded by NSF to see which have worked well and which have transfer potential to multiple disciplines. Physics, a discipline currently famous for vigorous pedagogical innovation and
success, is the original home of JiTT. Originally developed by Gregor Novak at IU, it has quickly attracted a band of enthusiastic practitioners who have coauthored a book on the subject with Novak: 

Just-In-Time Teaching : Blending Active Learning with Web Technology (Prentice Hall, 1999).

So aside from using the Web, how does JiTT differ from simply having students read study questions and bring their own questions to class? Practitioners would say the whole latent premise of the question is misleading. For one thing, as Marshall McLuhan wrote in Understanding Media (1964), "the medium is the message." The immediacy, the "in timeliness," the sense of personal control associated with the Web matter a great deal. They convey a message of involvement and interaction rather than a message of questioning an authority. The equality of involvement sets the stage for a far different class meeting than the serial, oral confessions of what individual students did not understand, which responding to study questions might do.

"This approach lets us get into students minds," says Simkins, "it helps make their thinking visible." "It changes the character of the classroom," he continues. "The comments we are responding to are 'their stuff,' not my stuff from lectures or stuff from the book; so there's a different kind of involvement and a different level of involvement."

As class meetings shift from being presentation and discussion of blocks of material and into an ongoing learning dialogue, everything becomes more fluid. That unsettles some professors. "Professors sometimes are not as confident about working on their feet or working without a net so to speak," says Simkins. But those who make the leap find a quality of "buy in" from students that transforms their teaching. Says Simkins: "They see you as focusing on 'them,' on their needs; they don't see you as just presenting information. You're caring about them, not just presenting information."

The deep focus on student learning so changes students feelings about the class that they report it motivates them to go further, ask questions, look things up that they wouldn't have before. And yet, as with so many felt differences, the improvement currently eludes psychometric testing. As Simkins writes: "Regress analysis of pseudo-control/treatment group exam results, controlling for demographic and academic differences among students, suggest that there is a small, measurable, positive effect on cognitive learning with JiTT-based pedagogy."

That hasn't deterred instructors at some 80 institutions from adopting the approach and setting up a website to share information about it - at www.jitt.org.

Warm Ups

Eventually, that website will post a wide range of "warm ups" from various disciplines, "warm ups" like those developed by Kathy Marrs, a professor of biology at IUPUI who presented with Simkins in Bloomington. "Subject mastery is always the primary concern of JiTT," says Marrs. Thus, "a well-constructed Warm Up assignment asks students to address open-end questions at the conceptual level and in writing." These exercises, she emphasizes, are not quizzes.

Marrs gives these examples of good ways to begin an effective Warm Up:

"What is the difference between . . . ?"
"Why do you think . . . ?"
"What happens if . . . ?"
"Do you think that . . . ?"
"Estimate how many . . . ?"
"In your own words explain . . . ?"

The big advantage of this sort of exercise over a quiz, says Marrs, is that while a quiz encourages students to do assigned reading, it doesn't necessarily get them thinking about the material beyond the level of memorization as these questions do.

Warm Ups can take on big general questions or very pointed specific ones. For example, a question Marrs asked that might be posed in many fields is:

"What is the difference between a theory and a belief? You may want to look these terms up before answering. Be as specific as you can, and give an example of each."

But a more pointed question (and some student answers) better convey the way in which JiTT exercises enliven class meetings:

"Which gender is doing more meiosis RIGHT NOW in class - the males or the females? Or do men and women undergo meiosis at pretty much equal rates? What type of cell is the end product of meiosis in
men? What type of cell is the end product of meiosis in women? How many chromosomes do these cells have compared to our other body cells?"

Student replies included:

* "If I read my notes and didn't get confused I think it is the guys who are doing more meiosis, but I'm not definitely sure why. The sperm cell is the end result for the male and the egg for the female. There are half as many chromosomes for these cells, 23 instead of 46."

* "Both genders are undergoing meiosis at pretty much equal rates. The end result for men is a sperm cell and the women is an egg cell. Both of these cells have 23 chromosomes each and not 46 like other cells that go through mitosis."

* "Men and women do undergo meiosis at equal rates, but RIGHT NOW the 'female(s)’ are doing more meiosis, this means you Dr. Marrs because you have a little one growing in 'the oven'!!! The end product of meiosis in men is the sperm, and the end product in women is the egg. These cells have 23 chromosomes each."

Typically Marrs and other JiTT teachers display a range of student responses anonymously to start discussion. Partially correct responses are particularly useful as "classroom discussion fodder," says Marrs. Any teacher who's faced the difficulty of dislodging incorrect prior knowledge welcomes the opportunity JiTT affords of correcting misconceptions while new concepts are still fresh in students’ minds. And partially correct responses make that easier. It’s not as though students have gotten the concept all wrong; their understanding just needs a little adjustment. Again, the egalitarian ethos effected by filing Web responses and having these hold the spotlight in class casts students as active learners right from the start. They come to class with an investment in understanding.

Marrs and Simkins agree that the JiTT approach creates a "positive learning cycle" with students at its center and they see few barriers to using the approach in many disciplines. Updated "study questions"? Well, kinda, sorta . . .

For more information on JiTT see:

* Gregor Novak, Andrew Gavrin, Wolfgang Christian, Evelyn Patterson, Just-In-Time Teaching : Blending Active Learning with Web Technology (Prentice Hall Series in Educational Innovation, 1999)

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