

Developing Research Skills and Promoting Research Activities among Postsecondary Educators in the Two-Year College

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Overview

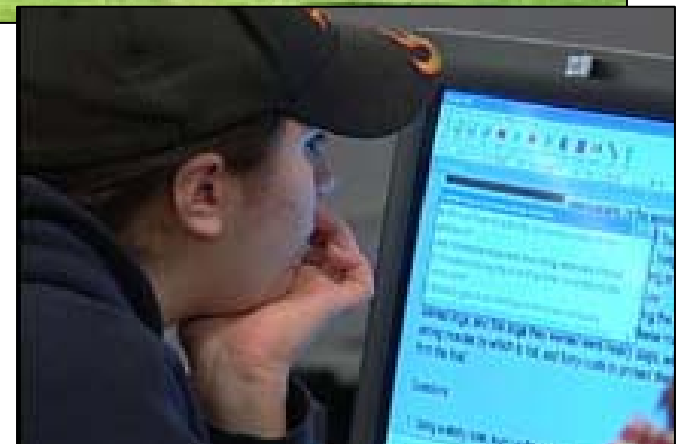
- Background
- Challenges and rationale
- Professional development approach
- Information and activity samples
- Lessons learned
- Next steps

Audience Background

- Administrators
- Full-time faculty
- Part-time/adjunct faculty
- Professional development providers
- Research personnel
- Others?

Landmark College and LCIRT

- 2-year college exclusively serving students with learning disabilities and/or attention disorders
- LCIRT conducts professional development, consulting, and research activities
- Research themes
 - Promoting institutional change to support students
 - Universal design/usability of information, technology, services
 - Validation of educational methods and techniques



Challenges at Colleges

Practical

- Financial
- Resources
- Expertise
- Ability
- Support

Philosophical

- College mission
- Department goals
- Attitudes
- Expectations
- Awareness

Some of Our Challenges

- Faculty
 - Primarily generalists
 - Cross-department affiliations
 - No sabbatical system
- Scheduling
 - High contact hours, constrained schedule
 - Meetings over lunch
 - Limited resources, no release time

Course Period	Meeting Time
Period 1	8:30 – 9:45
Period 2	9:55 – 11:10
Period 3	11:20 – 12:35
Mid-day break	12:35 – 1:20
Period 4	1:20 – 2:35
Period 5	2:45 – 4:00
Period 6	4:10 – 5:25
Period 7	5:35 – 6:50
Period 8	7:00 – 8:15

Importance of Research

- Enhance our ability to serve students
 - Encourage discovery and innovation of instructional techniques
 - Validate effectiveness of techniques and approaches
 - Promote awareness, critical thinking, publications
- National focus on *Evidence Based Decisions* and *Science Based Instructional Methods*
 - Develop ability to pursue grants and federal funding
 - Promote capabilities as project managers and principal investigators
 - Consistent with federal position on research

Department of Education's Stance

“No Child Left Behind puts special emphasis on determining what educational programs and practices have been proven effective through rigorous scientific research. Federal funding is targeted to support these programs and teaching methods that work to improve student learning and achievement.”



The screenshot shows the ED.gov website header with the U.S. Department of Education logo and tagline. A navigation bar includes links for Students, Parents, Teachers, Administrators, and Performance Reports. The main content area features a red sidebar with a 'NCLB' logo and a list of menu items: Overview, Stronger Accountability, More Local Freedom, Proven Methods (with sub-items: Doing What Works, Reading, Math Achievement, Science Achievement, English Fluency, Good Teachers), Choices for Parents, and A-Z Index. The main text area is titled 'PROVEN METHODS Proven Methods' and contains a paragraph about the NCLB's emphasis on rigorous scientific research and a paragraph about reading programs. At the bottom right, there are links for 'Printable view' and 'Share this page'.

[downloaded May 27, 2006, from: <http://www.ed.gov/nclb/methods/index.html>]

Our Need for Research

- Unique mission of College
 - Faculty develop new methods of instruction
 - Desire to disseminate and contribute new knowledge to support education of students outside the College
- Evolution of mission
 - Moving toward a more collegiate model
 - Emphasis (Rank and Promotion) on scholarly works
 - Desire of some faculty to enhance capabilities, add to existing knowledge base, engage in publishing

Early Steps to Promote Research

- Evaluation Office to promote internal assessment
- Participation in a Title III “Strengthening Institutions” grant
 - Promote awareness and experience with the publication process
 - Required a dedicated person to support faculty
 - Resulted in multiple publications, but required considerable support and release time

Recent Steps to Promote Research

- Development of processes for research proposals to be evaluated and vetted
- Establishment of IRB (Institutional Review Board)
- Hiring of Director of Research to support research activities, promote research agenda
 - Limited budget, staff, resources
 - Not a full-time, dedicated position

False Starts

- Promotion of faculty grant-seeking
 - “Go get grants,” “Go be a Principal Investigator”
 - Reality: Lack of time available, few qualified PIs, lack of buy-in and rationale for grants
- Mini-grants for faculty
 - “We’ll give you money to develop your own research pilot studies”
 - Reality: Not ready to develop and propose rigorous research projects
- Research assistantships for faculty
 - “We’ll pay you to help us do research”
 - Reality: Insufficient time available, not enough money, assistantships would be focused on professional development instead of research

Need for Research Leadership

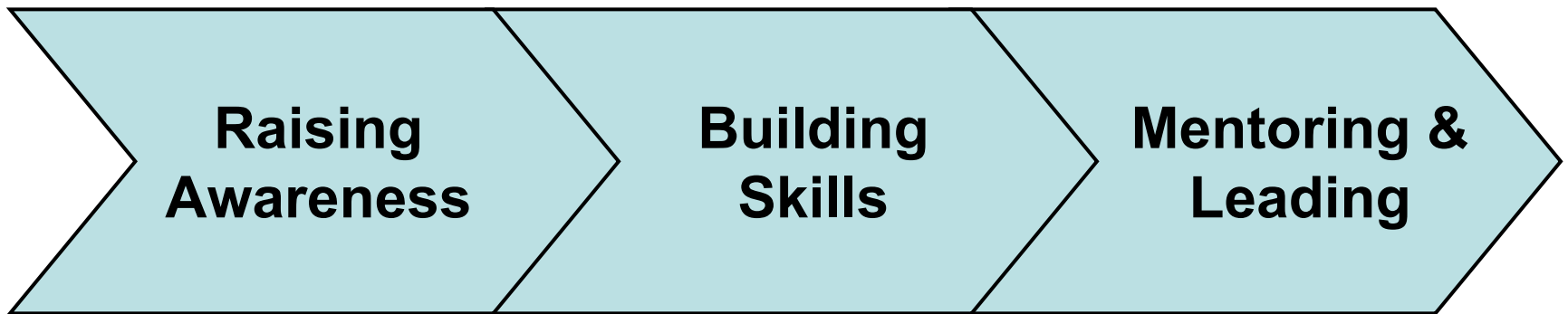
“A commitment to research programs is more than just informing faculty...about research opportunities, about grant writing opportunities, and about professional organizations. Merely imparting information is not educating.”

“Developing a strong and viable research program requires bold and committed leadership...in the creation of policies and procedures and a culture supportive of the many programs of research of the individual...scientist”

Adderly-Kelly, B. (2003). Promoting the scholarship of research for faculty and students, *The ABNF Journal*, March/April, p. 41.

Reality Check

- Need to adopt a phased approach
- Independent research can't happen yet
- Focus on awareness, skills-building, foster a shared and common vision



“What is research and why we should care.”

“How can we all support ongoing research activities?”

“I have a study idea but can't do it alone.”

Project Approach

- **Tailored**
 - Developed around the needs and abilities of faculty at the College
- **Open**
 - All College personnel can join, not just faculty
- **Sensitive to constraints**
 - Funding and release time not available/sustainable
 - Schedules and instructional expectations not likely to change in near term

Project Approach

- **Active and “owned” learning**
 - Participants not expected to have research backgrounds, need to support development of mental models
- **Collaborative**
 - Interviews with faculty to discuss concerns and needs
 - Participants help shape schedule and activities
 - Other staff departments lend support
- **Comparative**
 - Promote projects that use existing methods from research

Project Overview

- Main components (2005-2006)
 - Biweekly research lunch series
 - Modular topics with integrated activities
 - Introductory discussion
 - Group activity
 - Connect to previous/future meeting topics when possible
 - Incentive/recognition for completion
 - Mentored Research Associates
 - Team research projects
 - Co-authorship on related presentations and publications

Project Administration

- Project introduction
 - Frequently Asked Questions
 - Initial schedule
 - Description of project goals
- Staffing
- Ongoing evaluation
- Acknowledgement of completion
 - Certificate of participation

Topics Covered

Conventional

- Research methods
- Hypothesis testing
- Literature reviews
- Sampling
- Instruments and protocols
- Ethics and human subjects
- Statistics and data analysis

Special interest

- Identifying research ideas through personal experience
- Feasibility of research projects (“pre-mortems”)
- Grant-seeking
- Qualitative research
- Dissemination targets
- Internal research policies and procedures

Resources Used

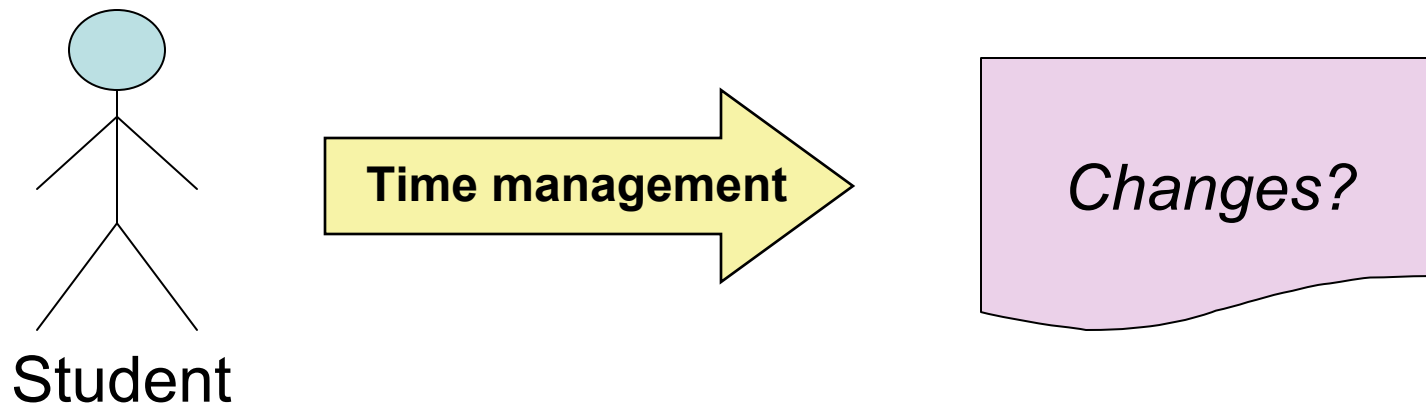
- Research methods textbook
 - Title: Research Methods in Education, Sixth Edition
 - Author: William Wiersma
 - Published: 1995, Allyn and Bacon
- Online research methods reference
 - Title: The Research Methods Knowledge Base, 2nd Edition
 - Author: William M. Trochim
 - Site: <http://www.socialresearchmethods.net/kb>
- Source of comparative research studies and methods
 - Title: How College Affects Students: A Third Decade of Research, Volume 2
 - Authors: Ernest T. Pascarella, Patrick T. Terenzini
 - Published: Jossey-Bass, 2005

Example: Developing hypotheses

- Handout
 - Introduction and background notes
 - Illustration of concept
 - Group brainstorm and generation of hypotheses
 - Walkthrough of worksheet
 - Serves as an introduction for discussing related research topics such as
 - Confounds
 - Assumptions made
 - Importance of maintaining records and logs of decisions
 - Positivist versus other research philosophies
 - Deciding what to measure and how to measure it

Group Brainstorm Exercise

You believe that effective time management is important for student success. What kinds of hypotheses could be developed to test your belief?



Example: Coding qualitative data

- Handout
 - Part of workshop on interviewing and qualitative data analysis
 - Introduction and background notes
 - First independent data coding activity
 - Review of coding responses
 - Group development of codes
 - Second independent data coding activity, using group codes
 - Review of how participants applied codes
 - Serves as an introduction for discussing related research topics such as
 - Operational definitions
 - Importance of training analysts when coding data
 - Concepts of inter-rater reliability (IRR) and concordance
 - Calculation of IRR and concordance

Example: Literature reviews

- Handout
 - Workshop conducted and developed with Library staff
 - Introduction and background notes
 - Brainstorm of research ideas
 - Walkthrough of elements on worksheet and rationale
 - Demonstration of databases, using ideas from brainstorm
 - Recommended strategies from Library staff

Lessons Learned

- Startup
 - Clearly communicate expectations and goals
 - Availability (or not) of funding
 - Expected level of effort
 - Level of knowledge required
 - Amount of support available
 - Anticipated benefits and outcomes for participants
 - Expect attrition after launching project
 - Encourage and acknowledge participation from people who do not have research backgrounds
 - Stimulate initiation of multiple projects
 - Promote cross-project interest and support
 - Compensate for attrition, cancellations, complexity
 - Identify future collaboration opportunities for participants
 - Capture interests and incorporate into future sessions

Lessons Learned

- Ongoing
 - Allow for flexible levels of participation—“sit back and observe” as well as active engagement
 - Be sensitive to the academic calendar (preparing and grading for exams, vacations near holidays and college breaks)
 - Propose schedule as a *starting point* for topics and activities
 - Be responsive to participant interests (e.g. specialized topics, approaches, instruments of interest)
 - Use modular approach to anticipate “drop-ins”
 - Avoid excessive dependency on information from previous meetings
 - Enlist support from multiple departments (e.g. Library, Technology, Counseling, students)
 - Maintain momentum and consistency—keep scheduled meeting dates and times
 - Always close the loop with “homework”
 - People want feedback on their work

Lessons Learned

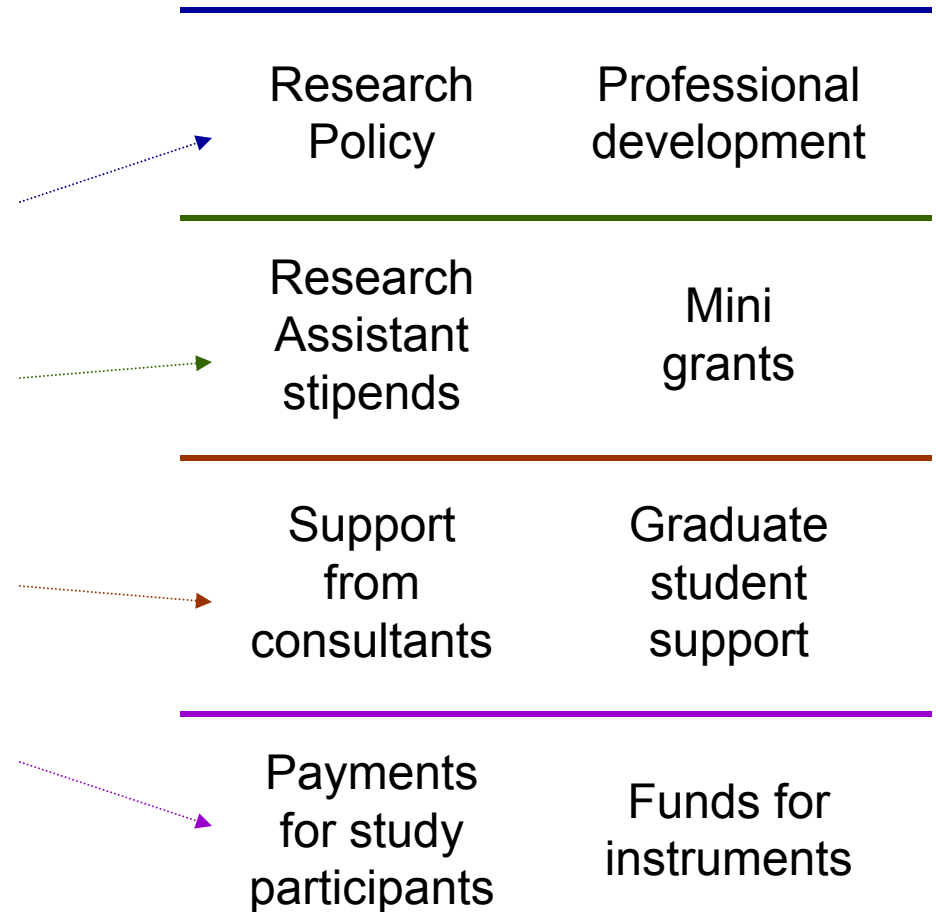
- Ongoing
 - Support multiple ways of learning and knowing (lecture, discussion, question-and-answer, activities, interviews, group work, worksheets, “homework”)
 - Conduct frequent formative assessments
 - Gather feedback on what’s working and not working
 - Identify alternate methods and approaches for exploring topics
 - Lobby for tangible support from administration
 - Policies to promote research
 - Funding to support pilot projects and professional development
 - Institutional support to engage in grant-seeking
 - Discuss actual research projects conducted at your institution (or comparable peers)
 - Invite speakers to share their experiences
 - Identify role models who can serve as subject matter experts within institution

Lessons Learned

- Completion
 - Provide recognition for regular participants
 - Certificates of participation and completion
 - Co-authorship and acknowledgement in publications
 - Participation as guest speakers in meetings
 - Evaluate progress and effectiveness with participants
 - Review content and specific activities from the year
 - Help identify interest gaps (“what did we miss?”)
 - Solicit feedback for future topics and new activities
 - Encourage current participants to lead future discussions and workshops
 - Discuss progress of research projects with participants
 - Work with participants to identify funding opportunities
 - Disseminate project activities and participant feedback through campus newsletters and announcements

Next Steps: Research Center

- Lobby for development of central structure for administration and promotion of research
 - Create policy and support professional development
 - Distribute funding for incentives and direct research support
 - Work with specialists to support research tasks
 - Help provide funding for study participants and specialized instruments



Session Summary

- Questions and feedback?
 - Importance of research postsecondary institutions
 - Methods for promoting awareness
 - Approaches for developing research skills
 - Challenges to implementation
 - Feasibility of approach
 - Sample workshop and activity ideas
 - Issues and gaps