Third Annual Teaching Scholars Institute:

"Good Practice Encourages Active Learning"

A collection of teaching strategies introduced by teaching scholars from:

Murray State University

University of Tennessee at Martin

Western Kentucky University

Held at:

University of Tennessee at Martin

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Teaching Scholars: Good Practice Encourages Active Learning

The Teaching Scholars Institute (TSI) consists of faculty members selected by Deans at Murray State University (MSU), Western Kentucky University (WKU), and the University of Tennessee at Martin (UT Martin) for their innovative teaching approaches. The mission of the Teaching Scholars Institute is to foster communication among the universities and to develop a record of effective teaching strategies.

The Teaching Scholars Institute held its third meeting at the University of Tennessee at Martin, on February 3, 2006, to discuss Chickering and Gamson's principle of active learning, one of seven principles of good practice (1987). Their description of active learning is:

> Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves.

The TSI participants first met in small groups based on their disciplines to discuss how they encourage active learning based on the subject matter that they teach. Discipline Groups included:
- Business
- Health
- Humanities
- Science/Agriculture
- Social Sciences/Education

After coming together to discuss each group's findings, the instructors divided into small groups based on special interest topics (e.g., civic engagement and upper division classes). Due to the interdisciplinary nature of the groups, the participants were able to reframe their discussions on active learning.

Special Interest Topic Groups included:
- Civic Engagement
- General Education/Large Classes
- Special Issues (e.g., Legal Issues, Disability, etc.)
- Technology
- Upper Division Classes

The findings presented in this report highlight the success stories and insights that the instructors shared during the day. The faculty members offered innovative approaches to connecting with students and involving students more significantly in their chosen discipline and in the broader area of lifelong learning.

The report is divided into two main sections:
I. Perspectives of active learning by discipline
II. Perspectives of active learning by special topics

I. Perspectives on Active Learning by Discipline

A. Social Sciences and Education Faculty

Pam Petty   *Special Instructional Programs*   Western Kentucky University
Brian Johnson   *Psychology*   University of Tennessee at Martin
Jacqueline Hansen   *Early Childhood/Elementary Education* Murray State University

The TSI faculty from the Social Sciences and Education offered an array of active learning strategies: from introducing students to the class syllabus to promoting critical thinking.

Their discussion yielded the following acrostic and model to define the process of active learning:
*A* authentic, applicable, accountable
C cooperative, community, caring---- to make the class a good place to take risks.
T time management and Teacher efficacy—empowering us to feel creative, to change what we do.
I interpersonal, interesting, instructional technology—can't just plug and play the techniques.
V vary strategies, vigor, different venue
E experience, enthusiasm, effective.
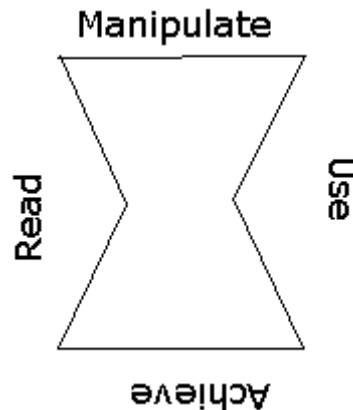
Strategies

- **Observations.** Johnson (UT Martin) offered an example of making active learning meaningful in Social Psychology. He designed a class project in which students record observations of behavior. From that, they select and tie it to a classroom theory. With sophomores to seniors in the class, with only the introductory psychology sequence as background, Johnson designed the assignment whereby everyone is on equal footing.

- **Stories.** Petty (WKU) described herself as a storyteller. Those things (personal or interpersonal hooks) help her build community. In elementary classrooms, she noted it took a lot of time at the beginning and established guidelines for cohesion. Then later there is less need to remind the students of the rules. This carries over to college. You have to believe that the time is important. In education, everything you do is modeling effective teaching.

At MSU, Hansen teaches a teaching methods course. To teach students how to write anecdotal records, she requires that they watch someone for 10 minutes in a public setting and write about it in scientific terms (e.g., people in a cafeteria or a boyfriend watching TV). This teaches them to write analytically, not subjectively. After they are taught how to design a lesson plan, she then requires them to teach children. She begins her lessons with a personal or interpersonal hook such as, when teaching how to do a well-designed lesson, "Think of an event that required a lot of planning, for example, a wedding. Why was planning important?"

- **Pop Culture.** Hansen (MSU) added that at the college level, she spends a few minutes deciding what personal, pop culture thing to share about herself (e.g., riding a Harley motorcycle). To build community, she offered the 3 P's: 1.) be positive, even if you had a bad day; 2.) be punctual and prepared, so everyone starts with a common foundation of knowledge; and 3.) be professional. The number one rule is no negative self-talk—no sarcasm or put downs in the classroom. Johnson shared an assignment of a colleague who works through the decades of psychology and has students identify the popular culture events happening at the same time to explore what is influencing the discipline of psychology.

- **Music.** Johnson (UT Martin) described that the hook in his social psychology class is the inclusion of music throughout the semester. Phil Zimbardo, a famous psychologist, said he would have 5 minutes open mike time. Johnson brings in a song related to what topic is being covered in the class. "Social psychology is how we perceive the world, so I use Peter Gabriel's song, 'In Your Eye' to illustrate it. When discussing self-concepts, I use the Who's 'Who Are You'."

  Petty (WKU) burns a CD with categories of music. As a big country music fan, in her reading method's course, she plays "How Bad Do You Want It" [by Tim McGraw]. The song becomes the class mantra. She notes faculty can communicate with students through music. Not only is it active, but it helps her communicate with her students in a different way.

- **Me Box.** Petty (WKU) employs video streaming for her online classes. They have to introduce themselves to children, and students think it will be easy. But children are very perceptive and do not hesitate to question. Students tend to use adult words and lose the children. So to help them, she requires a "Me Box". Students get a container and walk though the house and pick up things that represent their daily lives. Students come to class with their containers and share the contents. Then they do it for the children and the kids love it. Having a thing to hold up makes it easier. For online classes she uses a "Me PowerPoint" with links to favorite artists, pictures, etc.

- **Literacy Autobiographies**. Hansen (MSU) describes these as students' life stories as readers and writers. She asks, "What do you remember about those experiences?" She notes it affects how faculty and students see other learners.

Active Learning to Promote Class Reading

- **Themes.** Hansen (MSU) described how to teach by themes, not chapters, by selecting parts of the text book that she wants them to be responsible for, using Literary Log—summaries, outlines, concept webs. The students must complete an application activity for each theme. She also uses Circles of Sharing. Students stand in two circles, one inside the other. One circle rotates so everyone talks to everyone about the theme. Another way to accomplish group work is to use Think-Pair-Share. With this method, the teacher gives a prompt or question and gives the students a few moments to think about it. Students then pair up and discuss their answers and reflections with one another. Finally students share their discussion with the rest of the class either by offering their results or being called on. Each stage is just a few moments.

- **Online tools.** Petty (WKU) asks students to read several chapters and then asks them to link on the course calendar where they can select a type of graphic organizer for that reading. She expects them to think about what to do before they read, while they read, and after they read.

- **Quizzes.** Johnson (UT Martin) noted that he offers quizzes in a statistics course to promote more active learning. The questions are from the reading for the day. It gets them back to being prepared. If the student does not get it early, then the professor cannot help later in the semester. He notes that he is trying to use more feedback loops, more regularly, and that doing so helps him know more readily where students are falling behind.

- **Literacy Logs**. Petty (WKU) asks students to rank different reading strategies (for pre-reading, during and after reading) that they were assigned. When they come to class, she has children's books, and they have to apply their favorite strategy to their book. For example, if their favorite was an anticipation guide—they read the book and write an anticipation guide for that book. For extra credit, she requires students to send an electronic version to her, and she puts it on a web page for teachers. So the task is <u>authentic</u>. Hansen (MSU) notes that the meaning in this type of method is applying what they have learned. As Petty (WKU) noted, "read-manipulate-use."

- **Encouraging Students to Organize Material.** Johnson (UT Martin) and Petty (WKU) emphasized the importance of students reformulating what they have learned and writing it down in their own words. Petty offered a model of working from the Broad Idea at the top, then give Details (the middle). Hansen (MSU) described the use of graphic organizers, groups and reporting back, such as Think-Pair-Share, 3x3x3 and Jigsaw. She described how to employ this technique when covering lots of information in a short period of time. She organizes students in groups of three and, at planned times, stops the discussion to pose a question. She then allows the group three minutes to come up with three answers, and they spend three minutes answering questions.

- **Questioning.** In his Social Psychology course, Johnson (UT Martin) asks students to bring in index cards with two or three questions that are course-related. For his Intro to Psychology class, he poses a question to students every day that asks them to reflect on material that they have either previously read about or that will be covered that day in lecture.

- **Scavenger Hunts.** To save time and to promote active learning, Petty (WKU) offers electronic scavenger hunts on all syllabi. For example, on an electronic syllabi, she has another page with name and date and that asks fill-in-the-blank questions about the course.

She also uses check boxes, drop downs, and blanks. The assignment has a Cloze procedure for the plagiarism policy—every 5th word is left out for them to fill in. They have to tell her the assignments and how many points per assignment, for example. Hansen (MSU) echoes that she also uses this strategy with an alternative approach. To help them find the resources they will need to create lesson plans, she created the Great American Race where the class is divided into teams. They race to find resources all over campus that they will need. She requires that students sign out at each place. The first team done gets a 100 grand (candy bar that is). It is on the honor system.

Petty (WKU) suggested another strategy with her syllabi that lists all of the assignments they must do with due dates. Students can pick which of those assignments they will do more than once. They give Petty the due dates from the ones they are going to repeat within in the class. The theory is for them to do more teaching and less typing. Students have to dialogue with their teacher supervisor and make decisions. Choice is a major part of active learning. This allows students to follow their passion.

Table 1: Overview of Social Science/Education Perspectives on Active Learning

Principles	Disadvantages	Ideas
• A-authentic, applicable, accountable • C-cooperative, caring, community • T-time, theme, teacher sufficiency • I-interpersonal, interesting, instructional technology • V-vary strategies,vigor, venue, • E-experience, enthusiasm, effective	• large classes • lots of material to cover • limited study skills • dealing with the abstract and higher order of thinking can be more difficult in large class settings	• modeling what faculty want: critical thinking • make reading assignments task-oriented • mix it up • class enrollments increase which can mean more positive evaluations from students • reward student efforts • relate target material to their lives, current events

B. Humanities

Wayne Beasley   *History*   Murray State University
Alice-Catherine Carls *History and Philosophy* University of Tennessee at Martin
Laura McGee   *Modern Languages*   Western Kentucky University

The TSI faculty from the Humanities began by defining the term "active learning" and then discussed necessary elements for active learning to occur. The group cited large classes and limited study skills as challenges to implementing active learning. To promote active learning, they noted that faculty members must model active teaching to promote active learning. Examples that were suggested

included: making reading assignments task oriented, varying strategies in the classroom, rewarding student efforts, and relating target material to their students' lives and current issues. The group members shared a mixed response to active learning, but there was some acknowledgement that classes may fill up faster and that students may offer more positive evaluations of the class.

Defining Active Learning

Beasley (MSU) challenged those who would purport that active learning is the best way to teach in all situations. The historians of the group, Beasley and Carls (UT Martin), both thought that while activities and writing were all well and good, they preferred lectures and thought that "reflection is central to processing information." Beasley observed that experts would not call what he does active -- lecture and discussion -- but added that he thinks it contains elements of active learning.

McGee (WKU) described her belief that that while lecturing might allow students to hear information, students are people too, and people like to participate in the conversation; otherwise, they lose interest. She shared that active learning helps relate that new information to where students are in their lives right now.

Motivation as Prerequisite

McGee (WKU) shifted discussion to the necessary element of student motivation by asking, "How does a faculty member motivate students to perform active reading when they have poor reading skills?" She prepares and encourages her students. She asks some pre-reading questions to set up for the next class to help them relate—to self assess 'how much do I know about the topic, how it is relevant?' For instance if the Bubonic Plague is the topic of an upcoming class, she might ask them about AIDS, the bird flu and how those illnesses relate to economics, morals, religion.

> *"I am also more myself in an active learning class."*
>
> *-Alice-Catherine Carls, UT Martin*

Carls (UT Martin) offered that she observed enrollment trends in her courses based on her teaching strategies. The courses in which she implemented more activities tended to have higher enrollments that those courses in which she could not as readily use active learning. She also shared that when she attempted to focus on issues by giving twenty-minute mini-lectures to allow time for discussion, she became frustrated when the students had no knowledge of the material. She expressed her desire to relate to the students this way, but that she has abandoned the technique due to the amount of material to cover.

Beasley (WKU) commented on the added challenge of classes of 150 and his inability to manage roundtables in a mega-class. He felt that Chickering may be too idealistic in suggesting that active learning should occur in all classes, regardless of size and/or discipline.

Responsibility of Student

McGee (WKU) suggested that the faculty member should not give the students a reading assignment without asking them to do something with it—even if it is only a writing a half page summary. She does not always collect the assignment in the same way. For instance, one time she will pick up a set

and then randomly distribute them to the class; another time, she will collect them to read; yet a different approach is to select one from the pile and have the students react to its contents. Expecting students to work should entail reward and/or consequences for those who do not follow through. She offered her strategy for accountability by noting she teachers 30 students in her 101 German class. Different strategies work for her such as a random quiz that takes only ten seconds.

Beasley (MSU) observed that what the Humanities faculty might be discussing actually parallels the goals of the Socratic method, the highest form of learning. Other faculty agreed the Socratic method could work for upper division classes, but that active learning could be especially helpful in the general education, lower level classes, in which students may not be as self-motivated about a particular discipline.

C. Health Faculty

Beverly Siegrist	*Nursing*	Western Kentucky University
Gloria Browning	*Nursing*	University of Tennessee at Martin
David Fender	*Occupational Safety and Health*	Murray State University

The faculty members from Health disciplines acknowledged that their subjects more readily incorporate active learning than some other disciplines through case studies and internships. Active learning offers several strategies that address learning preferences of students.   It is also important that faculty are confident in their knowledge of content before they begin to engage in active learning.

The faculty members began discussing the challenges of teaching classes with both traditional and non-traditional students. The adult learner brings experiences from the outside world that can be useful for the younger students. Promoting discussion across the generational and developmental differences can be challenging, yet productive.

Assessment

The group discussed how active learning can be more difficult to assess. The assessments they have used effectively include reflection journals, discussions, preceptors, feedback, peer review, self-evaluation, and observation.

Table 2: Overview of Health Faculty Perspectives on Active Learning

Examples	Principles	Disadvantages	Assessment
• case studies • care maps • lab settings • internships • teaching projects • psychomotor /hands on experiences • computer assistance	• learning preferences • knowledge of content • comfort • approachable	• resources • different age groups • traditional vs. nontraditional students • developmental differences	• reflection journal • discussions • preceptors • feedback • peer review • observation • self evaluations

D. Science and Agriculture

Dana Emberton-Tinius *Biology*   Western Kentucky University
Joel Lenoir   *Engineering*   Western Kentucky University
Anthony Harmon   *Chemistry*   University of Tennessee at Martin
Brian Parr   *Agriculture*   Murray State University

The faculty members from Science and Agriculture talked extensively about active learning and the importance of leading students from the theoretical to the practical in their disciplines. The pointed out that active learning promotes cognitive dissonance. When faculty focus solely on providing all of the necessary and correct answers, students expect the faculty to provide answers without thinking independently. Students need an element of dissonance to prompt them to explore, ask, inquire, and investigate.

Table 3 : Overivew of Science/Agriculture Perspectives on Active Learning

Principles	Strategies	Difficulties	Assessment
• Focus on outcomes as clear measurable objectives – a short list of what students need to accomplish. Explain connections. • keep focus on the student • value cognitive dissonance	• visual Intellectual activities • changing the pace of class • varying presentation style • making connections to the real world via case studies, simulations, etc.	• large class size • finding appropriate levels of connection • technology can serve as an impediment • covering all of the material	• link course activities to objectives to assessment • use more than one mode of assessment – summative, formative, authentic, student self-assessment • course reviews

E. Business

Scott Droege   *Management*   Western Kentucky University
David Eaton   *Economics/Finance* Murray State University

The TSI Business faculty members noted some of the same impediments to active learning as the other groups, including the increasing numbers of students who do not read assignments and the need for more accountability for students. They recognized that active learning can help students take theory and apply it for deeper understanding.

Table 4: Overview of Business Perspectives on Active Learning

Examples	Advantages	Disadvantages	Assessment
• in-class visual/tactile activities • change pace of class/vary delivery style • be authentic-make connections to "real world • case studies	• focus on outcomes, learning objections rather than "topics" • keep the focus on the student provide classroom climate where students can participate in low-risk, no consequence • no fear of failure	• class size, class design • technology-ITV, PPT, Online Delivery • class time invested vs. content covered • finding appropriate level of connection and interaction	• link course objectives to activities to assessments • use different modes of assessment for a richer measure. • student self-assessment

II. Topic Clusters

The TSI faculty were assigned to small groups to discuss active learning as applied to special issues in higher education: Civic Engagement, Special Issues, General Education, Technology, and Upper Division Courses. In these topic clusters, faculty interacted with colleagues from a variety of disciplines.

A. Civic Engagement

Laura McGee   *Modern Languages*   Western Kentucky University
Alice-Catherine Carls *History* and Philosophy   University of Tennessee at Martin
Brian Parr   *Agriculture*   Murray State University

The TSI faculty in the Civic Engagement group equated the term to world engagement with the goal of creating better-informed citizens. Thus, they connected students' ownership of learning to the application of what is learned. They also noted that active learning in civic engagement allows learning to impact the students' lives. With that impact, however, is the acknowledgement that faculty may have difficult in predicting what will change students and when the learning will occur.

Table 5: Faculty Perspectives of Active Learning and Civic Engagement

Examples	Advantages	Disadvantages	Student Response
• Service Learning Scholars (MSU) • agricultural literacy (MSU) • language education advocacy/policy (WKU)	• important to provide an opportunity for student to reflect on what it means • to society and self (at Murray –part of the S.L. contract is to reflect)	• heated debate, closed minded discussions • furthering faculty member's agenda • busy work • legal issues	• takes them out of the classroom • gives them access to activity that impacts their lives directly • want to be engaged and to decide how they will

• service learning coordinator (WKU) • New York Times in the classroom (UTM) • travel study trips (ALL)	• group accountability • in class responsibility -work • move internship experience to earlier part of education • authentic and ownership by students • better informed citizens • combine skill sets		be engaged. • hard to predict what will change students • method will not save you • teacher must match the method to students • opportunity knocks, door opened • costs of active learning

B. General Education

Wayne Beasley   *History*   Murray State University
Dana Emberton-Tinius   *Biology*   Western Kentucky University
Anthony Harmon   *Chemistry*   University of Tennessee at Martin

This group of TSI faculty was asked to discuss strategies, and disadvantages, and assessment in active learning as applied to general education courses. There was considerable discussion as to whether or not active learning is a panacea for teaching today's college student.

Defining Active Learning

Harmon (UT Martin) revealed that his approach to "active learning" is to ask students non-rhetorical questions in his chemistry class. Harmon went on to say that his strategy is to keep asking questions, building on the students' knowledge, even if it is something as simple as what color does one get by mixing red and purple in order to talk about sapphires.

Beasley (MSU) stated that his problem is the number of students per class. He once taught a class of 150 students. He has 45 students in each general history class now; "even this is too many." He offered that his effort at active learning was to leave a series of PowerPoint presentations on Blackboard.

Emberton-Tinius (WKU), who teaches Anatomy and Physiology, asked groups of students to paint different human systems on a large sheet or shower curtain. During a presentation, the students then had to stand on the sheet and walk through the systems for which their group had been responsible. The following semester, a different group of students took those drawings to an elementary school and were responsible for talking about the human systems with the children. She referred to her civic engagement writing portfolio idea worth fifty points (a test score equivalent in a class of eight exams). The students had a choice of the following four: 1.) writing about a community service project such as donating blood; 2.) joining the class in the K-12 outreach on the human body systems; 3.) attending a WKU event; or 4.) classroom presentation.

Beasely (MSU) and Harmon (UT Martin) observed the difficulty of active learning with large classes and student populations who are not motivated to learn for the sake of learning.

> *"Listening to a lecture was what I wanted to do and what I needed. These kids need entertainment."*
>
> *-Dana Emberton-Tinius, Western Kentucky University*

Table 6: Faculty Perspectives on Active Learning in General Education Courses

Examples	Advantages	Disadvantages
• portfolio • notebook/journals • group discussion board	• long term retention of information • higher energy level in classroom • potential motivator exposure to diverse ideas	• to faculty… -higher evaluation time (student work) -sacrifice activities for content • to students… -always advantageous

C. Special Issues

Brian Johnson   *Psychology*   University of Tennessee at Martin
Pam Petty   *Special Instructional Programs*   Western Kentucky University
David Eaton   *Economics/Finance*   Murray State University

This TSI group was asked to apply the principles of active learning to special issues in higher education. The participants discussed issues such as the logistics and costs associated with implementing active learning (e.g., special fees, extra time required to visit sites). Another insight brought out by this group was in the observation that laboratory assignments can become passive learning, rather than active, when the focus is on rote memorization. They also noted that implementing active learning in a classroom may mean a faculty member must sacrifice some elements of content. Managing that balance becomes a challenge.

Table 7: Faculty Perspectives of Active Learning and Special Issues

Examples	Advantages	Disadvantages
• internships • laboratories • case studies • group work	• teacher must match teaching method to their academic discipline and personal style	• even when a teacher wants to use active learning, students must be motivated to participate • active learning, away from the classroom, may entail issues of confidentiality, ethics, etc. • teacher ratings may drop because more responsibility falls upon the learner

D. Technology

Gloria Browning	*Nursing*	University of Tennessee at Martin
Scott Droege	*Management*	Western Kentucky University
Joel Lenoir	*Engineering*	Western Kentucky University
David Fender	*Occupational Safety/Health*	Murray State University

The TSI faculty in the technology special topics group all agreed that technology can benefit students who are more reserved. Yet, some members pointed out that they have students who do not prefer technology in the classroom as much as others do. They also reached consensus that technology for the sake of technology is a misnomer. More traditional methods of teaching still hold relevancy in the new millennium.

Table 8: Faculty Perspectives on Technology and Active Learning

Examples	Advantages	Disadvantages	Notes
• simulation • labs • blogs • discussions • personal response systems (i.e. clickers) • web search	• shy students come out • community building • more creative • reconsider components of course	• technology for sake of technology • technical material	• generally expect/like it • raises expectations • understanding varies

E. Upper Division Courses

Jacqueline Hansen	*Early Childhood/Elementary Education*	Murray State University
Beverly Siegrest	*Nursing*	Western Kentucky University

In trying to define their perspective on active learning with upper division courses, the participants likened the challenge to that of a student with a GPS system. Thus, the faculty should aim to guide students to find their own way.

Table 9: Faculty Perspectives of Active Learning and Upper Division Courses

Examples	Advantages	Disadvantages
• distance learning • field experiences • help students become self-directed learners	• very little difference in upper and lower division courses	• limited time to cover so many topics • can be difficult to assess

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Alice-Catherine Carls, History and Philosophy
Brian Johnson, Psychology
Anthony Harmon, Chemistry

Western Kentucky University

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