

Resources on Promoting Critical Thinking in First-Year Seminar Classes

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Online Resources

John N. Gardner Institute for Excellence in Undergraduate Education

Formerly the Policy Center on the First Year of College, the Gardner Institute focuses on the development of assessment-based action plans with measurable outcomes. Resources include

- [Publications](#)
- [First-Year Summit](#) (for institutional leaders)
- [Foundations of Excellence in the First College Year](#) self-study

National Resource Center for the First-Year Experience and Students in Transition

Provides multiple resources, including

- [Searchable database of first-year seminar syllabi](#)
- [Searchable database of summer reading programs](#)
- [Listserv archives](#) (organized by topic)
- [Links to relevant research and publications](#)

OnCourse

OnCourse is a website devoted to helping educators foster academic success and persistence in college through motivation and empowerment. Creator Skip Downing includes links to articles and activities designed to foster the development of key skills for college success. His section on life-long learning includes critical thinking

(<http://oncourseworkshop.com/Student%20Success%20Strategies.htm>; scroll down to “Life-long learning”).

Books, Papers, and Monographs

Cuseo, J. (n.d). **Active learning: Definition, justification, and facilitation. Unpublished paper. Retrieved July 21, 2009 from <http://www.uwc.edu/administration/academic-affairs/esfy/cuseo/Active%20Learning--Definition%20Justification%20and%20Facilitation.doc>**

Cuseo, a professor of psychology at Marymount College in California and an expert on the first-year experience, discusses the value of active learning and presents instructional strategies for promoting it. He also discusses how strategies to promote active learning help students develop critical thinking skills.

Daly, W. (1995). **Beyond critical thinking: Teaching the thinking skills necessary to academic and professional success (Monograph 17). Columbia, SC: University of South Carolina, National Resource Center for The Freshman Experience and Students in Transition.**

Publisher's description: "Daly expands the familiar concepts of critical thinking to include 'independent thinking.' He argues that many of the mental activities required for independent thinking run counter to the way the human brain actually works and that in order to help students meet growing academic and economic demands, educators will have to modify their instructional strategies to include more opportunities for students to practice independent thinking. The monograph includes classroom strategies for providing students needed experience in higher order thinking skills."

Erickson, B. L., Peters, C. B., & Strommer, D. W. (2006). *Teaching first-year college students*. San Francisco: Jossey-Bass. [not in Meredith's catalog]

Publisher's description: "*Teaching First-Year College Students* is a thoroughly expanded and updated edition of *Teaching College Freshmen*, which has become a classic in the field since it was published in 1991. The book offers concrete suggestions about specific strategies and approaches for faculty who teach first-year courses. The new edition is based on the most current research on teaching and learning and incorporates information about the demographic changes that have occurred in student populations since the first edition was published. The updated strategies are designed to help first-year students adjust effectively to both the academic and nonacademic pressures of college. The authors also help faculty understand first-year students and show how their experiences in high school have prepared—or not prepared—them for the world of higher education. Written in a highly accessible format, the book contains instructive commentary from both students and educators and includes a new chapter that addresses the topic of creating inclusion in classrooms and curricula. In addition, this revised edition offers information on active learning techniques, learning styles, constructing evaluation tools and assessments, and alternative teaching methods."

Friedman, D. B. & Marsh, E. G. (2009). What type of first-year seminar is most effective? A comparison of thematic seminars and college transition/success seminars. *Journal of The First-Year Experience & Students in Transition*, 21(1), 29-42.

The authors examined differences between students at Appalachian State University taking the traditional, long-standing freshman transition seminar and students taking new, pilot thematic freshman seminars. The traditional seminar focused on transition issues and academic skills, while the thematic seminars paid slight attention to these topics, focusing instead on a specific, discipline-based topic (e.g., banned books, environmental science, studio art). Students in all seminars took the First-Year Initiative (FYI) survey after course completion; the FYI measures students' perceptions of certain course outcomes. One of these outcomes was critical thinking; the mean score of students in the thematic seminars was statistically similar to that of students in the transition seminars. Friedman and Marsh do not indicate that critical thinking was a learning outcome of either type of seminar; however, one might expect that a thematic seminar would lead to greater critical thinking gains than a transition seminar given its primary focus on topics such as banned books that would seemingly spark more discussion and inquiry than would a seminar on study skills and campus resources. It is surprising, then, that the authors found no difference in means between the two groups. While the study has some substantial limitations, including the fact that the authors relied on student self-reports rather than direct assessments, we nonetheless might infer that teaching critical thinking

to first-year students needs to be an intentional process in order to yield learning gains (and this is supported by other literature on critical thinking instruction).

Giancarlo, C. A. & Facione, P. A. (2001). A look across four years at the disposition toward critical thinking among undergraduate students. *The Journal of General Education*, 50(1), 29-55.

Believing that higher education should not only teach students to think critically but should also strengthen students' disposition toward critical thinking, the authors sought to determine whether first-year students differed from seniors in their disposition toward critical thinking. They used the California Critical Thinking Disposition Inventory (CCTDI) to test entering students at a private, Catholic, four-year institution in 1992 and the same group of students as seniors in 1996 (n=147 for students participating in both years). CCTDI overall scores were higher for seniors than for first-years, and the increase was statistically significant. However, the study did not control for factors that may have contributed to the increase, such as age, developmental stages, particular curricular and extracurricular activities and experiences, etc. Nonetheless, the study suggests that critical thinking disposition is something that can and should be taught (or developed) alongside the teaching of critical thinking skills. Meredith may want to consider the development of a critical thinking disposition to be a learning outcome—separate from those relating to critical thinking skills—for first-year seminars and possibly for general education as well. See also Lampert, N. (2007, January). Critical thinking dispositions as an outcome of undergraduate education. *The Journal of General Education*, 56(1), 17-33.

Hatcher, D. L. (2006). Stand-alone versus integrated critical thinking courses. *The Journal of General Education*, 55(3-4), 247-272.

Hatcher presents the curricular model used to teach critical thinking to students at Baker University; their model involves a two-semester sequence of courses taken by all first-year students and a senior capstone course. He describes the structure of the two first-year courses, which focus on learning to understand and evaluate arguments (first semester) and applying those skills through readings and writing assignments in a composition course (second semester). Baker's program began in 1990 and student outcomes have been assessed using the Ennis-Weir Critical Thinking Essay Test (E-W), an essay test; students take the E-W three times, allowing for pre-test/post-test and longitudinal comparisons: during the first week of their first year, as a final exam in the spring first-year course, and during the senior capstone course. Baker students showed significant gains in E-W scores on the first-year spring post-test and the senior test, compared to first week scores. In 1996, Baker switched to the California Critical Thinking Skills Test (CCTST), a multiple-choice test, for assessment; students showed similar pre-test/post-test/senior year score gains on the CCTST as they had on the E-W. In 2005, Baker again switched assessment instruments to the Cornell Level Z test, in part due to concerns about the suitability of the CCTST. These are three instruments Meredith may want to investigate for use in assessing student critical thinking outcomes.

Hatcher proposes that a two-semester sequence of courses in the first year gives students ample time to develop and apply critical thinking skills, as opposed to the more limited

timeframe of a single-semester course, where memorization, rather than application, of skills may predominate. However, Hatcher doesn't present any empirical or qualitative data to support his idea that a two-semester sequence leads to enhanced student learning of critical thinking. Nonetheless, discussion of how to integrate critical thinking into Meredith general education program should consider how to build upon FYS students' learning gains in subsequent courses. Also of note is the training Baker faculty have received; thanks to a grant, "almost all Baker faculty members have attended a summer workshop that covers the textbook at the CT materials taught to all freshmen . . . [as well as] ways teachers in all disciplines can integrate CT skills into their own classes" (p. 267). Meredith should look into similar options for grant funding of faculty development on critical thinking pedagogy.

Maser, J. P., Hunt, S. K., & Kuznekoff, J. H. (2007). Revising general education: Assessing a critical thinking instructional model in the basic communication course. *The Journal of General Education*, 56(3-4), 173-199.

The authors focus on a communication course, COM 110, at Illinois State University (ISU); the course serves as part of the general education curriculum for first-year students, and all students must take it in their first year as part of a two-course sequence (the second class is English 101). The main goals of the course are to teach critical thinking skills, information literacy, and communication skills. The study examined whether enhancements to the standardized COM 110 curriculum would result in higher scores for students on the Critical Thinking Self-Assessment (CTSA) and a locally developed, course-specific test of critical thinking skills. The results showed that students in the experimental group (those exposed to the new curriculum) significantly increased their scores on the skills test from pre-test to post-test, but the control group did not show significant increases and in fact decreased on some measures. All students' CTSA scores increased significantly pre-test to post-test, which was a concern as the control group's skills test scores did not increase; this result underscores the need to use student self-assessment data with caution.

Of particular note in this study are the instructional tools used by the COM 110 instructors teaching the enhanced curriculum; these are loosely described in the article and may be useful for designing the Meredith FYS curriculum to teach critical thinking. In addition, in light of the authors' finding that the control curriculum for COM 110 did not result in increased scores on the critical thinking skills test, they emphasize "the importance of conducting general education course assessment on a consistent basis" to ensure that courses are achieving their stated outcomes (p. 189). They also note the importance of infusing critical thinking instruction throughout the general education curriculum, rather than relying on a single course to teach a skill as complex and important as critical thinking.

Finally, the authors describe the faculty development program that ISU has implemented to train their COM 110 instructors: all new instructors must attend a ten-day training workshop to learn course content and pedagogical tools and techniques. The training workshop ensures that COM 110 instructors have the capacity to effectively teach critical thinking, and it also ensures that COM 110 content and learning outcomes are

standardized across instructors. For these two reasons, Meredith should consider a similar training program for FYS instructors.

McClure, A. I., Atkinson, M. P., & Wills, J. B. (2008). Transferring teaching skills: Faculty development effects from a first-year inquiry program. *Journal of the First-Year Experience & Students in Transition*, 20(1), 31-52.

This study used focus groups to examine whether and to what extent First-Year Inquiry (FYI) instructors at NC State transfer the pedagogical strategies they learn from teaching FYI courses to other, upper-level courses they teach. (FYI courses are discipline-based, but the faculty development instructors receive is interdisciplinary.) One theme that emerged was the transferability of the use of formal measures to assess critical thinking; FYI faculty are required to design and deliver a critical thinking assessment for their courses and to submit a written reflection on that assessment at the end of the semester. This finding suggests that structuring the first-year seminar program at Meredith in a way that encourages (or requires) faculty to focus on critical thinking assessment may result in a “trickle up” effect as these faculty teach other, upper-level courses, leading to the establishment of a culture of critical thinking assessment.

Riesen, J., Szarlan, J., & Singha, S. (2003). *Case studies for first-year experience students*. Belmont, CA: Thomson/Wadsworth. [not in Meredith’s catalog]

Publisher’s description: “This short book presents 40 case studies based on the real-life experiences of first-year college students. These case studies examine academic, social and personal issues from a wide variety of perspectives and provoke students to think critically about how they might react in similar situations.”

Roderick, C. & Carusetta, E. (2006). Experiencing first-year university in a problem-based learning context. *Journal of the First-Year Experience & Students in Transition*, 18(1), 9-27.

The authors conducted a phenomenological study of first-year students in a small, selective program at a Canadian university. These students participated in a two-semester sequence of seminars that utilized problem-based learning. The authors identify the specific challenges these students faced (conflict between perception of college an actual experience, time management, need for grades) with the supports the program offered (close-knit learning community, relationships with faculty and other students). While they did not look at critical thinking specifically, problem-based learning is one pedagogical strategy for building critical thinking skills, and first-year seminar instructors who may be considering this method should familiarize themselves with the authors’ findings, specifically that “learning, at least initially, should be directed by the instructor, with a gradual increase in the level of self-direction as students become more familiar and comfortable with problem-based learning” (p. 23) to avoid overwhelming first-year students with too much challenge and not enough support. They also encourage instructors to guide students in self-evaluation and metacognition to develop students’ intrinsic motivation to learn.

Shepelak, N. J., Moore, V. L., & Curry-Jackson, A. (1992). Critical thinking in introductory sociology classes: A program of implementation and evaluation. *Teaching Sociology*, 20, 18-27.

The authors examined looked at four models of teaching critical thinking used in introductory sociology class sections at a Midwestern university. Students in the four sections evaluated changes in their own critical thinking skills after taking the class. The authors found that in the sections in which instructors explicitly taught the meaning and process of critical thinking and then structured assignments to allow students to apply those skills, students indicated a greater increase in their critical thinking skills than did students in sections that taught critical thinking more implicitly. The conclusions that can be drawn from this study are limited given the sample and methodology; however, the idea that critical thinking instruction should be formal and explicit to maximize student learning gains is supported throughout the literature. This is especially true for first-year students, who tend to be concentrated in introductory courses [see, e.g., Friedman & Marsh (2009)]. This study also supports the idea that critical thinking instruction should be developmental, to gradually build students' skills [see also Roderick & Carusetta (2006)]. Accordingly, the authors present a four-stage model for guiding students through the critical thinking process' this model may be adaptable for first-year seminars here at Meredith.

Sherfield, R. M., Montgomery, R. J., & Moody, P. G. (2004). *Case studies for the first year: An odyssey into critical thinking and problem solving*. Upper Saddle River, N.J.: Pearson/Prentice Hall. [not in Meredith's catalog]

Publisher's description: "Odyssey is an action-packed interactive book that introduces the reader to critical thinking about real-life issues related to success. Written in an engaging, conversational style, this book asks the reader to look inside the lives, actions, challenges, and trials of ordinary people in extraordinary situations. Forty-two real-life cases address the topics of change, sex, drugs, academic success, information resources, communication, relationships, diversity, technology, safety, personal responsibility, and careers. For readers who need to develop critical thinking and problem-solving skills regarding issues facing us today."

Tsui, L. & Gao, E. (2006). The efficacy of seminar courses. *Journal of College Student Retention*, 8(2), 149-170.

The authors used a case-study approach to examine the relationship between active learning pedagogical techniques and development of students' critical thinking skills at four small (under 5,000 students) U.S. higher education institutions. They focused on seminar courses, which the literature has shown to be well suited for active learning. Active learning, in turn, has been connected with positive retention, knowledge transfer, and higher-order thinking outcomes. The authors found frequent use of active learning techniques at the two institutions in the study where students had high critical thinking self-report scores on the CIRP. The students and faculty at these schools who were interviewed for the study identified seminars as the most effective forum for teaching critical thinking skills because of their suitability for active learning. These two schools shared an institutional philosophy that prized skill building over factual recall. By contrast, the two studied institutions that had low critical thinking CIRP scores focused on lecture and factual recall and made rare use of active learning techniques throughout their curricula. While the methodology of this study limit its generalizability, it does suggest that students may experience greater cognitive gains, including gains in critical

thinking skills, in seminar courses that utilize active learning techniques. The authors also note that because seminars and active learning have been linked to positive retention outcomes, seminars are especially beneficial for first-year students. However, in light of Roderick and Carusetta's (2006) findings, we must keep in mind that first-year students may need extra support and a gradual easing into active learning to avoid overwhelming them and thus negating or diminishing potential gains. The authors conclude with recommendations for practice, notably that schools should offer first-year seminar courses that are disciplinary or, more ideally, interdisciplinary, and that active learning is not "a single teaching technique, but rather... a combination of instructional practices" (p. 165).

Weissman, J. & Magill, B. A. (2008). Developing a student typology to examine the effectiveness of first-year seminars. *Journal of the First-Year Experience & Students in Transition*, 20(2), 65-90.

The authors looked at two types of first-year seminars, orientation-style skill-building seminars and discipline-based academic seminars, offered at a large, religiously affiliated, doctoral university to determine whether certain types of students received greater or lesser benefit (defined as persistence to second year and GPA) from their participation in these two types of seminars. They used cluster analysis to classify students into four groups based on their pre-college attitudes (attained from College Student Inventory data). Their results indicated that students who were academically motivated received the greatest benefit from discipline-based academic seminars, whereas students with lower academic preparation received the greatest benefit from orientation-style seminars. Based on their results, the authors suggest that institutions should offer both types of seminars and should attempt to match students to seminars, based on their incoming attitudes and behaviors, in order to ensure the greatest benefit to students. Here at Meredith, the question has been raised as to whether the proposed first-year seminars will replace the FYE classes; the authors' findings here would suggest that both should be offered as they meet the needs of different types of first-years.