

## Annotated Bibliography on Research into Rhetorical Reflection

### Preface

(for v.1.1 20 Aug. 2007)

This annotated bibliography represents a concerted effort to find research articles on "rhetorical reflection" in the writing process (or the activity of writing). Rhetorical reflection is defined as in-task reflection done predominantly for the purposes of validity testing or problem solving within a sequence of drafting and revising texts. Since rhetorical reflection within the writing process will be the focus of my dissertation, the goal of this project was to find previous research done in this same area of focus. Knowledge of previous research done on rhetorical reflection will assist me in creating proposed designs for my own dissertation research.

In order to assess each research study, I devised a table to include pertinent information about each study. The categories for the chart were predominantly devised from John W. Creswell's book *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 2<sup>nd</sup> edition (2003). These charts do not represent a traditional format for annotated bibliographies, but have been adapted to serve the purposes of this project.

Table for assessing research studies:

Title/Author	
Research Question(s)	
Research Approach	
Knowledge Claims (methodology)	
Strategies of Inquiry	
Methods	
Sample/Sampling	
Data Analysis	
Results	
Assessment	

Not all sources included in this annotated bibliography were research studies or focused on rhetorical reflection; however, for various reasons I felt it important to include them in this bibliography. Of the 31 sources in this bibliography, 20 are research studies broken down into the research table categories. The 11 sources that are not primary research studies have been included because they either provided good summaries of previous research (as in the Butterfield, Craft, and Rijaardan articles) or they present interesting theoretical or practice oriented ideas related to reflection (as in Yancey, Horning, or Flavell).

The sources I found can be categorized in various ways. First, we can examine the dominant methodologies of the studies. As might have been expected, qualitative methodologies predominated:

Quantitative	=	4
Qualitative	=	14

Mixed Methods = 2

The second categorization of the research distinguishes those studies that focused on rhetorical reflection in writing or related subjects and constructivist reflection in writing or related subjects. Despite my focus on rhetorical reflection, in some cases I included research that predominantly focused on constructivist reflection (done post-task for purposes of learning and synthesis of learning). The 19 research articles breakdown in this way along my second means of categorization:

Writing-Rhetorical Reflection Research	=	8
Related-Rhetorical Reflection Research	=	4
Writing-Constructivist Reflection Research	=	3
Related-Constructivist Reflection Research	=	4

This annotated bibliography represents the results from a considerable time researching to find relevant research studies. The difficulty with finding relevant studies is that little or no research has been done on reflection inside the writing process using reflection as the key terminology. Much work has been done using "metacognition" as a term, and there is some question whether reflection and metacognition are synonymous in all cases.

Besides providing a survey of different research approaches and frameworks for conceptualizing reflection, this bibliographic study has highlighted the key area of research into revision and its link to reflection for future exploration (see Flowers, Harris, Hayes, and Rijlaardan).

This bibliography of research into rhetorical reflection should continue to grow during my dissertation inquiry, but this bibliography represents a good beginning. As more studies are identified, they will be added to this bibliography.

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Title/Author	Anson, Chris. "Talking About Writing: A Classroom-Based Study of Students' Reflections on Their Drafts." <u>Self-Assessment and Development in Writing: A Collaborative Inquiry</u> . New Jersey: Hampton Press, 2000. 59-74.
Research Question(s)	How do writers represent their own writing process? How do they talk about their writing? Can we explore writer's reflections on their emergent texts to understand how writers develop expertise
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivism
Strategies of Inquiry	Classroom-based research, purely descriptive, case study Content analysis? Rhetorical analysis
Methods	Talk aloud protocol--"retrospective accounts" done in naturalistic setting (within context of class)
Sample/Sampling	Taped recorded narrative commentaries about the process of writing a first draft turned in with draft. Few strict guidelines put on focus of tapes (i.e. no direct prompts). Does not specify number of sample—only says "classes." Selected accounts used for data analysis based on whether they were the very best or very worst writers. No specific number of how many fit into this sample.
Data Analysis	Developed a coding analysis rubric based on two poles: 1) Halliday's functional approach to language --Ideational (speaker's content) --Interpersonal (audience) --Textual (language) 2) Time-oriented dimension --Retrospective (what he or she did during creation of text) --Projective (focus on actions the writer says he or she intends to do) --Temporal (occurs in the present moment) Developed rubric with nine possible combinations from the two axes (functional/time-oriented) e.g. : R/ID = Retrospective/Ideational  No evidence of use of inter-rater reliability done Brings in theories of intellectual development from Perry's Model of Intellectual Development in his interpretation of data
Results	Stronger writers showed more control of their writing process; weaker students lack control, seldom comment projectively. There is an unmistakably "absolutist" quality in the metacommentaries of students who speak of their writing textually and in the past tense, and there is an unmistakably "evaluistic" quality in the talk of both successful

	<p>novice writers and experienced writers as they shift among functions, retrospect and project, and embrace uncertainty in their own control of their work.</p> <p><b>It appears that there is a strong relationship between proficiency and the blending/shifting of functions in scheme.</b></p> <p>Concludes with how this metacommentary can enable him in his classroom practice to provide better feedback and direction to struggling writers.</p>
Assessment	<p>This article is focused directly on the type of "data" I am interested in and develops a VERY interesting tool for coding this data. He varies from me in that he transcribes verbal accounts and I use written accounts. This seems interesting to me and significant since I seem to base a fair amount of my thinking on the importance of the act of writing. His sampling seems problematic to me, but he is being descriptive, qualitative. Should he have used inter-rater reliability checks to assess the usefulness of his coding rubric? Since he is not counting tendencies, perhaps not. Should we worry about the correlation he makes between a certain type of reflection and writing proficiency? He leaps to this correlation. Also, should we be worried that he also leaps from correlation to cause-effect? The cause of greater proficiency is due to the ability to blend/shift functions? He doesn't seem to go this far, but he certainly suggests it.</p>

Burton, Jonathan. "Reflective practice revisited." *Work Based Learning in Primary Care*. 4.4 (Dec. 2006):297-300.

This short editorial makes a persuasive case for the importance of reflective practice using the theories of Schon, Kolb, and Boud as well as the story of a recent encounter with a patient to bolster his case. The piece starts with the question—"What makes you change your practice?" The author pays special attention to Kolb's model of experiential learning and the place of reflection in this process. He ends by discussing Boud's work and how it takes these notions further by discussing outcomes of reflection as change. He stresses that "reflective practice is useful but it has to be undertaken in a somewhat systematic way" (300). Burton has published on reflective practice in the past and as editor of this journal his voice carries some weight in his field. Not a research-based article.

Title/Author	Beach, Richard. "Self-Evaluation Strategies of Extensive Revisers and Nonrevisers." <i>CCC</i> . 27.2 (May 1976): 160-164. <i>JStor</i> . 2 Aug. 2007.
Research Question(s)	What are the self-evaluation strategies employed by two groups of students: those who consistently revised their drafts extensively ("extensive revisers") and those who consistently revised very little or not at all ("nonrevisers").
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist

Strategies of Inquiry	Informal, exploratory study, classroom-based. Descriptive.
Methods	Text Analysis, tape recording, holistic evaluation and inter-rater check
Sample/Sampling	26 preservice English teachers in a Writing Methods course, juniors and seniors. Students wrote two short papers on topics of their choice. For each paper, they were told to write an initial freewriting mode and then tape their evaluations of that draft. They were then to continue writing as many drafts as necessary, taping their evaluations after each draft. Two day break between each draft.
Data Analysis	Holistic evaluation of degree of revision—two raters to determine drafts revised "extensively" or revised "little." 92.8 inter-rater reliability. Grounded Theory/Text Analysis of transcripts of student's spoken self-evaluations to generate interpretive categories. "Lacking any valid and reliable content-analysis schema for analysis of the transcribed self-evaluations, I had to rely on my own subjective analysis.
Results	<p>The study found characteristics common to each group and the salient differences.</p> <ol style="list-style-type: none"> <li>1. Conceptions of the revising process</li> <li>2. Conceptions of revising free-writing</li> <li>3. Degree of abstraction Extensive revisers were able to generalize about different aspects of their drafts</li> <li>4. Predicting Changes</li> <li>5. Degree of Detachment able to step out of egocentric perspective and consider alternative approaches</li> <li>6. Attitude towards revision</li> </ol> <p>Implications: "It is suggests that in order to help students learn to self-evaluate effectively we need to provide alternative, helpful models of the revision process."</p>
Assessment	<p>North categorizes this as a marginal Clinical study and might rate it as positivists because it has at its heart a search for the "paradigm" of revision.</p> <p>It is a very interesting, elegant study. Though it is troubling to categorize student writers as "revisers and non-revisers," he appears to split his group cleanly. Would all students fall so easily into these two categories? Would all students be either "extensive" or "little" revisers—what about those who revised "some"?</p> <p>For my uses, he provides an example of a study focused on "texts" (recorded transcripts) of between-draft self-evaluations. These "texts" are very close to my subject of interest. What is the significance of these texts produced verbally via done in writing? His findings could outline preliminary content analysis features for a textual analysis of student reflections to see if there is a correlation between certain text features and revision. He outlines interesting future research: "Instead of simply examining degrees of revisions, further research</p>

	<p>could analyze the relationship between specific types of revision and specific self-evaluation strategies" (e.g. Strategies of thinking about free-writing differ from strategies of thinking about final drafts.)... Further research is also needed in using students' self-evaluations as indexes of growth in writing. ...Students' thinking about their writing serves as a direct reflection of the effect of instruction. Assessing growth in thinking could reflect students' ability to translate teacher and peer evaluation into their own conceptions and then use those conceptions in revising" (164).</p> <p>His two proposed future studies are VERY close to my own work. What I like about his approach is that he seems to be descriptive. Rather than initiating some stimulus to invoke a desired response, he is about describing what is going on. The proposed study linking student growth with reflection is very interesting. I see connections with King and Kitchener's growth of reflective judgment and Moon's "best representation of knowledge" connected with different stages of the learning process.</p>
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Butterfield, Earl C. and Hacker, Douglas J. "Environmental, cognitive and metacognitive influences on text revision: Assessing the evidence." *Educational Psychology Review*. 8.3 (Sept. 96): 239-298.

This almost 60 page article asks whether researchers have tested hypotheses about text revision expressed by Flower and Hayes' cognitive model of the writing process (1981, 1986). It elaborates on the definition and dynamics of each part of this model. Very illuminating. It then reviews 100 research reports about revision published since 1980, organizing findings around the parts of Flower's 1986 version of the model. Most all of these examples of research appear to be experimental design research studies. As far as metacognition, it provides some examples of research on children that increased metacognitive understanding correlated with their writing quality (271). It offers a not very helpful list of research studies on metacognition, especially on the question of whether instruction in metacognitive ability made a difference. One last study by Bracewell (1983) indicates that revision depends on metacognitive understanding to guide monitoring of textual problems and to control correcting them.. The article points out the weakness in research into metacognition: "Only one study has shown an unconfounded relationship between metacognitive control and writing performance (Bracewell 1983), and no study has looked directly at the relationship of metacognitive monitoring to writing or revision" (286).

Craft, Melissa. "Reflective Writing and Nursing Education." *Journal of Nursing Education*. 44.2 (Feb. 2005): 53-57.

This article summarizes the rationale for and research supporting the use of reflection (in the form of reflective journals) in nursing education and practice. Starting from her own experience

using journals after the Oklahoma City bombing incident, the author surveys the historical development of reflective writing and then its implementation in nursing education and practice. The article is filled with summaries of articles and research studies supporting the positive impact of reflection in the form of journals for nursing education.

Title/Author	Edwards, Richard and Katherine Nicoll. "Expertise, competence and reflection in the rhetoric of professional development." <i>British Educational Research Journal</i> . 32.1 (Feb. 2006): 115-131.
Research Question(s)	What are the ways in which the rhetoric of technical expertise, competence and reflective practice is deployed to mobilize professional practices and identities in particular ways and position certain practices and dispositions as specifically professional?
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	phenomenological
Methods	Rhetorical analysis of texts
Sample/Sampling	Specific discourses of professional development (three discourses) Second part of article focuses on professional discourses in higher education in UK.
Data Analysis	Notes that they will apply rhetorical principles in their rhetorical analysis (ethos, logos, pathos, kairos, and exigence from Aristotle)
Results	The ways rhetoric is deployed to mobilize certain forms of professional practice and identity and practices and identities as professional has been broadly outlined.  Hopefully, the audience is persuaded that engagement with the discourse of professional development in this manner is illuminative.
Assessment	This article is interesting because it presents a research study that is a rhetorical analysis. Its sample is not clearly described, nor is the rationale for selection of particular texts to analyze. However, it is interesting not only in the method it employs but that it examines some of the rhetoric surrounding reflection and reflective practice critically.  It focuses special attention on the exigencies of change and adaptation to change in discourse. Examines sets of rituals and performances in the continual fabrication of professions and professional development, particularly how practitioners are positioned as holding expert bodies of knowledge. Examines notions of competence and reflective practice and how reflective practice has become a persuasive view of professional work. Pays special attention to the metaphor of reflection. Has a special section on how audiences for professional development are mobilized.
Quotes:	"To reflect on practice is to talk about it—in one's head, with others, on paper—but not to take into account the discursive resources upon

	<p>which one draws and the rhetorical nature of the work being performed. It is to work with a metaphor of a mirror, when, given our view of rhetoric, we would suggest there is the need to consider the discourse of reflective practice, as any other discourse of professional development, as a language game" (123). (post-modern view of lang.)</p> <p>In other words, reflective practice is not simply a speech act within a contemporary discourse of professionalism and, as such, it does not simply describe but is also performative" (123).</p>
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Title/Author	Efklides, Anastasia. "Metacognition and affect: What can Metacognitive Experiences Tell Us About the Learning Process?" <i>Educational Research Review</i> . 1.1 (2006): 3-14. <a href="http://www.pedagogy.ir/images/stories/media/metacognition-and-affect.pdf">http://www.pedagogy.ir/images/stories/media/metacognition-and-affect.pdf</a>
Research Question(s)	What is the role of ME in learning? (focus on metacognitive feelings and metacognitive judgments/estimates that are present in learning situations)
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Literature review
Methods	Interpretation, Synthesis
Sample/Sampling	Review research literature
Data Analysis	No clear method of analysis articulated
Results	ME, particularly metacognitive feelings, have distinct characteristics, particularly the connection with both the cognitive and affective regulatory loops. "Thus, metacognitive feelings and metacognitive judgments are products of nonconscious, nonanalytic inferential processes and lead to nonconscious rapid control decisions (Koriat & Levy-Sadot, 2000) based on analytical processes" (11).
Assessment	<p>This article by a widely published researcher in metacognition and self-regulation presents a review of research and his own conclusions/interpretations on the importance and place of affect within ME. A number of other researchers on reflection also mention the significance of the "affective realm" for productive reflection and learning. Efklides presents a much deeper look into this relationship.</p> <p>Is this research? I am considering it as a research article—even though the author does not seem to have systematically collected or analyzed data—because it takes previous research and publications as the source of its data and pulls together conclusions from this research.</p>
Quote/Notes	Article focuses on Metacognitive Experience (Flavell 1979) --three facets of metacognition: Metacognitive Knowledge, Metacognitive

	<p>Experience, Metacognitive Skills</p> <p>Basic thesis of the article is that metacognitive feelings need more attention as far as their impact on metacognitive judgments and the application of MS and MK.</p> <p>Good quote on importance of task knowledge: "Experts right from the beginning of task processing identify the critical task features and information, whereas novices refer to superficial task characteristics irrelevant to the procedures needed to deal with the task" (5).</p> <p>Summarizes work by Carver and Scheier (1998) and Carver (2003) explaining link between affect and regulation of cognition—to types of feedback loops (one on attainment of goals, the other monitoring rate of progress toward goals). Metalevel feedback loop.</p>
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Title/Author	Ellis, Robert, Charlotte E. Taylor and Helen Drury. "Evaluating Writing Instruction Through an Investigation of Students' Experiences of Learning Through Writing." <i>Instructional Science</i> . Spring 33 (2005): 49-71.
Research Question(s)	What is the nature of the relationship between the student experience of writing in Biology and the quality of their learning and; What are the implications of this relationship for the quality of the instructional design methodology, Genre-based literacy pedagogy?
Research Approach	Mixed method
Knowledge Claims (methodology)	Positivist/Post-positivist
Strategies of Inquiry	Non-experimental design
Methods	<p>Surveys/Questionnaires (two closed-ended, one open-ended)</p> <p>Conceptions of Writing Questionnaire—drew on a questionnaire used to investigate student conceptions of mathematics and refined by author for a study into learning through writing (his diss). Based on "fragmented and cohesive subscales"</p> <p>Approaches to Writing Questionnaire—drew on a well-known questionnaire used to investigate student approaches to study (Biggs 1987, 2001). Scale: deep motive and strategy and surface motive and strategy</p> <p>Subject Experience Questionnaire—derived from the Course Experience Questionnaire currently used to investigate student perceptions of courses in Australian Universities. (end of course evaluation it looks like)</p> <p>Qualitative Questionnaire—open-ended questions, comprised two questions:</p> <p>1) When you wrote in your labs and lectures for Biology, what were you learning?</p>

	2) When you were writing the practice reports for Biology, how did you go about it? What things did you do and why?
Sample/Sampling	The two closed-ended questionnaires were administered randomly to 250 students out of 1170 possible students. Done at end of semester. (232 completed the questionnaire completely = 20% of cohort). One class chosen at random for open-ended questionnaire—thirty responses. (Authors note that "results can only be used as illustrative examples of the variation in the students' conceptions and approaches related to learning and writing—i.e. the sample for the open-ended questionnaire is too small to make any significant statistical generalizations from.)
Data Analysis	Correlation analysis, factor analysis, and cluster analysis of the subscales in the questionnaires were conducted. The correlation and factor analyses were investigations at the level of the variables. --article goes into great detail about the different statistical tools used in these different analyses
Results	<p>A cohesive conception of writing was positively related to a deep approach to writing and positive perceptions of the learning context. Likewise, a fragmented conception of writing was positively related to a surface approach to writing and negatively related to perceptions of learning context.</p> <p>Results from quantitative analyses reveal qualitatively different student experiences of learning through writing. Two groups. Students with a cohesive conception of writing, one that did not separate the science from the writing, tended to adopt approaches with the entention of engaging with the science. They had positive perceptions of the course and their learning in it. Students with a fragmented conception of writing, one that did separate the science from the writing experience, tended to adopt approaches that did not reveal an awareness of the scientific meaning of the experience.</p> <p>Analyses did not find a close association between the performance outcome and the student experience. Study not conceived to measure change or reorientation in students conceptions or approaches to learning through writing.</p> <p>Study is valid because it adds to our understanding of qualitatively different student experiences of learning through writing. (Despite significant efforts on the part of tutors to reveal the value of learning through writing, nearly 50% of the students displayed a surface orientation towards the writing experience.</p>
Assessment	The study really was on a particular <u>writing instruction methodology</u> called Genre-based literacy pedagogy: 1) deconstruction of texts, joint construction of texts, 3) individual construction of texts. It then surveyed students for results of this pedagogy's impact.

	<p>How is this study relevant to my interest in reflection? It does not examine reflective texts? Students were not even asked to do reflective texts? The first questionnaire—the Conceptions of Writing Questionnaire—specifically uses the term reflection in its question: "Writing in this subject is like a process of reflection that allows me to better understand the things we study." Note: this is "constructivist" reflection, post-task. These questions on reflection were used on what he called the "cohesive" subscale (in opposition to the fragmented subscale). The results suggest that reflective learners are more cohesive which is positively correlated to the deep approach to writing.</p> <p>The other interesting thing about this study is its use of surveys as its chief methodology. Though its purpose is ultimately qualitative, it does use a quantitative survey to triangulate or rather explicate more fully results from the quantitative surveys. It is an example of Guba's notion that you can have mixed methods, but they need to cohere in their overall methodological position as this one does within a positivist methodology.</p>
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Title/Author	English, Joel. "MOO-based Meta-cognition: Incorporating Reflection into the Writing Process." <i>Kairos</i> 3.1. Spring 1998. < <a href="http://english.ttu.edu/kairos/3.1/features/english/bridge.html">http://english.ttu.edu/kairos/3.1/features/english/bridge.html</a> >.
Research Question(s)	What is the affect of MOO-based conferencing between teachers and students, tutors and students, and students with eachother? Is there a difference or benefit of doing this conferencing via online means vs. the traditional face-to-face means of conferencing?
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Case Studies?
Methods	Textual analysis
Sample/Sampling	Collected logs of moo conferences and post-essay reflections,. Eight examples selected for analysis. No clear criteria for selection expressed other than availability for sample selection, 2 student-tutor conf. sample, 3 student-teacher, 3 peer conference
Data Analysis	Interpretation/textual analysis of logs and student commentary in light of theory
Results	the type of reflection-on-action that MOO Logs allow has "never been available before" for our students and curricula; never have transcripts of discussions been so easily available. In the sense of being able to save and print the online discussions and use the logs for reflection, online synchronous conferencing provides a new advantage for the writing classroom.
Assessment	This research is long on theoretical claims and short on empirical

	<p>justification for these claims. The sample seems particularly small even to be descriptive—was the dissertation sample larger? The type of reflection is different than writer's reviews, but it parallels the notion of between-draft reflection in one form or another. The real crux of this research is its dynamic with face-to-face writing conferences and the advantages of this online format has for added possibilities of reflection. Is this the implication of the study: Should all writing center conferences be online?</p>
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Flavell, John H. "Metacognition and Cognitive Monitoring: A New Area of Cognitive-Developmental Inquiry." *American Psychologist*. 34.10. October 1979. 906-911.

This article anchors almost every scholarly discussion about metacognition and composition. What it does is define metacognition ("the knowledge and cognition about cognitive phenomena") and chart out its territory. He spends time, in particular, defining metacognitive knowledge and experience, providing ample concrete illustrations. One of the most important ideas expressed in the article is the notion of monitoring, that "cognitive strategies are invoked to make cognitive progress, metacognitive strategies to monitor it" (909). He presents a model for how this monitoring happens that must have been influential for researchers like Flower and Hayes who studied the cognition of writing. He states the belief that metacognitive knowledge and monitoring skills may be systematically developed. He closes by describing monitoring in essentially the same terms as judgment or what we would call today, critical thinking ("the critical appraisal of message source, quality of appeal, and probable consequences needed to cope with these inputs sensibly" (910). Although this article does not present a research study, its ideas have been the basis for many research studies on writing and relates to reflection as a form of metacognition in particular.

Web article on Flavell-- <http://www.lifecircles-inc.com/flavell.htm>  
 Wikipedia—metacognition: [http://wik.ed.uiuc.edu/index.php/Metacognitive\\_knowledge](http://wik.ed.uiuc.edu/index.php/Metacognitive_knowledge)

Title/Author	Flower, Linda. <i>The Construction of Negotiated Meaning: A Social Cognitive Theory of Writing</i> . "Reflection and the Reconstruction of Literate Practice." Carbondale: Southern Illinois Press, 1994. 263-291.
Research Question(s)	<p>What is the best way for teachers to help students enter a new discourse and learn a new literate practice (like college writing)? Does reflection offer a better, quicker way to make this "change of schema" than a slow initiation via apprenticeship?</p> <p>Are these working theories and representations more than fictive accounts and might they relate to reality and indeed shape action? How does reflection support action? How is meaning reconstructed generally?—does reflection assist in this reconstruction?</p>
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist "My purpose in this chapter is...to initiate inquiry rather than to offer solutions" (265).
Strategies of Inquiry	Case studies

Methods	Text analysis, interpretive
Sample/Sampling	Samples from three students of a final paper in an advanced writing course--"Detailed accounts and working theories developed in the writer's data-based reflections on their own writing and learning process" (265).
Data Analysis	Text analysis, interpretive
Results	<p>Role reflection plays best understood through Freire's notion of naming (Freire 76).</p> <p>"Reflection not only supports such meaning making [construct and reconstruct an image of a literate practice], it seems to support a certain kind of construction as well. Reflection allows writers to recognize some of the complexity of their rhetorical situations, to acknowledge and to honor multiple and often conflicting goals. It seems to make action more immediately problematic but more ultimately satisfying" (289).</p> <p>"Reflection ... is a way to name the world and in naming to create new problems" (291).</p>
Assessment	It is interesting to see Flower conducting a qualitative study. This chapter reminds me of the level study of Harris on revision. It is classroom based, small, almost action research like. It is theoretically rich with student examples to illustrate the theory. Both validity and reliability lie in the quality of the theorizing.
	<p>Good quotes:</p> <p>Theory/thesis: "Building reflective working theories may be a better way to penetrate a cultural practice" (266). Reflection, then, is a tool for negotiating and reconstructing meaning...an interpretive process...[whose] value may lie less in the accuracy of the "insights" it produces, than in the process of reflection/action" (267).</p> <p>"Reflection is one place in which writers can acknowledge the affective nature of writing, but because reflection is a step removed from the emotional moment, it allows students to bring some critical distance to problematic feelings and fears and to channel emotional energy into rhetorical action... . They suggest ways that reflection—as an effortful, interpretive, and fallible but strategic process—could motivate a more informed and sustained negotiation of meaning" (268).</p> <p>"The essence of transfer in learning is the ability to use old knowledge in new settings. But the proponents of situated cognition...have called any simple idea of transfer into question. They have argued that learning is embedded in situations, that knowledge is entwined with its use, and that abstract, general principles (for all their power in some settings) do not travel well when students go from class to class or from home to school. ...Instead, transfer of knowledge is possible when people recognize—actually attend to the fact—that features of this situation fit prior situations, and as a result, they adopt old knowledge</p>

	and strategies to fit these new conditions. ...Transfer...seems to depend not merely on possessing relevant information but on having strategic knowledge—on reading a situation, setting appropriate goals, using appropriate strategies, and being aware of one's own options and assumptions" (290"
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Title/Author	Harris, Joseph. "Revision as a Critical Practice." <i>College English</i> . 65.6 (July 2003): 578-592.
Research Question(s)	Starts with thesis: "In this essay I argue that in teaching students to write as critics we need to ask them to change not how they think but how they work—to take on, that is, a new sort of intellectual <i>practice</i> . I believe this practice is characterized by both a strong sense of the use of the work of others and a reflectiveness about one's own aims" (577).
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Essayistic—point-support (examples)
Methods	Textual analysis
Sample/Sampling	Selected examples of text from students from a basic writing class --Students from an upper-level class taught at Duke on writing and social class.  Student texts, drafts, reflective comments, end-of-course reflection --each revision must have attached a copy of its previous draft with changes highlighted (MSWord comparedraft), 250-500 word comment on development of work, pointing to two or three significant points of revision
Data Analysis	Close reading and interpretation of text in light of theory
Results	Seeing revision as "critical" practice has less to do with helping students learn to be conscious of ideology than about the kinds of labor involved in drafting and revising a critical essay, of advancing an ongoing intellectual process
Assessment	Can we call this a research project? I think so, but more on an action research level. He obviously used a similar classroom pedagogical technique related to revision with two different classes. He kept the textual artifacts from the classes, and then analyzed them to see what they revealed. Within the student's revision summaries and end-of-course statements, he found evidence that students had done and learned HOW to do revision as a critical practice. It could be called deep revision. This article reminds me of some articles that spin from dissertations where only the tip of the data is revealed and discussed. How much other data did he have? What were the procedures he went through for data collection and analysis? These are left invisible.
Quote	Quote of Sylvia Scribner "Practice" is used here to denote a recurrent set of goal-directed

	activities with some common object, carried out with a particular technology and involving the application of particular knowledge. A practice is a usual mode or method of doing something and cultural practices exist in all domains" (59)
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Hayes, John R. "What Triggers Revision?" *Revision: Cognitive and Instructional Processes*. Ed. Linda Allal, Lucile Chanquoy, and Pierre Largy. Boston: Kluwer Academic Publishers, 2004: 9-20.

Hayes provides a review of research on "what we know and what we don't know about the cues and conditions that initiate the activity of revision" (9). He provides four critiques of the "dissonance model (Bridwell, 1980; Scardamalia & Bereiter, 1983; Sommers, 1980), making special note of Scardamalia and Bereiter's CDO model (Compare, Diagnose, Operate). This critique is especially interesting to me since I see reflection as a form of dissonance detection or mindfulness (Mezirow) that triggers "transformation." Not all Hayes' critiques discount Mezirow's views on reflection, but Hayes does say this model does not account for discovering possibilities, additions, or new directions (rather than faults). Hayes reviews the 1980 Hayes and Flower general model of writing, the 1987 Hayes et al. model of revision, and the 1996 Hayes new model of revision. The place of reflection fits in all these models, but Hayes' 1996 model has a specific place for Reflection in his "Fundamental Processes," listing under reflection two items: problem solving, decision making. Special focus in this article is put on the influence of teaching criteria and its impact on students' ability to apply that criteria in revision (both formal and technical/grammatical criteria). The studies cited seemed to teach the criteria recognition via close examination and holistic scoring of writing samples. He speaks of this as a "teaching method."

\*\*Note: He does not elaborate in this article on the impact of post-draft reflection and its possible influence on initiating or influencing revision.\*\*

Key references:

Hayes, John R. "A new framework for understanding cognition and affect in writing." *The Science of Writing: Theories, Methods, Individual Differences and Applications*. Ed. C. M. Levy and S. Randall. Mahwah, NJ: Lawrence Erlbaum Associates, 1996. 1-27.

Scardamalia & Bereiter. "The Development of Evaluative, diagnostic, and remedial capabilities in Children' Composing. *The Psychology of Written Language: Development of Educational Perspectives*. London: Wiley, 1983.

Henning, Teresa. "Using Scenarios to Reflect on Research Papers." *English Journal*. 95,4. Mar 2006. 102-103.

This article describes a new pedagogical technique this author used to get students to reflect more productively. She realized that her reflective assignments violated some of Lindemann's

basics for all writing assignments that a writing situation should invoke students' interest and give them a clear role to play. To accomplish these mandates, Henning adopted the use of scenarios for end of essay/project reflections. The example she gives is of a email to a friend on writing a research paper at the end of a unit working on writing a research paper. She believes this method nicely blends Yancey's call for reflection to lead to transfer in learning and Lindemann's ideas of writing assignments. No research. Mentions that her campus is very devoted to reflection in the curriculum—Purdue University North Central

Title/Author	Higgins, Lorraine, Linda Flower, and Joseph Petraglia. "Planning Together: The Role of Critical Reflection in Student Collaboration." <i>Written Communication</i> . 9.1 (1992): 48-84.
Research Question(s)	When students collaborate on plans for a paper, do they necessarily reflect critically on their own ideas and processes, as many advocates of collaboration might expect? If and when students engage in reflection, does it make a qualitative difference in their writing plans? How do student writers engage in and use reflection as they develop plans?
Research Approach	Qualitative
Knowledge Claims (methodology)	Pragmatic—testing an assumption that guides practice
Strategies of Inquiry	Phenomenology? Gathers descriptive data
Methods	Subjects audio-taped themselves as they planned course papers with a peer. Transcripts coded for reflective comments and holistically rated for quality
Sample/Sampling	22 college freshmen
Data Analysis	Two analysis of transcripts 1) coding scheme based on "planner's blackboard" issues 2) second analysis used coding scheme to observe frequency of reflection, quality ratings for each planning session, and a descriptive analysis of reflective patterns that emerged in the taped discussions  --reflective comments were defined as comments including one or more of the following features: an explicit evaluation of plans explicit comparison or consideration of alternatives and choices explicit reasoning or justification of plans (11)  Did inter-rater reliability (.89 based on pairwise comparison)
Results	Results indicate a significant correlation between the amount of reflective conversation and the quality of students' plans. Results also indicate 1—students use reflection to identify problems, to search for and evaluate alternative plans, and to elaborate ideas through the process of justification

	<p>2—problem-solving was most effective when reflection was sustained over many conversational turns          3—collaboration did not guarantee reflection</p> <p>--later mentions also Third form of reflection emerged as students <i>justified their choices</i>. (12) cf Mezirow confirmation          Findings suggest that how students represent collaboration and the writing assignment itself will determine whether and how they reflect on their own ideas</p> <p>It seems plausible that some students' lack of reflection might be due to their inappropriate understanding of the goals of the task (15)</p> <p>Our observations support the claim that reflection can play a role in planning complex texts; however, this paper qualifies that claim by suggesting some factors that may affect whether and how student writers will use reflection in productive ways. If we are to understand the role of reflection in collaborative writing tasks, then we need to understand how students represent and negotiate the social and cognitive aspects of those tasks in the very process of their learning. (23)</p>
<p>Assessment</p>	<p>Interesting study. I can't fit it in either a quantitative or qualitative methodology. It is testing an assumption, but it seems to do it in a qualitative way? It is still based not on think aloud transcripts but transcripts of planning sessions, so does it not have some of the other flaws of think aloud. I think this article is an excellent research study. It has to be qualitative in the way they adapted and developed their interpretive framework. I find this study links well with my guess that reflection is linked to invention.</p>
<p>Quotes</p>	<p>Key definition: Critical reflection refers to a particular act of metacognition in which individuals engage in evaluative thinking about their own ideas and processes as they work through an intellectual problem. We assume that such reflection requires some level of awareness of a task and of one's own approach to it; however, reflection goes beyond self-awareness: when individuals engage in reflection they use their awareness to evaluate their own thinking in order to achieve some goal. (1)</p> <p>Link to invention--...the bulk of this reflective activity [from Durst 1989 study] occurred in the planning stage of writing analyses, where students reflected on the demands of the analysis task and their understanding of the topic. (3)</p> <p>Reflection can play an important role in helping students move out of knowledge-telling and into knowledge-transforming. (3)</p>

	Three types of reflection—evaluation/problem identification, alternatives, and justification. (18)
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Horning, Alice. "Reflection and Revision: Intimacy in College Writing." *Composition Chronicle*. 9.9 (Jan. 1997): 4-7.

This article advocates incorporating reflective writing throughout a composition course, particularly if teachers wish for students to reflect productively in their portfolios. The bulk of the article describes a particular reflection practice she uses called "writing process statements." These statements accompany each final draft and recount—using a list of questions as prompts—the writer's process. Horning believes students tell the story of their learning in these writing process statements, and that gives us as teachers a level of intimacy with our students, enriching both teaching and learning.

Research Assessment: Like the Yancey piece, this does not revolve around a study, but instead using references to other studies and scholarship to bolster her premises on reflection. She does present excerpts from two student process statements to illustrate her concepts. Again, this builds knowledge, but it isn't based upon an empirical study. It is based on first-person experience connected to the scholarship and literature in the field.

Title/Author	Kennison, Monica. "The Evaluation of Students' Reflective Writing for Evidence of Critical Thinking." <i>Nursing Education Perspectives</i> . 27.5 (Sep/Oct2006):269-273.
Research Question(s)	Is the Critical Thinking Scale a reliable and valid tool for analyzing the link between a students' reflective writing about practice experiences and their critical thinking?
Research Approach	Quantitative
Knowledge Claims (methodology)	Postpositivistic
Strategies of Inquiry	Non-experimental  "A nonexperimental descriptive, correlational design was used to explore the interrelationship between the variables of critical thinking and teacher rating with the CTS."
Methods	Survey, Content Analysis (teacher ratings)
Sample/Sampling	57 Nursing students
Data Analysis	CTS rating—three teacher raters, rated independently Interrater reliability calculated using two-tailed Pearson product moment correlation (?)  CCTST construct validity assessed  Relationship evaluated using a one-tailed Pearson product-moment

	correlations
Results	Study shows that CTS is a good tool for analyzing the link between student's reflective writing and practice experiences and their critical thinking. (Goal is fair and consistent evaluation of reflective writing pieces.)
Assessment	<p>This is an interesting study to evaluate an evaluation instrument by calibrating it (comparing its effectiveness) to another established evaluation instrument. If instrument A measured as good as measurement B and B is already established as good, then instrument A is ok. This study also contradicts Sumsion's contention that reflective writing is not measurable and should not be used for assessment.</p> <p>One perhaps weakness of this study is in the scoring of the reflective writing using the CTS. This scoring seemed to be done in a loose way and I couldn't tell that the inter-rater reliability was that good. It didn't seem to be. (and that's the complaint of Sumsion).</p> <p>I would like to see an example of the CTS.</p>

King, Patricia M. and Karen Strohm Kitchener. *Developing Reflective Judgment*. San Francisco: Jossey-Bass, 1994.

This incredible book details the results of fifteen years of research and theory-building of what these authors call the "Reflective Judgment Model." Their seven stage reflective judgment model is an adaptation of William Perry's Model of Intellectual Development (1970) and is based on years of rigorous research. "Reflective judgment" as the authors define it is the ability to "make defensible judgments about vexing problems" (1). Their definition of reflective thinking is heavily influenced by John Dewey's belief in the connection between reflection and the awareness of a true problem. Longitudinal studies seem to indicate that reflective judgment is a matter of maturity and develops over time.

Kraus, Sharon and Kathy Butler. "Reflection in Not Description: Cultivating Reflection with Pre-Service Teachers." Reports—Speech/Meeting Papers: Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education. 52<sup>nd</sup>, Chicago, IL, February 26-29, 2000.

This article presents the case that the ability to reflect is important for teachers to learn from practice. The article has good general review of value of reflection from Dewey and Schon. One of five core propositions from 1998 Nat. Board for Professional Teaching Standards states that "teachers think systematically about their practice and learn from experience." ...Disposition of reflective practice must be taught and cultivated. Ebb (1998) and Schon (1987) devo of reflection a growth process that may be modeled and practiced. "Reflective dispositions must be fostered over a period of time and in a variety of situations." This article outlines a three stage model they developed for teaching this reflective disposition to pre-service teachers: the Foundational Stage, Process Development Stage, and Reflective Practice Stage. The article outlines how teaching reflection and reflective self-assessment is integrated into the entire pre-service curriculum—foundational (introductory courses), process (courses on practical teaching

matters), reflective practice (pre-service in the classroom stage). Reflective Practice Stage: The reflective activities have been introduced in the earlier two stages and are now implemented in actual classroom settings. Reflective interviews, reflective journals, self assessment.

"Research seems to indicate that teachers who think very little are less successful and less effective in the classroom. They tend to believe that there is only one answer to questions and they have all the answers. ... Teachers must know how to break out of this mode. They must learn to question and reflect on everything related to their careers... " (7).

Title/Author	McAlpine, L., C. Weston, J. Beauchamp, C. Wiseman & C Beauchamp. "Building a Metacognitive Model of Reflection." <i>Higher Education</i> . 37: 105-131, 1999.
Research Question(s)	How do those who are successful teachers improve their teaching?
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Case Study, (almost ethnography?)
Methods	Interviews, text analysis (content analysis) Pre and post course interviews, 1/3 <sup>rd</sup> of 39 hour courses videotaped, professors interviewed pre and postclass for each of these videotapings. Postclass interviews included a viewing of the videotaped class session which stimulated recall about their reflection during teaching. --originally asked professors to carry a voice-activated tape recorder to capture reflections not stimulated by the interviews, but this was too onerous for the subjects— Researchers acknowledge that their methods of data capture ended up focusing on practical sphere. If they had alternative forms of data collection (i.e. more retrospective rather than in the moment) they might have captured more strategic and epistemic statements.
Sample/Sampling	Six university professors—selection sample (criteria, recognized for their teaching excellence). Two women, four men. All in math.
Data Analysis	Interviews transcribed, verified by professors (subjects). Developed coding system for reflective "episodes" based from reflection model developed from literature (i.e. theory informed their viewing??). Coding scheme had four tiers: Tier 1) three categories from lit: practical, strategic, epistemic Tier 2) two functions of model: monitoring and decision making Tier 3) emerged from interpretation of theory and informed by data (grounded?)—described monitoring and decision making in more detail Tier 4) emerged directly from the data and breaks down in greater detail the codes from the third tier (seems like it is the context specific level?)  Reliability—Three coders used, coders compared on regular basis 10%

	<p>of transcripts for inter-rater reliability</p> <p>Data analyzed using NUD.IST (Non-numerical Unstructured Data Indexing Searching and Theorizing).</p> <p>Member checking?—When researchers had finished the coding, they held a symposium with the six subjects to present the codes and model to them. "Their overall reaction verified the accuracy of both." (116)          --This doesn't seem like a "formative" evaluation moment in the development of their data analysis. The simply confirmed their approach/findings and didn't seem open to evaluation and adjustment as needed. Final check, not iterative "usability" test.</p>
<p>Results</p>	<p>Conclusion—reflection is good because teachers can then be more intentional and deliberate in their thinking about teaching. (126).</p> <p>The result of their study is a metacognitive model and a coding scheme that operationalize the process of reflection. Both provide a language for describing reflection and therefore a way to think about how to improve teaching.</p> <p>Results present reflection in the practical sphere (very much reflection-in-action, in-class)</p> <p>Results show frequency of particular codes in different categories. E.g. For Decisions, decision making, the most changes were made to method (52%) and content (43%). "This concentration on changes in method and content combined with the earlier finding that the professors were monitoring method (33%) and content goals (24%) confirms the large role that these two factors ... play in reflection about the class and course" (121).</p> <p>--One finding didn't fit model—that 45% of episodes that led to change where neutrally evaluated, suggesting that changes made to actions are not always the result of the action being perceived as a problem. (echo here?—negation is not always the impetus for change/transformation)          Most changes were minor so they speculate they are fine tuning, that these neutral evaluations fall on the perimeter of the corridor; by making changes, the professors intentions would be to move the evaluations towards the center of the corridor.</p> <p>"This ability to hold in memory goals and to use them as the basis for monitoring and decision making all while teaching may only be possible in those who have extensive experience, are relatively developed in their pedagogical thinking, and are perceived by others to be relatively expert. In other words, we believe this ability may represent "best practice" (126)</p>

	<p>Closing comment—What has become very apparent in the elaboration of the model of reflection is the extent to which knowledge provides the basic structure for enabling the process of reflection-in-action and reflection-on-action to be effective. Without the domains of knowledge, the professors would have difficulty defining goals, generating plans, deciding what to monitor and how to evaluate the cues, and making decisions to change their instructions. These professors are skilled teachers because they have the necessary knowledge to reflect on their teaching decisions. (128)</p> <p>***Post-process/Phronesis link—hermeneutic guessing, practical wisdom, rhetorical proficiency, writing skill, must have some basis in knowledge***</p>
<p>Assessment</p>	<p>This is a significant article for me, even though it focuses on reflection-in-action. It presents a model of reflection that adds to the conceptual framework of reflection.</p> <p>The research is fairly well done. I worry that they developed the model and then sought to find evidence for it in their data. But that is basically what I probably will be doing, so perhaps it validates this approach. I am not sure about what the coding shows or reveals. How useful is finding frequencies of this model's components? What would be useful analysis? I don't know.</p>
<p>Quotes:</p>	<p>The model as it is presently conceived has six components: goals, knowledge, action, monitoring, decision making, and corridor of tolerance. It represents an ongoing iterative process involving both thought and action; it can be imagined as an ongoing conversation (Yinger 1990) between present action, past experience, and intentions for the future. (106)</p> <p>Specifically, reflection is visualized as continuous interaction between the two inter-related components of action and knowledge. Action represents the external arena in which plans are enacted, cognitions are transformed into behaviours, goals implemented.</p> <p>Knowledge represents broad and in-depth cognitive structures accumulated through a combination of training and expertise (Houston and Clift 1990). (107)</p> <p>The interaction between knowledge [they detail seven domains of knowledge] and action occurs related to specific goals that drive this thinking and action. In other words, goals, which remain relatively constant are the component around which the process of reflection takes place since goals represent the teachers' expectations or intentions about what it to be accomplished in terms of instruction and form the basis for actions to be taken in order to achieve these. It is for this reason that they are placed centrally in the model; they both direct and constrain the other features of the model.(108)</p>

\*\*Notion of the "corridor of tolerance" to explain why monitoring may not always lead to decisions to change. –"teachers must have some tolerance in assessing their teaching since actual teaching can rarely match expectations. No change happens as long as the cues being monitored fall within what the individual deems acceptable progress. Lots of variables influence this corridor of tolerance. (109)

New term!—"reflection-for-action" (112)

Reflection is driven by goals, resulting in plans drawn from knowledge, leading to actions that are constantly being revised and updated as feedback is monitored through the corridor of tolerance and decisions lead to adjustments in action. (109)

Three sphere's of reflection— cf Mezirow's three forms of reflection (content, process, premise)

Reflection in the practical sphere focuses on improving actions in a particular course or class. Strategic reflection involves an attention to generalized knowledge or approaches to teaching that are applicable across contexts. Epistemic reflection represents a cognitive awareness of one's reflective processes, as well as how they may impede reflection and enactment of plans.

Definition of reflection:

We now define reflection as a process of thinking about teaching and learning by monitoring cues for the extent to which they are within a corridor of tolerance and making decisions to adjust teaching as appropriate to better achieve teaching and learning goals. The two processes, monitoring and decision making, and the concept of goals are central to our understanding of how reflection functions. Ongoing use of the processes of monitoring and decision making link knowledge and action, and are essential for building and accessing knowledge.

On reflection-on-action: This form of reflection while operating metacognitively in the same way as reflection-in-action is asynchronous, and thus monitoring (and any potential decision making strategies) are inherently separated in time and space. Thus, decision making is hypothetical and conditional. In other words, one can retrospectively analyze and evaluate cues, and hypothesize about what one could have done, or plan what one might do in similar circumstances in the future. This ability may more easily lead to dramatic shifts in teaching. (127)

Title/Author	Nair, Subadrah Madhawa and Malor Muthiah. "The Effectiveness of Using Needham's Five Phase Constructivist Model in the Teaching of History." <i>International Journal of Learning</i> . 12.5 (2005/2006): 311-322.
Research Question(s)	Does the use of Needham's Five Phase Constructivist Model (1987) have an effect on students' achievement in History? Does this approach to teaching history enhance students' interest in History?
Research Approach	Quantitative
Knowledge Claims (methodology)	Positivistic/Post-positivistic
Strategies of Inquiry	Quasi-experimental  Five null hypotheses were tested at the 0.05 significance level There is no significant difference between the mean scores of the Experimental Group and the Control Group in 1. the overall achievement in the History questions 2. their achievement in the essay questions 3. in their achievement in the structured questions 4. in their achievement in the objective-type/multiple-choice questions 5. in their interest in History before and after the course
Methods	Pre-test and post-test Questionnaire (only administered to experimental group both pre- and post-test. Conducted a pilot study on both instruments on 25 students
Sample/Sampling	70 Form IV tenth grade students from two schools. Experimental and Control group from different schools so as to insure no influence of treatment on control group. Efforts made to insure similarity of subjects.
Data Analysis	T-Test showing mean scores, with Standard Deviation, mean difference, t, df, p??? Data processed using the Statistical Package for the Social Sciences (SPSS) Program
Results	Null Hypothesis results 1. rejected—significantly higher in overall achievement in history 2. rejected—helped achieve significantly higher in essay type questions 3. rejected—structured questions 4. accepted—objective-type/multiple-choice questions 5. rejected—interest  Conclusion: Using Needham's model is very effective
Assessment	This is a very scientific classroom-based study. They do a fairly good job of controlling variables for validity and reliability. I was not sure how they were assessing the essay portion. The study also did not tease out any particular part of the model, such as the effect of reflection.

	<p>As a study of reflection, it does not provide a focus on reflection but we could say that reflection is part of the package that shows this improvement in learning and attitudes. Notice also the reflection is definitively post-task, constructivist in nature.</p> <p>This study is interesting as a study of a pedagogical technique. It has tangential applicability to my work, very tangential.</p>
Quotes/info	<p>Needham's Five Phase Constructivist Model</p> <ol style="list-style-type: none"> <li>1) orienting</li> <li>2) generating ideas (by relating to prior knowledge)</li> <li>3) restructuring the ideas</li> <li>4) applying the ideas</li> <li>5) reflection</li> </ol>

Title/Author	O'Neill, Peggy. "From the Writing Process to the Responding Sequence: Incorporating Self-Assessment and Reflection in the Classroom." <i>Teaching English in the Two-Year College</i> . (Sept. 1998).
Research Question(s)	Does incorporating student self-assessments help students become more independent, better writers?
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Case Study?
Methods	Textual Analysis
Sample/Sampling	Two students, Four texts in "response sequence"—1) student reflective writing and self-assessment, 2) student draft/essay, 3) teacher response to self-assessment and essay, 4) student rejoinder to the teacher's comments. Also, portfolio cover letters.
Data Analysis	Close reading and interpretation of text in response sequence with follow-up analysis of portfolio cover letters.
Results	No clear statement of results—implicit value put on these activities for improving students' self-awareness and expertise as writers. Instead, the article advocates classroom practices and techniques to elicit these more productive forms of reflection, self-evaluation, and response.
Assessment	Although this article is not clearly framed as an empirical study, it does have a clear "sampling" and it presents empirical evidence from student texts (reflections) for analysis. The author's uses Writer's Memos as reflective self-assessments for EACH draft. The framework for these reflective pieces is a bit different than for Writer's Reviews, but it is the same in-task reflective moment. This article typifies the kind of "research" or empirical data on reflection and its value—heavy on theory and work by others who have done similar type "studies" (in this

	case, Sommers' "Writer's Memo" article is a good example). Light on connecting or doing more rigorous research.
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Title/Author	Peck, Wayne C. "The Effects of Prompts Upon Revision: A Glimpse of the Gap Between Planning and Performance." <i>National Center for the Study of Writing and Literacy Technical Report No. 26</i> . (May 1989). <a href="http://www.writingproject.org/cs/nwpp/download/nwp_file/130/TR26.pdf?x-r=pcfile_d">http://www.writingproject.org/cs/nwpp/download/nwp_file/130/TR26.pdf?x-r=pcfile_d</a> (appears as chapter in <i>Reading-to-Write: Exploring a Cognitive and Social Process</i> . Ed. L. Flower et al. Oxford U. Press, 1990.)
Research Question(s)	This study examines the process of revision within the context of a reading-to-write college assignment. Could students make significant changes in their writing if they were asked to examine their task representations and instructed to attempt the demanding task of transforming their prose into an interpretive essay with a clear purpose?  What are some of the problematic facets of the revision-process? How are revisor's cognition shaped by the situation in which it occurs? How do writers represent the task of revision to themselves when given different prompts to revise?
Research Approach	Quantitative
Knowledge Claims (methodology)	Postpositivistic/ Positivistic
Strategies of Inquiry	Quasi-experimental
Methods	Think-aloud protocol, Self-Analysis questionnaire, text analysis  Experimental Group—given "treatment" of lecture on task representation and review of ways other students had seen the task, students asked to complete a Self-Analysis of their own representation during lecture, sent with instructions to revise paper with specific prompt-"to interpret with a purpose"  Control Group—no lecture, general revision instructions to make paper "better"  Both groups were asked to conduct think-aloud self-interviews on tapes at intervals during their revising process, and then to review the tapes for insights into their own process.
Sample/Sampling	69 students randomly divided within classes into experimental and control

	<p>groups (36 experimental, 33 control). 57 revisions collected (31 experimental, 26 control)</p>
Data Analysis	<p>Analysis of changes in student task representations was based on</p> <ol style="list-style-type: none"> <li>1) judges' blind ratings of students' original and revised texts in terms of their Organizational Plan</li> <li>2) on changes reported in students' own Self-Analysis</li> <li>3) on evidence of revision protocols to distinguish attempted changes and visible changes in the text</li> </ol> <p>i.e. they looked at drafts to see what changes were made and then investigated the relationships between what the student self-reported both in a self-analysis questionnaire and think-aloud protocols</p>
Results	<p>Key Observations:</p> <ol style="list-style-type: none"> <li>1) Writers revise their papers in different ways depending upon how they represented the task of revision to themselves.</li> <li>2) A gap exists for some a large group of writers between their planning process and their writing process. Some writers are knowledgeable and skillful in planning a revision but do not translate their complex planning process into equally sophisticated revisions.</li> </ol> <p>Findings highlighted the impact of situational variables upon the process of revision, especially the "transaction" between a writer's process and the situation in which the writing is being done. The protocols suggest that students "negotiate" their task, their text, and their situation as they planned and revised.</p> <p>Summary: "This study demonstrates that writers revise differently depending upon how they represent or "negotiate" their task, their text, and their situation" (17).</p>
Assessment	<p>This study parallels my interest in reflection because it asks students to do self-evaluation and self representation (something very close to reflection) between drafts and studies this self-representation/evaluation's impact on the subsequent draft.</p> <p>Reflection is THE place (or a good place) where writers can represent and negotiate their task, their text, and their situation.</p> <p>"Throughout the protocols, we found evidence of students struggling with varying degrees of success to create rhetorical purposes and integrate them into their compositions."(15)</p> <p>The article, though, does not use the language of "reflection."</p>

Title/Author	<p>Pelham, Fran O'Byrne. "Research: Recording Process and Product." Paper presented at the Annual Mid-Atlantic Writing Centers Conference. Villanova, PA. 24 April 1993. (ERIC document ED 362 895)</p>
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Research Question(s)	What mental behaviors are present in the inquiry and composing processes of a freshman writing student as he/she enacts a research assignment? What composing and inquiry patters of behavior will emerge as a student negotiates research paper assignments? How does the student approach the tasks of inquiry and composing? What commonalities or contrasts, if any, are present in the inquiry and composing processes as a student works through a research assignment and, in turn, writes a text? Lastly, would a Research Journal influence the writing of a research paper? (2)
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Case Study
Methods	Protocol analysis (audiotaping of thoughts), interviews, conferences, and text analysis of essays and related assignments
Sample/Sampling	One student? Refers to other students in the same class.
Data Analysis	Unclear. It appears no rigorous methods of data analysis other than close reading and interpretation were used.
Results	<p>Results of this naturalistic study suggest that a link exists between a student fulfilling process-oriented research paper assignments that acknowledge various cognitive levels, and the achievement by the student of successful, original research paper writing. Furthermore, the inclusion of a Research Journal and its role in planning, drafting, and reflecting point to a student learning various cognitive processes as the research assignments vary. (1)</p> <p>Claims Research Journal is powerful tool allowing students to reflect on research and make discoveries that lead to inventive essays. Students make connections in the journals.</p>
Assessment	<p>This is a conference paper based on what could hardly be called a research study. It appears to be another kind of classroom based action research inquiry. I think the researcher wanted to see the influence of Research Journals and she found them very helpful. The sampling of one student is kind of ridiculous?</p> <p>The article is somewhat significant for me in that it discusses how journal reflecting during the process of composing makes a difference.</p>

Title/Author	Raphael, Taffy E., Carol Sue Englert, and Becky W. Kirschner. "Students' Metacognitive Knowledge about Writing." <i>Research in the Teaching of English</i> . 23.4. Dec. 1989. 343-379
Research Question(s)	What are the changes in students' metacognitive knowledge as a result of participating in instructional programs emphasizing a communicative context for writing, or emphasizing the role of text structure knowledge

	in writing?
Research Approach	Quantitative
Knowledge Claims (methodology)	Positivistic/Postpositivistic
Strategies of Inquiry	<p>Quasi-experimental</p> <p>Four groups created to examine the influence of such instruction on students' metacognitive knowledge:</p> <ol style="list-style-type: none"> <li>1) a Communicative Context group that learned and practiced writing within an environment that emphasized the writing process with a particular stress on audience and purposes in writing</li> <li>2) a Communicative Context/Text Structure group that received text structure instruction embedded with a program that emphasized the communicative context (i.e. audience and purpose) for writing</li> <li>3) a Text Structuring group that received text structure instruction as part of the writing process, but in the absence of an environment stressing audience and purpose;</li> <li>4) a no treatment Control group that received neither text structure instruction nor the defined communicative context, but participated in the traditional language arts curriculum of the school. (textbook driven)</li> </ol> <p>???What if this Control group curriculum had instruction in context or structure???</p>
Methods	<p>Survey/questionnaire, interviews, textual analysis</p> <p>See strategies, sampling, and data analysis</p>
Sample/Sampling	<p>140 heterogeneously grouped students from 7 upper elementary classrooms (4 fifth and 3 sixth grades). Students from lower SES neighborhood, equal mix ethnically, students assigned randomly to classrooms at the beginning of the academic year. Treatment groups: Comm Context <math>n= 41</math>, Text Structure <math>n= 41</math>; Comm Context/Text Structure <math>n= 44</math>; Control <math>n= 14</math>)</p> <p>Subset of 12 students per treatment group was identified for in-dept interviews (<math>n</math> interviewed = 48)</p> <p>Interview selection based on representative ability range based on teacher judgment and standardized test scores. Comparable ability of treatment groups underwent a variance analysis based on language achievement scores on Stanford Achievement Test—no significant differences (<math>p &gt; .05</math>) between groups.</p> <p>Materials for assessment: Group questionnaires, individual interviews, writing samples/packets</p> <p>Three assessment points</p> <p>Pre-treatment—questionnaire and interview</p>

	<p>End of Phase I (mid-point)--questionnaire          End of Phase II (post-treatment) —questionnaire and interview          Analysis of student "think sheets" in writing packets</p>
<p>Data Analysis</p>	<p>Three types of metacognitive knowledge were examined:          (1) declarative knowledge concerning audience, purpose, and text structure, (2) procedural knowledge concerning steps in the writing process, and (3) conditional knowledge concerning how procedures vary under different writing conditions and during revision. In analyzing the data, a general description of strategies was synthesized from group questionnaire data and in-depth profiles of students' responses selected from individual interviews and writing samples.</p> <p>Questionnaires—scoring procedures          --examined by two judges who categorized student response to each question, schemes verified by a third judge, patterns converted to percentages, significance of response variation across groups tested using a Chi-square analysis</p> <p>Interviews—two judges blind to treatment groups and hypotheses of the study administered the interviews. Judges read each interview (I guess they transcribed them?) and wrote a descriptive paragraph characterizing the type of knowledge students in different classrooms displayed. Descriptions analyzed to identify general characterizations and trends and find illustrative examples.</p> <p>Writing packets—          Comparison of students first and second drafts were made in terms of types of revision (mechanical, overall organization, additions, deletions) (does this imply a coding system?) General patterns observed.</p> <p>Second, target students who best characterized the patterns in each group were selected for further examination. For each of these students, changes in drafts were compared to their plans as outlined on their pre-writing, editing, and revising think sheets.</p>
<p>Results</p>	<p>Lots of tables with numbers (including chi-square analysis of differences in groups. Also has excerpts from some interviews for illustrative purposes.</p> <p>Students declarative knowledge about writing was notably influenced by the type of instruction they received. Students who participated actively in a communicative context focused on writing as a way of sharing ideas to be read by many different readers; students receiving text structure instruction discussed such knowledge as it related to presenting ideas and organizing them.</p>

	<p>Procedural knowledge—          Communicative context students saw author-editor, peer conference, peer editing exchange as helpful for these writers to understand making sense in writing and provided responses that turned them back upon their topics in reflective ways, saw purpose of editing to try out, extend, refine ideas</p> <p>Text structure group, in contrast, focused largely on mechanics in the editing process. Editing important for fixing errors, no sense of helping people understand the topic better. Not reflecting on their topic or even considering new ideas during the editing phase. For students not engaged in peer-editing and peer conferencing there is little point to editing beyond copy-editing, no understanding for how to read for their potential reader's perspective.</p> <p>Conditional Knowledge—          Conditional knowledge is described in terms of the relationship between plans made on their think-sheets and writing samples from first and second drafts.</p> <p>In general, students in the communicative Context group showed growth in their ability to develop a revision plan based upon their editor's comments. But vague about peer-editing think sheet comments and specifics in revision plan.</p> <p>In contrast, Text Structure group were quite specific in their revision plans and carried out their plans in revising their paper.</p> <p>All three treatments has a positive effect on students' knowledge about the writing process and awareness of writing strategies. Students did improve in their writing as well as enhanced their metacognitive awareness.</p>
<p>Assessment</p>	<p>This is a complex elephant of a study. Its sampling seems good, but I wonder how valid the data collected is for measuring what they want to measure. I am VERY unclear how well a baseline the control group provides. I worry about the questionnaire and also the particular questions asked. The data analysis on the interviews in particular seems weird and she doesn't describe how these transcripts were analyzed well enough for me to see its validity. Reliability is in question because of the specific nature of the instructional techniques. What if I don't use think-sheets? The impact might be just related to think-sheets, not a general focus on an instructional topic/strategy. I wonder also if we could consider the data collected (questionnaires, interviews, think-sheets, drafts) as "metacognitive" or metacognitive knowledge.</p>

	<p>I like her division of the different knowledges involved in the writing process—declarative, procedural, conditional. It reminds me of Mezirow's three types of reflection: content, process, premise reflection.</p> <p>This is an interesting design for me to look at. I would not want to do this for my own study since it seems incredibly complex and riddled with potential problem areas.</p>
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Rijlaaradam, Gert, Michel Couzijn, and Huub Van Den Bergh. "The Study of Revision as a Writing Process and as a Learning-to-Write Process." *Revision: Cognitive and Instructional Processes*. Eds. Linda Allal, Lucile Chanquoy, and Pierre Largy. Boston: Kluwer Academic Publishers, 2004. 189-208.

This essay serves as a capstone to the entire collection of essays on cognition and revision. In it the authors clearly define "revision" as goal-directed processes of reviewing already written text. This definition excludes changes made on "pre-text" (as in invention) and is different from changes made to the text, called transformations. The authors provide a through review of revision research and bring up important issues related to previous revision research (such as "But what do transformations tell us other than that transformations were made?" (194)). The authors also review research on revision with the aim of using research to determine how to teach students to write and include a section on the importance of feedback for writing improvement. The article concludes with the authors' presentation of two research agendas based upon the view of writing as a cognitive activity. Of great interest to me is the author's inclusion in their list of main research questions of "non-automatic reflection on already-written text"—when does it happen, how is this activity related to other cognitive activities, what is the relation of this activity with text quality? Bingo! That is exactly the focus that I have for my research. The authors also include a second set of research questions related to revision as a learning tool and concludes with key methodological issues in research on writing and revision. This is a significant article for it focus on revision and review of relevant research.

Title/Author	Rubin, Louis. "Learning About Reflection." <i>Making Thinking Visible: Writing, Collaborative Planning, and Classroom Inquiry</i> . Urbana: NCTE, 1994. 223-227.
Research Question(s)	What is the value of collaborative planning? What do students' reflections on collaborative planning reveal?
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Classroom practice inquiry, action research?
Methods	Textual analysis
Sample/Sampling	Composition classes from one Fall semester (unknown how many classes or how many students)

	<p>Text artifacts collected:          --first reflections at end of initial planning sessions for two different essays          --reflections upon completion of paper, asked to write about how collaborative planning contributed to paper</p> <p>Questionnaire asking students to judge collaborative planning compared to other classroom techniques used          --included comparative reflection commenting on their experience of collaborative planning in the planning of their first two papers</p> <p>--retrospective reflection on last day of semester</p>
Data Analysis	Textual analysis, survey interpretation?
Results	<p>Students focus on different dimensions of collaborative planning at different points of distance from the planning sessions. Proximate reflections contain more specific information, more distant ones contain more general observations that were overlooked in their involvement with the particulars.</p> <p>Having students reflect on their experience at different points of distance from an experience helps students access different kinds of information at different times. Advocates documenting the shift, and having students reflect upon their reflections (this shift).</p>
Assessment	<p>This article appears to be a perfect example of an action research project. A teacher incorporates a new teaching technique and then collects some data to analyze how effective the technique has been. I found it particularly interesting that she used a questionnaire to get students impressions of this technique compared to others used in the class. No results from this questionnaire were provided.</p> <p>Although I totally agree with this author's view of reflection "that reflecting on one's own experience is important for learning" and the focus on process-oriented student-centered reflections, she is studying a different kind of reflection (different framework, as Moon would say). Her initial reflections after the first planning session sound interesting. I would want to look at them not for what they reveal about collaborative planning but for what those reflections themselves reveal about the development of that student's inquiry and writing process.</p>

Title/Author	<p>Shapira, Anat and Rachel Hertz-Lazarowitz          "Opening Windows on Arab and Jewish Children's Strategies as Writers." <i>Language, Culture and Curriculum</i>. 18.1 (2005): 72-91.</p>
Research Question(s)	<p>What is the effect of strategy usage on written output?          "Strategies are actions and behaviors used by writers to solve problems in the writing process. These actions and behaviors reflect four clusters:</p>

	meta-cognitive, cognitive, social, and affective processes>"
Research Approach	Mixed method?
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Case study/phenomological research
Methods	<p>Multiple methods</p> <p>1) Writing Strategies Questionnaire 48 item Likert-type questionnaire, administered to all subject</p> <p>2) Writing Strategies Interview Structured interview of 31 randomly selected participants, questions based on same four-cluster conceptual framework as the WSQ</p> <p>3) Writing Think-aloud Protocol Each of 31 randomly selected participants asked to think-aloud as they write an essay</p> <p>4) Written Outputs Half of participants (187) wrote a 20 minute composition</p>
Sample/Sampling	352 sixth-grade students from 11 schools
Data Analysis	<p>1) Likert scale</p> <p>2) Correlation to WSQ and WTAP</p> <p>3) Behavior observed and coded, transcribed for analysis of use of strategies in writing</p> <p>4) Second author evaluated all essays following global scoring evaluation (1-100) based on preset criteria. Inter-rater reliability check done on 50 essays, second raters blind to purposes of study. 90% cases within 20 pts.</p>
Results	Writers who reported high use of affective strategies produced compositions that scored highest. Acknowledges sketch boundaries between different strategy clusters. Think-aloud demonstrated central role of the affective strategies for children. Sees gap between meta-cognitive and cognitive knowledge of strategies.
Assessment	<p>Results could be age-specific: i.e. affective strategies work well for 6<sup>th</sup> graders. Results could also be influenced by the nature of the writing task provided (freewriting). Maybe the free writing assignment led participants to an affective-inclined expression, making the assignment more appropriate for those scoring high on the affective strategy cluster.</p> <p>Meta-cognition defined as basically self-awareness. Affective strategies: Positive or negative. Negative affective strategies such as avoidance, passiveness, difficulty concentrating, lack of concern. "Positive strategies include anxiety alleviation, use of calming or self-relaxation techniques such as deep breathing, meditation, listening to music, laughing, self-encouragement and self-talk regarding one's ability successfully to complete the assignment. Additional positive strategies are self-rewarding, risk taking, sharing with others feelings that are related to the writing process and emotional</p>

	temperature checking through the use of checklists." (75) Some of this sounds fairly reflective in nature—what you might do inside a post-draft reflection. Affective element of reflection?
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Title/Author	Sumsion, Jennifer and Alma Fleet. "Reflection: Can we assess it? Should we assess it?" <i>Assessment &amp; Evaluation in Higher Education</i> . 21.2. June 1996. 121-131. EBESCO Academic Search Premier. Texas Tech University Library. 23 July 2007.
Research Question(s)	What is the feasibility and desirability of assessing reflection demonstrated by student teachers studying early childhood literacy?  Assuming reflection could be identified and assessed, what relative assessment weighting should be given to mastery of unit content versus demonstrated capacity for reflection?
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist? (the researcher seems to make positivistic claims from qualitative data?)
Strategies of Inquiry	Phenomenological?
Methods	Content analysis
Sample/Sampling	124 first year early childhood students Subjects knew their class participation would be a subject of study, but they were blind to the focus on reflection of the researchers. Four gathered on four occasions during the semester—only 73 of 124 complete sets acquired, comprise the data for analysis.
Data Analysis	In a previous pilot study, data was analyzed using Sparks-Langer et al.'s (1990) seven-point scale for measuring pedagogical language and thinking. It was found not to be useful. Instead, developed a simple 3 point scoring system: highly reflective, moderately reflective, and not reflective (based from Boud). Three coders, inter-rater reliability, blind coding
Results	Did the Student Teachers Demonstrate a Reflective Approach to their Professional Development? --qualified yes  Was the Instrument Effective in Identifying Evidence of Reflection? --only 50% inter-rater reliability achieved. Raises doubts about the effectiveness of the instrument  Was there any Relationship between Grades and Reflection Ratings? --there was a generally positive relationship (correlation?) between academic grades and reflection ratings for more academically able students --there was not a relationship between grades and reflection ratings for the weaker students Discrepancy?—appears to be no obvious explanation for this

	<p>contradiction</p> <p>Checks were made to see whether any previously overlooked factor might explain the discrepancy between the generally positive relationship between academic grade and reflection rating for the more academically able student teachers and the lack of a strong relationship between grade and rating for the apparently less academically able student teachers.</p> <p>Reflection appears to be unsuited to quantitative measurement—coding is dependent on a high degree of interpretation. Study also suggest that is it possible to be reflective without being academically able</p> <p>The study affirms an earlier decision by teaches not to include evidence of reflection as a component of unit assessment.</p>
<p>Assessment</p>	<p>This research is part of Sumsion's doctoral research. It appears problematic. I would want to know more about the coding of the data in this particular instance before I made the sweeping generalization that all reflective writing is impossible to code reliably. Also, no statistical analysis done on the numerical data. The article raises</p>
<p>Quotes/Notes</p>	<p>Defines reflection: " in this study reflection was considered a generic term for processes involved in exploring experience as a means of enhancing understanding (Boud et al., 1985). These processes include looking back on experiences, decisions and actions; recognizing values and beliefs underlying these actions and decisions; considering the consequences and implications of beliefs and actions; exploring possible alternatives; and reconsidering former views. Processes such as these are expected to lead to informed, thoughtful and deliberate analysis or contemplation of one's beliefs and actions. As such, they are expected to enhance professional practice." (Abstract)</p> <p>Problems with evaluating reflection--</p> <p>" Reflection was not assessed, nor was evidence of reflection used as a criteria for assessment of assignments. This decision was made for a number of reasons. First, the teacher educators had been unable to find a simple means of identifying reflection (suitable for use with a large number of student teachers), which acknowledged the complexity of reflection (Sumsion, 1995). A pilot study (Fleet &amp; Sumsion, 1991) had highlighted the limitations of available instruments. These included difficulty in achieving intercoder reliability; failure to account for all instances of reflection identified; and unsuitability for use with a large number of student teachers. In addition, an extensive review of the literature about reflection (Sumsion, 1993) had failed to find more suitable alternatives." (Unit Assessment)</p> <p>Written reflection's doubts--</p> <p>"Doubts have been expressed about the value of data from written</p>

	<p>sources in determining evidence of reflection (Smith &amp; Hatton, 1993). Concerns focus on the difficulties involved in differentiating between reflection and mastery of a reflective writing genre. Some students teachers who are reflective, for example, may not be able to write in a style which is generally recognised as reflective. Conversely, student teachers with effective writing skills may be able to appear to write reflectively, without actually engaging in reflection. The relationship between the ability and willingness to be reflective about one's professional development, and one's ability and willingness to write reflectively is, therefore, unclear." (Data Collection)</p>
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Yancey, Kathleen Blake. "Getting Beyond Exhaustion: Reflection, Self-Assessment, and Learning." *Clearing House*. 72.1 (S/O 98): 13-17.

In this article, Yancey explores the question: What might happen if self-assessment became a regular part of our writing curriculum? She begins her article exploring two premises: 1) students aren't used to providing assessments of their own work, and 2) teachers don't request self-assessment, even though the research shows it is an important part of how writer's write. She offers two frames to use when presenting self-assessment to students. The first comes from Faigley, Cherry, Jolliffe, and Skinners *Assessing Writers' Knowledge and Processes of Composing* (1985) scale to show development in process descriptions: General-intention responses, general-strategy responses, task-specific-strategy responses. Her second "schema" comes from a way for framing self-assessment she developed herself: self-knowledge, content knowledge, task knowledge, and judgment. She provides concrete suggestions for how to ask for self-assessment from students and closes by advocating that teachers make self-assessment part of their course grade (i.e. students assign some part (15%) of their own grade).

Research assessment: Even though this article is not based on a "study," it does work to promote knowledge on practice. Yancey supports her ideas with references to other researchers quite a bit—so is this a "literature study?" She doesn't offer any results or evaluation of this practice other than her own experience and beliefs. I wish I know the right term to refer to this kind of article.

Title/Author	<p>Yeo, Roland K. "Learning Instition to Learning Organization: Kudos to Reflective Practitioners." <i>Journal of European Industrial Training</i>. 30.5 (2006): 396-419.</p>
Research Question(s)	<p>What is the role of RALG and how has it influenced the way faculty members learn through reflection and action to enhance job effectiveness? (RALG-- reflective-action learning group)</p> <p>What are the critical success factors of RALG in encouraging collective learning among faculty members?</p>

	How does RALG influence organizational learning?
Research Approach	Qualitative
Knowledge Claims (methodology)	Constructivist
Strategies of Inquiry	Case study + "ethnographic observation"  Study is exploratory in nature, an inductive approach to data collection was chosen.
Methods	Interviews, observation
Sample/Sampling	Case organization is a Singapore university, 50 faculty members and one administrator Convenience sampling, semi-structured interviews, (provides some literature supporting interview methodology) --triangulation of data collection through analysis of meeting notes, RALG heads' observations of their member's work attitude, and teaching evaluation results
Data Analysis	Content analysis, through a funneling process the data were further synthesized to search for more specific patterns.  To enhance the reliability of the data, three levels of analysis were conducted: stability, reproducibility, and accuracy (Krippendorff 2004). Second independent coder. Data analyzed using NUD*IST to help categorize ideas into meaningful patterns.
Results	The practice of reflective-action learning group (RALG) is closely aligned with Kolb's experiential learning cycle. Reflection motivates individuals to shift from single-loop to double-loop learning, increasing their competence and capacity to undertake greater challenges. Transferring knowledge to a modified action increases the interaction of the learning loops.  It is clear that faculty members have improved their functional competence as they have become better teachers. It is the constant dynamics of dialogue and feedback demonstrated through double- and triple-loop loops that are able to produce ideal communicative actions beneficial to the organization.
Assessment	The qualitative design of this study is interesting. The description of Content Analysis and then how it was carried through into NUD*IST to find patterns is interesting. It seems that the inter-rater reliability for the coding was a bit rough, but this project almost seemed like it was grounded theory research. I was disturbed by some of the sweeping conclusions about the cause-effect impact of these RALG groups. I was more interested in the observations about what was going on in terms of looping and the relationship of reflection to action.
Quote/Notes	Opens with this quote: "By three methods we may learn wisdom: first, by reflection, which is

	<p>noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest." Confucius</p> <p>Within the learning space of RALG, there is a strong connection between reflection and action, which to a large extent promotes action learning. (400)</p> <p>Talks about the difference between single and double-loop learning. Moving from What should we do? To How should we do it?</p> <p>Role of meaningful conversation</p>
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Title/Author	
Research Question(s)	
Research Approach	
Knowledge Claims (methodology)	
Strategies of Inquiry	
Methods	
Sample/Sampling	
Data Analysis	
Results	
Assessment	