

Melding the Nitty Gritty of Critical Thinking and Information Literacy into English Developmental and Composition Classes

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Working together, librarians and faculty have successfully melded student learning objectives from information literacy and English to net more dynamic and effective lesson plans. By identifying and integrating critical thinking cognitive skills from both arenas, library and classroom sessions can be built to reinforce one another. This paper brings insights from work at three large community colleges in New Jersey that forged ahead with work in this way. The focus was on the progression of student learning objectives from early developmental writing and reading through level II composition classes.

Introduction and Context

The developmental education efforts at community colleges across the United States are attracting increased scrutiny. Success in developmental reading and writing classes, as well as English composition classes, have received more attention as low success and retention rates at community colleges are called into question. Nationwide, an average of 60 percent of entering community college students are required to take developmental classes in reading, writing, or mathematics.¹ Yet failure rates remain at thirty percent or higher; resulting in far too many students dropping out.² Therefore, this curriculum represents an important opportunity for librarians to partner with faculty to help students succeed in the early stages of their career and at the same time help improve retention results for the college.

Among others, Rebecca Albitz's article, "The What and Who of Information Literacy and Critical Thinking in Higher Education," points out the disconnects related to our efforts as teachers and librarians. Albitz says, "The literature survey exposes a number of dis-

connects between higher education's goal of graduating information literate, critical thinkers, and how we impart this knowledge to students."³ Meredith Farkas states the case well in her recent *Academic Libraries* article, saying, "Critical inquiry skills are among the most important in a world in which the half-life of information is rapidly shrinking. These days, what you know is almost less important than what you can find out - which now requires a set of skills that are very different from what most libraries focus on."⁴ Anne-Marie Deitering and Sara Jameson at Oregon State University conclude that for first year composition classes at their institution, "We have not done enough regular, formal assessment that examines the integration of IL and writing instruction."⁵

Our premise is that by re-examining teaching content in light of the concepts in "critical thinking," we can re-energize and re-calibrate our efforts and move toward improved success. After all, English and developmental faculty, as well as librarians, are increasingly frustrated with student results, even as more time and effort are expended. Yet there is hope; and changes

can be realized. Two researchers at University of Louisville (KY) studied their situation and concluded that a recently implemented university-wide plan that “focused on critical thinking, led to positive changes in information literacy instruction.”⁶ At Oregon State, librarians found that “students who seem unlikely, or worse, unwilling to engage in critical reflection about their beliefs and opinions are a source of frustration to librarians and writing instructors alike.” However, they revised their efforts and found that “by using assignments and texts that concretely model a recursive and critical research and writing process, we [now] help students think more deeply and critically about issues and arguments and develop new mental habits that transfer to other courses taken throughout their college careers.”⁷

Our experience shows that successful partnering makes a real difference in results. This paper will discuss such partnering efforts over the past ten years at New Jersey community colleges. Working together, librarians and English developmental/composition faculty have melded student learning objectives from both perspectives (library and English) to net more dynamic and effective lesson plans. Integrating critical thinking skills from both arenas, the library and classroom sessions reinforce one another. And the net result is that the collaborations have worked. As noted by Deitering: “One of the major advantages of doing collaborative work is that over time faculty members begin to see qualitative improvement in the work of their students.”⁸

Theoretical Framework: Critical Thinking

With this backdrop, let us first examine the theoretical framework and research sources that discuss this melding of information literacy and critical thinking. Then we can go through the practical approach to discovering what the current practice is at your institution and how you might improve it. And finally, we can go through the specific actions taken at my current institution, Middlesex County College (MCC), to revise the teaching of English developmental and composition courses and their information literacy components.

The basic purpose of this exercise is to better engage the student and enable their success. Our premise, along with others in the field, is that this must be done through focusing on critical thinking skills. Using critical thinking as a base or reference point allows

us to effect a more fluid integration of objectives from English developmental, composition, and information literacy. And practically, of course, we know that critical thinking skills are essential in using information and integrating source material into any successful student essay or paper.

The core study of critical thinking should start with the field’s primary expert, Dr. Richard Paul, who is founder of the Center for Critical Thinking hosted at Sonoma State University in California. Based at the CCT, the National Council for Excellence in Critical Thinking sets guidelines (see www.criticalthinking.org) for teaching. Two of the best articles on the topic of melding the purposes of info literacy and critical thinking are Peter Facione’s “Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction”⁹ and J. Weiner’s, “Is There a Difference between Critical Thinking and Information Literacy?”¹⁰ Facione develops a consensus view of critical thinking and carefully maps out the cognitive skills and teaching objectives for critical thinking.¹¹ Weiner clearly maps out information competencies and how they link to central ideas behind both information literacy and critical thinking.¹² Both of these articles have helped the librarians and academic faculty at MCC to understand and discuss these issues.

In examining the theoretical framework, one uncovers overlapping intentions for communications, critical thinking and information literacy, yet the persistent barriers due to terminology and framework. And practically, we often segregate our efforts in these areas by artificially separating reading, from writing, from research. Taking the work of Dr. Peter A. Facione at Santa Clara University, we charted his consensus list of critical thinking cognitive skills and sub-skills. As Table 1 shows, there are overlaps between the cognitive skills in critical thinking and information literacy and then parallels the concepts with core tasks in critical writing exercises, research and information literacy. The alignment works; we clearly see their overlapping purposes and activities. Mapped graphically in Illustration 1, we see the dynamic purposes and activities that are clearly not segregated in the scheme of things.

This is the problem we want to solve. We want our students to be skilful at the separate activities of reading, writing, and research—yes. But our purpose is for them to be critical thinkers, able to be informed, and

able to comprehend and communicate ideas. Let us be clear about the concepts:

- **Critical Thinking:** Evaluating the quality of our own and others thinking. Are our ideas reasonable, rationale, defensible, and tested or not?
- **Communication:** Is our message conveyed? Is it clear, coherent and done in a well-developed manner?
- **Information Literacy:** Do we recognize when information is needed? And do we use information efficiently and ethically?

In reality, these do not stand alone and yet, somehow we expect the students to somehow to meld them together on their own to produce their papers. As noted by the Oregon State researchers, “[Critical thinking] is something we must teach deliberately, not something we can assume students will ‘get’ for themselves.”¹³ Instead of just being front room teachers, we must imagine ourselves sitting side by side with the student at their home desk as they try to write their essay—there we can see how the activities are clearly melded at that point.

Meshing with Educational Standards

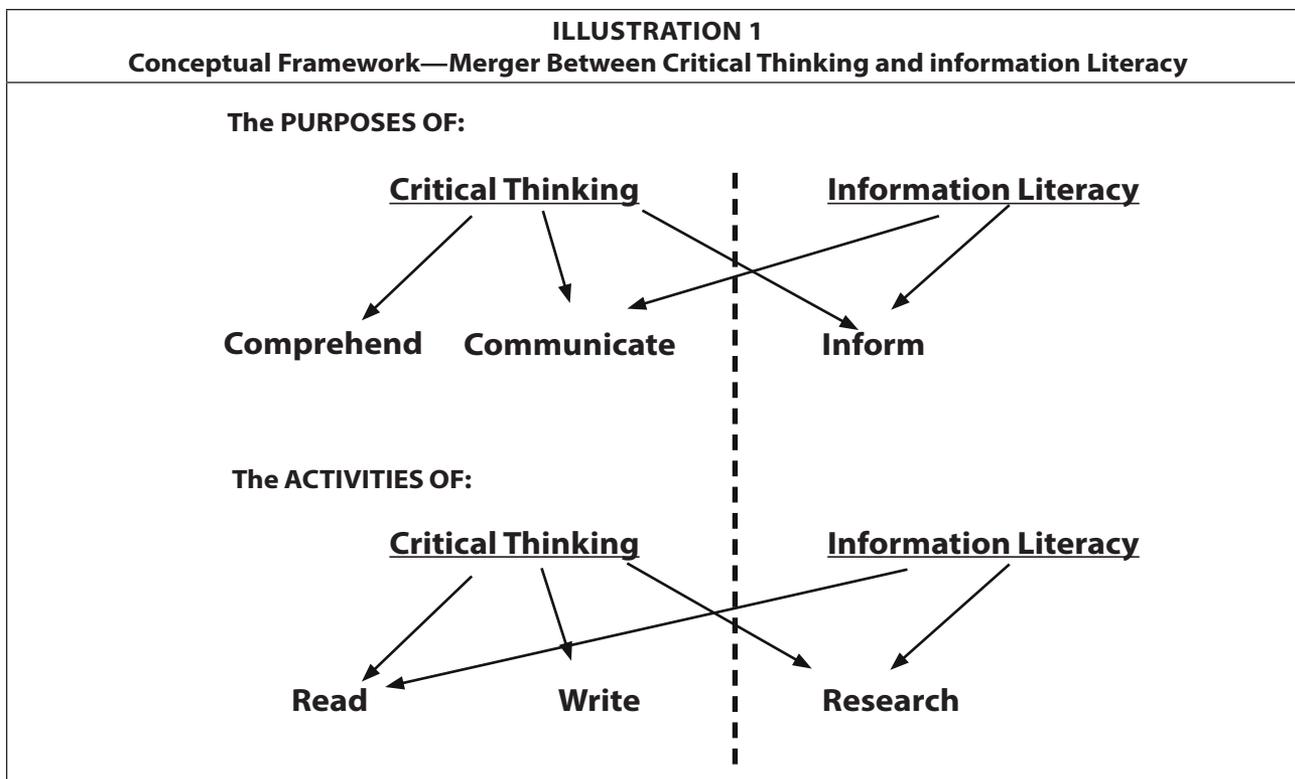
To mesh this paper’s intent with our educational administrator’s concerns, we also culled from the core education field documents in New Jersey. This includes the *Information Literacy Progression Standards* created by teams of academic librarians in NJ (posted on the www.njla.org website).¹⁴ Plus, we reviewed the recently revised (9.6.2011) *NJCC General Education Guiding Principles*, published on the njccc.org website. Most importantly, these principles were changed so they now separate out information literacy from technical fluency and make information literacy an “integrated course goal” running across all Gen Ed classes!¹⁵

Along with other states, NJ has also aligned its practices to the *Core Curriculum Standards* (produced in 2009; see corestandards.org). These core standards help us to address high school standards that impact colleges with our entering freshman. As stated for grades 11 & 12, in the English Language Arts Standards’ Research to Build and Present Knowledge (Standard #7 of the Writing Standards) include these two standards.¹⁶

TABLE 1
Overlay of Critical Thinking and Information Literacy Tasks

		Evidence/ Argument / Conclusion			Research	Info Literacy
		Evid	Argum	Concl		
Critical Thinking Cognitive Skills and Sub-Skills						
Interpretation	categorization	x			keywords	information need
	decoding significance	x			screen	
	clarifying meaning	x			topic	
Analysis	examining ideas	x			filter	info retrieval
	identifying arguments		x		thesis	
	analyzing arguments		x		select	
Evaluation	assessing claims		x		sources	eval websites
	assessing arguments		x		filter	source citations
Inference	querying evidence	x			search	eval of sources
	conjecturing alternatives	x			screen	
	drawing conclusions			x	abstract	use info effectively
Explanation	stating results			x		
	justifying procedures			x	document	research methods
	presenting arguments		x		document	conclude
Self regulation	self examination			x	evaluate	use info ethically
	self correction			x	evaluate	

Source of cognitive skills list: Facione, Dr. Peter A. *Critical Thinking*. CA Academic Press, 1990.



Conduct short, as well as more sustained, research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas; avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Although, we hope that this takes place in high school, more often than not, we find that students do not arrive with these experiences. In their Libri article of 2011, Robert Kennedy and Vivienne Monty from York University, Toronto, detail an admirable goal for “post-secondary critical skills that include writing, researching, information literacy, and critical thinking that is more analytical...”¹⁷ They suggest that librar-

ians must partner with faculty to be “an influential contributor to student learning”¹⁸

Delving into Teaching Practices

Let us move on to the “nitty gritty” of examining current teaching practice and looking for ways to integrate these approaches. How should one examine local practice in order to critique it from these perspectives? The first efforts should thoroughly review the teaching aims (described above) with current course content at your institution. Gather all of the relevant materials, i.e. course description, syllabus, textbooks, assignments, and sample papers from the previous semester, if possible. Carefully examine the words in these materials to look for a match to the critical thinking aims. This is where the theoretical framework and a familiarity with the terminology will greatly help you. Find any pertinent references to the ideas of critical thinking and come to conclusion whether stated purposes match intent. Below are examples taken from Middlesex County College courses that will provide insight into our process, the level of effort, and what we found. For the course descriptions, we highlighted terms related to our inquiry and used those to map out the progression of purposes that at least resided in our official language about the

courses. We discussed course descriptions and how they had changed.

Next, in reviewing the textbooks, we looked for mentions of sourcing, citation, and research tasks that could be exploited in teaching information literacy. Table 2 shows a list of examples that come straight from textbooks used at MCC for the courses from Reading 009 (developmental) through English 121 (composition I). [Insert Table 2] Many more examples

could have been pulled, but these were used to highlight levels of inquiry and served as points of discussion.

Next we reviewed the syllabi and the student learning outcomes. With a new English chair at Middlesex County College, student learning outcomes were revised. As one sees in the charts of Table 3, the learning objectives for the developmental classes were modified to clarify the critical thinking and informa-

TABLE 2 Example Info Lit & Critical Thinking Topics Found in Current Textbooks at MCC.	
RDG 009. Wachtel and Swanicke. Spotlight on Reading.	
<ul style="list-style-type: none"> • Facts vs. Opinions, p.263 • Interpretation: intent, attitude, tone. p.285 • Example: Look It Up – research the life of Vera Wang, p.306 	
RDG 011. Sikso, Yvonne Collioud. American 24-Karat Gold.	
<ul style="list-style-type: none"> • MLA covered, p.8 Kate Chopin. • Plus p.13 MLA quotations. • Cluster and outline topics, p.20 • Refers to Further Writing and Reading: “available in a library” 	
ENG 009. Fawcett. Grassroots with Readings: the Writer’s Workbook.	
<ul style="list-style-type: none"> • Clustering idea to narrow topic choices, p.13 • Reading Selections section, p.406+ 	
ENG 010 Buscemi. Basics: A Rhetoric and Handbook. 4th ed.	
<ul style="list-style-type: none"> • Introduces info lit ideas, inferring that students know these concepts (which may not be true). • p.100, 1.- It says to use documented data, facts, and statistics. “To prove that being overweight is...you might quote research data published in a scientific journals.” • In the index it refers to—Journals: in bibliography...online...quotation marks...in reference list...titles of...in works-cited and the word Library: accessing from home...books...call numbers...classification...databases... 	
ENG 010. Faucett. Evergreen.	
<ul style="list-style-type: none"> • Example points below infer search, visiting reliable data, evaluation, and comparison of data. • p.561, #1 Writing Assignment —has them visit and use a website (evaluation?)—“Visit www.supportingoursons.org... for ideas” • p.561, #3 “study the public services advertisement... recently released by the National Fatherhood Initiative...” (evaluation?) • p.575, #2 Writing Assignments – compares two definitions of success by two authors. 	
ENG 121. Behrens & Rosen. Writing and Reading Across the Curriculum.	
<ul style="list-style-type: none"> • Example article has “Discussion and Writing Suggestions • p. 213, #1—“Locate the definition of ‘work’ in the Oxford English Dictionary.” Must find OED and look it up. Deal with multiple definitions. • p.213, #3 – “What are major differences in the definition of career as the word was understood in the late nineteenth and much of the twentieth centuries and as the word as it is understood today.” Must find applicable sources and make judgments about timeframe and credibility. • p. 214, #3—“Research the definition of a work-related word not defined in this selection.” Must decide which word to choose, which sources to use, and how to search. • p. 220 #1 “What evidence do you find that we live in a world...” Think about evidence they heard or read? Search for some? 	

tion literacy components. The bolded phrases indicate discussion points and possible jumping off points for action. A focus on key elements of reading skills as

well as a beginning sense of sourcing was identified. See Table 4 for the changes in SLOs for English Composition. The intent of course changes for the English

ENG 009- OLD	ENG 009- NEW
1-Identify parts of speech and use them correctly in paragraphs and short writing assignments.	2-Compose paragraphs using topic sentences, major and minor details, and examples.
2-Recognize complete sentences, incomplete sentences and multiple sentences (comma faults and run-on sentences), and be able to correct those errors in his/her own writing.	1-Write complete sentences without using fragments or run-ons.
3-Recognize errors in subject-verb agreement and pronoun-antecedent agreement and show that he/she is able to correct those errors in his/her own writing	NEW 3-Produced a focused topic and pre-write an essay.
	NEW 4-Develop an essay and revise first draft demonstrating control over grammar and syntax
	NEW 5-Construct a complete essay including introduction, body and conclusion using acceptable grammar and syntax.
ENG 010-OLD	ENG 010-NEW
1-In the writing of several short in-class papers, several out-of-class papers, and a final examination demonstrate control over errors in grammar, punctuation, spelling, capitalization, syntax, and mechanics.	REVISED 1-Demonstrate control over errors in grammar, spelling, punctuation and capitalization in an essay.
2- Demonstrate ability to revise and edit their writing, using textbooks and advice from the instructor.	NEW Compose a thesis that states the point of the essay.
3- Demonstrate the ability to organize facts, ideas and opinions clearly and coherently.	REVISED 3-Construct an essay in which the details are organized in a logical order.
4-Begin to use language that is varied and precise.	REVISED 4- Produce sentences with variety in language appropriate for each rhetorical mode.
5-Begin to develop narrative, descriptive, and expository writing skills, developing a sense of audience and purpose.	REVISED 5-Write, revise, and edit a complete essay.
RDG009-OLD	RDG 009 - NEW
NA	2-Demonstrate a literal comprehension of readings, through identification and analysis of main ideas , supporting details and rhetorical patterns of organization and development.
NA	3- Critically analyze and evaluate reading material for the author's use of inferences, purpose and tone, patterns of organization, and transitional words and phrases.
	5-Adapt positive comprehension tools and apply appropriate strategies to correct incomplete comprehension.
RDG011- OLD	RDG 011 - NEW
	5-Utilize critical thinking skills including distinguishing fact from opinion, making inferences, and identifying author's purpose and tone.

TABLE 4: MCC Syllabi—Student Learning Outcomes, Excerpts from English Composition	
Old ENG 121 SLOs	ENG 121- Revised & Additional SLOs
1-Demonstrate the ability to paraphrase, summarize, and respond to texts by composing, through a series of drafts, coherent, developed, and grammatical essays.	1-Compose coherent, developed, and grammatical essays that demonstrate the student's ability to paraphrase, summarize, and respond to texts .
2-Compose a documented essay demonstrating the ability to locate, evaluate, and integrate source material and cite this information correctly .	2-Compose a documented essay demonstrating the ability to locate, evaluate, and integrate source material and cite this information correctly .
3-Demonstrate a proficiency in reading critically and applying inferential and critical skills to college-level readings.	3- Read critically and apply inferential and critical skills to college-level readings.
NA	NEW 4- Comprehend and use college-level language.
NA	NEW 5- Demonstrate mastery of the writing process
NA	NEW 6-Synthesize and organize facts, ideas, and opinions in a clear, coherent and well-developed manner using various methods of development.
Old ENG 122 SLOs	ENG 122 –Revised & Add'l SLOs
1-Demonstrate the ability to paraphrase, summarize, and respond to texts by composing, through a series of drafts, coherent, developed, and grammatical essays.	1-Demonstrate even greater...
2-Compose a documented essay demonstrating the ability to locate, evaluate, and integrate source material and cite this information correctly .	2-Compose a research paper demonstrating the ability to analyze, evaluate, and synthesize source materials and to cite this information correctly using MLA style; ...
3-Demonstrate a proficiency in reading critically and applying inferential and critical skills to college-level readings.	3-Demonstrate even greater... 6- Synthesize and organize facts, ideas, and opinions in a clear, coherent and well-developed manner using various methods of development, <i>especially argumentation and persuasion; in addition, the student will evaluate and critique arguments found in course reading materials.</i>

department were to move to greater emphasis, not on mechanics, but on process, synthesis, communication, and especially critical thinking.

Dialogue, Communication, and Changed Practice

The next phase of effort focused on dialogue and collaboration. In discussions with developmental and English faculty, they confirmed frustration with failure rates and regretted the fact that students had to take courses multiple times. Reflecting on essays and research papers, they confirmed the fact that many passages were incoherent and were very poorly sourced. This jives with anecdotal evidence and key conclusions from recent articles. In a current article from *Writing & Pedagogy*, the researchers examined student efforts to use and comprehend the sources used in their papers.¹⁹ The researchers were intent on seeing to “what extent have they (student writers) accessed the entire source and to

what extent just single sentences...” Their results confirm the findings of the Citation Project (citationproject.net) that students use only minimal portions of their sources. Students often just take snippets and look no further than the first two pages of the document. Other findings from the literature note the student’s inability to read critically as a deterrent to finding and evaluating information. As an example, authors of a study at Indiana State University cite “that critical thinking of information resources needs to be addressed by educators, because students confuse their facility for internet navigation with an ability to critically read online text.”²⁰

Our current efforts at MCC are in the final phase—changed practice. Librarians and English faculty are working together to meld learning objectives from information literacy and English to net more dynamic and effective lesson plans. What has been impacted so far?

- Curriculum teams are discussing these ideas and holding discussions at adjunct faculty meetings and at professional development workshops. We are encouraging innovation.
- Textbook committee debates are including these topics and new assignments are being built around existing readings.
- A more robust, official, program review process has been approved at MCC and ESL was one of the first to go through the process.
- Plans to reestablish a Writing Center are underway and include the Library Director. Already established are joint referrals between the Library Reference Desk and the English Tutors working in the Developmental Learning Center (next door to the Library).
- Assessments are planned that included immediate, post class discussion of learning objectives.
- Librarians have partnered on course-specific LibGuides that tailor to that faculty member's assignments and mesh critical thinking and info lit.
- A LibGuide was built to support our Center for Excellence in Learning & Teaching (CELT) and focuses on critical thinking and info literacy.

As progress is made, more of the practitioners (English faculty and teaching librarians) are trying new techniques and improving results. Teaching methods are being modified. Some examples, so far are:

1. Textbook readings are being expanded into info lit exercises asking students to find the original source or an additional source on the same topic. Most textbook readings for developmental and Composition I are poorly cited.
2. Core reading skills (comprehension and inference) are highlighted while screening search hits and article abstracts among the database search results. Skills can be tested by hiding the title and having students make up a title from just the summary and vice versa. Using the abstract, students find key search terms, which tests both comprehension and inference skills.
3. Critical thinking skills that “use” information are essential for selecting and then integrating source material into the student essay. If we segregate “the search” as our faculty may do

with the “writing assignment,” then we fail to reflect reality and we discourage our students. As with most, info lit classes are customized to the assignment or research paper at hand.

4. The critical thinking skills are needed for writing about any topic, that is, to analyze, synthesize, and evaluate a message. Evidence for critical thinking can be taught through the very articles found during research. This type of critical reading is essential in the process of culling ideas for a paper. We now teach how to read a scholarly article and have an entire unit on this in our “first year experience” classes.

In conclusion, we are confident that using these approaches, we will advance our purpose of improving student success. Becoming clear as to our joint and newly integrated learning objectives and purposes, we will clarify our efforts. And melding our classroom efforts will net better assignments and greater student engagement. Working together, we will improve teaching outcomes.

Notes

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