The contrasting assumptions of the didactic and critical theories and approaches to teaching and learning are set out in this paper. The assumptions have to do with: (1) whether students should be taught how, rather than what, to think; (2) the relationship between knowledge and thinking; (3) what constitutes an educated, literate person; (4) how knowledge and truth are acquired; (5) the need for students to be taught listening skills; (6) higher order critical thinking skills in relation to reading and writing skills; (7) the role of questioning; (8) the relationship between student talk, or silence, and learning; (9) knowledge and truth as holistic or additive; (10) the interrelationship or dichotomy between knowledge and values; (11) the importance (or nonimportance) of understanding the mind and its workings; (12) how prejudices are built up and broken down; (13) the starting point for genuine learning; (14) the relative importance of in-depth and superficial knowledge; (15) teacher and student roles in learning; (16) self-directed versus teacher-directed recognition of ignorance; (17) student versus teacher responsibility for learning; (18) how students transfer knowledge to real-life experiences; (19) the role of personal experience in learning; (20) authority for knowledge and understanding; and (21) how learners proceed toward truth—directly or in a zigzag manner. It is concluded that recognition of the need for a shift from a didactic to a critical theory of knowledge, learning, and literacy is growing daily, but that its implementation is only beginning. (IAH)
Two Conflicting Theories of Knowledge, Learning and Literacy: The Didactic and the Critical

Richard Paul

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The Institute for Critical Thinking at Montclair State College is designed to support and enrich faculty development efforts toward critical thinking as an educational goal. Guided by a National Advisory Board and a College Advisory Council, its primary purpose is to serve as a catalyst in the development of educational excellence across the curriculum at the College. A collaborative, multi-disciplinary approach is in process, with attention to the study of both the theoretical aspects of critical thinking across the disciplines and their implications for teaching and learning at the college level. Leadership roles have also been assumed in helping other colleges and schools to incorporate critical thinking into their curricula.

As part of this effort, the Institute for Critical Thinking publishes a newsletter, *Critical Thinking: Inquiry Across the Disciplines*, on a monthly basis during the academic year. The newsletter publishes information about the activities of the Institute, as well as brief analyses of various critical thinking issues. In addition, the publication of several series of resource documents are in process. These publications will make available, to interested faculty and others at Montclair and elsewhere, working papers related to critical thinking as an educational goal. These publications will enable those persons interested in critical thinking to have access to more extensive discussions of the kinds of issues that can only be presented in summary form in the newsletter. These discussions will typically be regarded as works-in-progress--articles written as tentative arguments inviting response from others, articles awaiting the long publication delay in journals, etc. The proceedings of our conferences will also be presented in the form of resource publications, as will articles based on our series of lectures, inquiry panels, and faculty seminars and forums.

In this first series of resource publications, we have included working papers by members and guests of our Institute Fellows "Round Table." Most of these working papers have been presented for discussion at one or more of the Fellows' seminar meetings, and have influenced our thinking about the nature of critical thinking as an educational goal.

The Institute welcomes suggestions for our resource publication series, as well as for our other activities. Correspondence may be addressed to Dr. Wendy Oxman-Michelli, Director, Institute for Critical Thinking, Montclair State College, Upper Montclair, NJ 07043.
Two Conflicting Theories of Knowledge, Learning, and Literacy: The Didactic and the Critical

Richard W. Paul

Most instructional practice in most academic institutions around the world presupposes a didactic theory of knowledge, learning, and literacy, ill-suited to the development of critical minds and literate persons. After a superficial exposure to reading, writing, and arithmetic, schooling is typically fragmented thereafter into more or less technical domains each with a large technical vocabulary and an extensive content or propositional base. Students memorize and reiterate domain-specific details. Teachers lecture and drill. Active integration of the students' daily non-academic experiences is rare. Little time is spent stimulating student questions. Students are not typically encouraged to doubt what they are told in the classroom or what is written in their texts. Students' personal points of view or philosophies of life are considered largely irrelevant to education. Classrooms with teachers talking and students listening are the rule. Dense and typically speedy coverage of content is typically followed by content-specific testing. Interdisciplinary synthesis is ordinarily viewed as a personal responsibility of the student and is not routinely tested. Technical specialization is considered the natural goal of schooling and correlated with getting a job. Few multi-logical issues or problems are discussed or assigned and even fewer teachers know how to conduct such discussions or assess student participation in them. Students are rarely expected to engage in dialogical or dialectical reasoning and few teachers are proficient analysts of such reasoning. Knowledge is viewed as verified intra-disciplinary propositions and well-supported intra-disciplinary theories. There is little or no discussion of the nature of prejudice of bias, little or no discussion of metacognition, little or no discussion of what a disciplined, self-directed mind or self-directed thought require. The student is expected to develop into a literate educated person through years of what is essentially content memorization and ritual performance.

The above dominant pattern of academic instruction and learning is based on an uncritical theory of knowledge, learning, and literacy that is coming under increasing critique by those whose concern is instruction fitted to new interpretations of the emerging economic and social conditions as well as to changing conditions for human survival.

Now let us set out the two opposing theories systematically in terms of specific contrasting assumptions.
1. That the fundamental need of students is to be taught more or less directly what to think, not how to think. That students will learn how to think if they can only get into their heads what to think.

2. That knowledge is independent of the thinking that generates, organizes, and applies it.

2. That all knowledge or "content" is generated, organized, applied, analysed, synthesized, and assessed by thinking; that gaining knowledge is unintelligible without engagement in such thinking. (It is not assumed that one can think without something, some content, to think about, nor that all content is equally significant and useful.)
3. That an educated literate person is fundamentally a repository of content analogous to encyclopedia or a data bank, directly comparing situations in the world with "facts" that he or she carries about fully formed as a result of an absorptive process. That an educated literate person is fundamentally a true believer, that is, a possessor of truth, and therefore claims much knowledge.

4. That knowledge, truth, and understanding can be transmitted from one person to another by verbal statements in the form of lectures or didactic teaching.

4. That knowledge and truth can rarely, and insight never, be transmitted from one person to another by the transmitter's verbal statements alone. That one person cannot directly give another what he has learned: one can only facilitate the conditions under which people learn for themselves by figuring out or thinking things through.
5. That students do not need to be taught skills of listening in order to learn from others, they only need to learn to pay attention and this is fundamentally a matter of self-discipline achieved through will power. Students should therefore be able to do so on command by the teacher.

5. That students need to be taught how to listen critically: an active and skilled process that can be learned by degrees with various levels of proficiency. Learning what another person means by what he says requires questioning, trying on, testing, hence engaging in public or private dialogue with him or her, and this involves critical thinking skills.

6. That the basic skills of reading and writing can be taught without emphasis on higher-order critical thinking skills.

6. That the basic skills of reading and writing are inferential skills that require critical thinking, that students who do not learn to read and write critically are defective readers and writers, and that critical reading and writing involve dialogical processes in which probing critical questions are raised and answered. (What is the fundamental issue? What reasons, what evidence is relevant to this issue? Is this source or authority credible? Are these reasons adequate? Is this evidence accurate and sufficient? Does this contradict that? Does this conclusion follow? Is another point of view relevant to consider?)
The Scholastically Dominant
Theory of Knowledge, Learning,
and Literacy assumes:

7. That students who have no
questions typically are learning well
while students with a lot of
questions are experiencing difficulty
in learning, that doubt and
questioning weaken belief.

The Emerging Critical Theory of
Knowledge, Learning and Literacy
assumes:

7. That students who have no questions
typically are not learning—while having pointed
and specific questions, on the other hand, is a
significant sign of learning. Doubt and
questioning, by deepening understanding,
strengthen belief by putting it on more solid
ground.

9. That quiet classes with little
student talk are typically reflective of
students learning while classes with a
lot of student talk are typically
disadvantaged in learning.

8. That quiet classes with little student talk
are typically classes with little learning while
student talk, focused on live issues is a sign of
learning (provided students learn dialogical
and dialectical skills)
9. That knowledge and truth can typically be learned best by being broken down into elements - the elements into sub-elements - each taught sequentially and atomically. Knowledge is additive.

9. That knowledge and truth is heavily systemic and/or holistic and can be learned only by many on-going acts of synthesis, many goings back and forth between wholes and parts, tentative graspings of a whole guiding us in understanding its parts, periodic focusings on the parts (in relation to each other) shedding light upon the whole, and that the wholes that we learn have important relations to other wholes as well as to their own parts and hence need to be frequently canvassed in learning any given whole. (This assumption has the implication that we cannot achieve in-depth learning in any given domain of knowledge unless the process of grasping that domain involves active consideration of its relation to other domains of knowledge.) That each learner creates knowledge.

10. That people can gain significant knowledge without seeking or valuing it, and hence that education can take place without a significant transformation of values for the learner.

10. That the people gain only the knowledge that they seek and value. All other learning is superficial an/or transitory. All genuine education transforms the basic values of the person educated, resulting in persons becoming life-long learners and rational persons.
The Scholastically Dominant Theory of Knowledge, Learning, and Literacy assumes:

11. That understanding the mind and how it functions, its epistemological health and pathology, are not important or necessary parts of learning. To learn the basic subject matter of the schools one need not focus on such matters, except perhaps with certain disadvantaged learners.

12. That ignorance is a vacuum or simple lack, and that students prejudices, biases, misconceptions, and ignorance are automatically replaced by their being given knowledge.

The Emerging Critical Theory of Knowledge, Learning and Literacy assumes:

11. That understanding the mind and how it functions, its health and pathology, are important; are necessary parts of learning. To learn the basic subject matter of the schools in-depth requires that we gain some insight into how we as a thinker and learner are processing that subject matter.

12. That prejudices, biases, and misconceptions are built up through actively constructed inferences embedded in experience and must be broken down through a similar process, hence, that students must reason their way dialogically and dialectically out of their prejudices, biases, and misconceptions. Thus students need many opportunities to express their views in class no matter how biased and prejudiced those views might be and a non-threatening environment to argue their way out of their internalized misconceptions.
13. That students need not understand the rational ground or deeper logic of what they learn to absorb knowledge. Extensive but superficial learning can later be deepened.

13. That rational assent is an essential facet of all genuine learning and that an in-depth understanding of basic concepts and principles is an essential foundation for rational assent to non-foundational concepts and facts. That in-depth understanding of root concepts and principles should be used as organizers for learning within and across subject matter domains.

14. That it is more important to cover a great deal of knowledge or information superficially than a small amount in depth.

14. That it is more important to cover a small amount of knowledge or information in depth (deeply probing its foundation) than to cover a great deal of knowledge superficially.

15. That the roles of teacher and learner are distinct and should not be blurred.

15. That we learn best by teaching or explaining to others what we know, and so that students need lots of opportunities to teach what they know to others, to formulate their understandings in different ways, and to respond to diverse questions from other learners.
The Scholastically Dominant
Theory of Knowledge, Learning, and Literacy assumes:

16. That the teacher should correct the learner's ignorance by telling him what he doesn't know.

16. That the students need to learn to distinguish for themselves what they know from what they do not know. Much of what students are presently learning should be recognized by the students as content that they do not genuinely know or comprehend, but they have merely memorized. Self-directed recognition of ignorance is necessary to learning.

17. That the teacher has the fundamental responsibility for student learning.

17. That progressively, the student should be given increasing responsibility for his own learning. Students need to come to see that only they can learn for themselves and that they will not do so unless they actively and willingly engage themselves in the process.

18. That students will automatically transfer the knowledge that they learn in didactically taught courses to relevant real-life situations.

18. That most knowledge that students memorize in didactically taught courses is either forgotten or rendered "inert" by their mode of learning it, and that the most significant transfer is achieved by in-depth learning which focuses on experiences meaningful to the student and aims directly at transfer.

Richard Paul
Conflicting Theories
The Scholastically Dominant Theory of Knowledge, Learning, and Literacy assumes:

19. That the personal experience of the student has no essential role to play in education.

The Emerging Critical Theory of Knowledge, Learning and Literacy assumes:

19. That the personal experience of the student is essential to all schooling at all levels and in all subjects, that it is a crucial part of the content to be processed: applied, analyzed, synthesized, and assessed by the student.

20. That a student who can correctly answer questions, provide definitions, apply formulae while taking tests has proven his or her knowledge/understanding of those details.

20. That students can often provide correct answers, repeat definitions, and apply formulae while yet not understanding those questions, definitions, or formulae. That proof of knowledge/understanding is found in the students' ability to explain in their own words, with examples the meaning and significance of the knowledge, why it is so, and to spontaneously recall and use it when relevant.
21. That learning is essentially a private monological process in which learners can proceed more or less directly to established truth, under the guidance of an expert in such truth. The authoritative answers that the teacher has are the fundamental standards for assessing students' learning.

21. That learning is essentially a public, communal dialogical and dialectical process in which learners can only proceed indirectly to truth, with much zigging and zagging along the way, much back-tracking, misconception, self-contradiction, and frustration in the process. In this process authoritative answers are replaced by authoritative standards for engagement in the communal, dialogical process of enquiry.

Conclusion

Recognition of the need for a shift from a didactic to a critical theory of knowledge, learning, and literacy is growing daily as the research base for a critical theory expands. The traditional didactic theory is increasingly on the defensive. It has few official defenders. Nevertheless it is still deeply embedded in classroom instruction as well as in the minds of most teachers and administrators. Implementation of the critical theory of knowledge, learning, and literacy is merely beginning. Its full development around the world is probably 10 to 15 years into the future.

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