

# Intellectual Foundations: The Key Missing Piece in School Restructuring

*We require intellectual eyes to know withal, as bodily eyes for sight. We need both objects and organs intellectual; we cannot gain them without setting about it; we cannot gain them in our sleep, and by haphazard.*

— John Henry Cardinal Newman, 1852

Virtually all agree that the teaching and learning of students should enable them to effectively handle not only challenging intellectual content in the classroom but also challenging practical content in everyday life. Virtually all also agree that we need high intellectual standards — with all the components of education aligned to those standards — so that everything adds up in both the minds of the students and those of the teachers. Every dimension of schooling — curriculum, pedagogy, teacher inservice, school leadership, school vision, and long-term planning — should work together so that students have the best possible chance of raising themselves to a high level of personal, ethical, and intellectual performance, and so that teachers are keenly aware of how best to foster these high-level performances.

The quality of student learning is the key variable. Nothing else matters if quality learning is not taking place. And understanding what this means requires that we re-discover the importance of the “intellectual” dimension of student performance. We must come to recognize once again — as we did long ago in our dim educational past, before psychology became the dominant discipline in the design of instruction — that education requires doing intellectual work, developing intellectually, achieving intellectual quality, and having intellectual standards. These are ideas we must deeply re-discover, if we are truly concerned with substantive educational change.

For example, in a recent landmark analysis of successful school restructuring, based on four large-scale studies, Newmann and Wehlage conclude that the key to success is “the intellectual quality of student learning.” This they say requires that teachers have “a vision of high quality intellectual work” and explicit “teaching standards” which enable them to “gauge the intellectual quality of the pedagogy” they use.

But, consider, what does this word ‘intellectual’ really convey to most classroom teachers? Is it a word they are comfortable with? Do they think of themselves as being “intellectual?” And what would it take for the “average” teacher to develop a realistic vision of “intellectual work” and of “intellectual quality” in either student work or

pedagogy? Make no mistake; this is not a matter of giving teachers sample lessons to emulate. It is not a matter of giving teachers some new definitions of terms.

This is a matter that goes directly to how deeply teachers view education and to their own most deep-seated habits of thought. For example, if a discussion or presentation moves in an “intellectual” direction, many teachers complain of its being “too abstract, too theoretical” and hence “impractical”. Further conversation with them demonstrates that they think that all teachers need to be effective are techniques and tactics that can be directly communicated to them with little or no abstract reasoning or theoretical discussion. In other words, many teachers think that the abstract and theoretical is, by its very nature, impractical.

Hence, there is a low level of tolerance for intellectual discussion of any sort in the present atmosphere of K-12 education. As a result, there is a significant problem for anyone who seeks to move education away from its emphasis on classroom “techniques and tactics” and toward the “intellectual reasoning through of important content.”

What is more, “intellectuality” and its significance to learning and instruction cannot easily or briefly be understood or transmitted. There is a developmental process necessary here. To understand intellectual work, it is essential to understand reasoning as an intellectual process. To understand reasoning, in turn, it is essential to understand basic structures integral to it — for example, assumptions, inferences, and implications. And to understand these structures, it is essential to understand intellectual criteria crucial to the assessment of these structures in action. Finally, one understands all of this only by becoming intellectually disciplined oneself. This is not, of course, a matter of becoming an “intellectual” in some snobbish sense of the word.

For example, if we assign students an intellectually challenging task, and we are engaged in responding to their reasoning intellectually, we will have to aid them in the process of coming to terms with the intellectual structures implicit in their thought. Sometimes we will have to raise questions about the purpose or goal of the reasoning, sometimes about the question or problem at issue, sometimes about information or evidence in use, sometimes about inferences being made, sometimes about concepts implicit in the reasoning, sometimes about assumptions uncritically presupposed, sometimes about implications that may or may not follow, and sometimes about the point of view or points of view that are, or should be, involved. And we will need to do all of this in such a way as to help students appreciate the importance of being clear, accurate, precise, relevant, and logical, as well as being sensitive to the complexities inherent in the questions they are asking and broad-minded in seeking to think them through. Finally, as we probe the parts of reasoning intellectually, we also see those parts in dynamic interrelationship.

Nothing simple here. Sound intellectual judgment is involved in deciding which questions to ask, how to put the questions, and when to put them. To do this, teachers must themselves acquire an inner sense of the interrelationships that exist between

structures in reasoning and a clear sense of how to bring intellectual criteria to bear on them. Furthermore, they must be comfortable with the kind of inner dialogue that is typical in the mind of an intellectually oriented thinker:

“Let’s see, if we put the question this way, then we are bound to focus on this. Does that make sense? And if we interpret the information this way, then we are assuming that. Are we justified in doing so? And if we use this idea to organize the data, one implication will be . . . But is that implication consistent with the results we obtained when we . . .etc . . . etc . . . etc . . .”

But most teachers are not practiced in such dialogue, in such disciplined inward talking. They have not been trained in taking reasoning apart, constructing, or assessing it. Very often they are unaware of the structure of their own reasoning. They even at times appear to simply jump to conclusions with no discernable reasoning at all. They are not as a rule comfortable with abstract intellectual distinctions. In their own schooling they did not experience many “intellectual” exchanges (such as above). The moves one makes in such exchanges are not clear to them. For many of them reasoning is simply a series of assertions about a subject. When asked for their reasoning on a subject or issue, they are much more likely to say something like “I think this and I think that and I believe this and I believe that,” than they are to say, “My main conclusion is this based on these three reasons. I have reasoned to this conclusion from this point of view, assuming that and that. The data I base this on is this, and this, and that, which I obtained from this source. If I am on solid ground, then this and that should follow.”

Teachers are therefore often uncomfortable in an intellectual discussion. Most, for example, are not clear about what an assumption, inference, or implication is, and when they attempt to explain them, their explanations are often vague and/or highly confused. So they are not likely to use them in discussions or in their teaching or in their personal reflections. The result is that most teachers would have difficulty modeling careful reasoning for their students. That is, they would have difficulty role-playing a reasoner engaged in scrutinizing the structure of her own (or someone else’s) reasoning and bringing intellectual standards to bear on it.

I am arguing that the general distaste of many teachers for intellectual presentations is a sign of a very serious problem in education today. It means that most teachers are unlikely to assign serious intellectual work to their students, or, given a significant intellectual task to assign (made up by someone else), they are likely to have difficulty explaining intellectual standards appropriate to the doing and assessing of the task. They will not grasp the (intellectual) moves to make in coaching the students through the task. Furthermore, for similar reasons, they are unlikely to understand how to cultivate their student’s intellectual development in general. They are unlikely to be able to distinguish genuine intellectual quality from pseudo intellectual quality. For example, an articulate and amusing but poorly reasoned essay on a significant topic is likely to seem better work to them than a well-reasoned but un-flashy essay. And more, they will lack the (abstract theoretical) perspective necessary to make (intellectual) connections between subjects. Hence, when they use “themes” to organize their teaching they are

more likely to use superficial connections (a unit on “bunnies”) rather than to focus on an important interdisciplinary issue (How does money affect our lives, for good and ill?).

One of the ways to grasp the shift that occurs in thinking when one begins to discipline one’s thinking intellectually is to look at how questions might be clustered in accordance with the various intellectual jobs they do. In the sidebar below, I have grouped and illustrated questions by their basic intellectual functions. You will note that they are not organized around the categories of Bloom’s Taxonomy. You will also note that most teachers have not learned to think of questions in this way. They are therefore unlikely to call attention to these important dimensions in thought. And without these understandings, they will develop little skill in intellectually based pedagogies such as Socratic Questioning.

### Questions of Clarification

- What do you mean by \_\_\_\_\_? • Could you give me an example?
- What is your main point? • Would this be an example: \_\_\_\_\_?
- How does \_\_\_\_\_ relate to \_\_\_\_\_? • Could you explain that further?
- Could you put that another way? • Would you say more about that?
- Is your basic point \_\_\_\_\_ or \_\_\_\_\_? • Why do you say that?
- What do you think is the main issue here?
- Let me see if I understand you; do you mean \_\_\_\_\_ or \_\_\_\_\_?
- How does this relate to our discussion (problem, issue)?
- What do you think John meant by his remark? What did you take John to mean?
- Jack, would you summarize in your own words what Jill has said? ... Jill, is that what you meant?

### Questions that Probe Assumptions

- What are you assuming?
- What is Karen assuming?
- What could we assume instead?

(See *Why Students — and Teachers — Don’t Reason Well*, and *Critical Thinking: What Every Person Needs to Survive in A Rapidly Changing World*, by Richard Paul, Foundation for Critical Thinking: 1994.

- You seem to be assuming \_\_\_\_\_. Do I understand you correctly?
- All of your reasoning depends on the idea that \_\_\_\_\_. Why have you based your reasoning on \_\_\_\_\_ rather than \_\_\_\_\_?
- You seem to be assuming \_\_\_\_\_. How would you justify taking this for granted?
- Is it always the case? Why do you think the assumption holds here?
- Why would someone make this assumption?

## Questions that Probe Reasons and Evidence

- Could you give us an example of that? • Are these reasons adequate?
- How do you know? • Why did you say that?
- Why do you think that is true? • What led you to that belief?
- Do you have any evidence for that? • How does that apply to this case?
- What difference does that make? • What would change your mind?
- What are your reasons for saying that?
- What other information do we need?
- Could you explain your reasons to us?
- But is that good evidence to believe that?
- Is there reason to doubt that evidence?
- Who is in a position to know if that is so?
- What would you say to someone who said \_\_\_\_\_?
- Can someone else give evidence to support that response?
- By what reasoning did you come to that conclusion?
- How could we find out whether that is true?

## Questions About Viewpoints or Perspectives

- You seem to be approaching this issue from \_\_\_\_\_ perspective. Why have you chosen this rather than that perspective?
- How would other groups/types of people respond? Why? What would influence them?
- How could you answer the objection that \_\_\_\_\_ would make?
- What might someone who believed \_\_\_\_ think?
- Can/did anyone see this another way?
- What would someone who disagrees say?
- What is an alternative?
- How are Ken's and Roxanne's ideas alike? Different?

## Questions that Probe Implications and Consequences

- What are you implying by that?
- When you say \_\_\_\_\_, are you implying \_\_\_\_\_?
- But if that happened, what else would happen as a result? Why?
- What effect would that have?
- Would that necessarily happen or only probably happen?
- If this and this are the case, then what else must also be true?

These are some of the kinds of questions that one raises when one understands the interrelated structures implicit in human reasoning. When they are appropriately asked (using sound judgment), they enable us to work intellectually: to take thinking apart, put it together, and assess it. They are, therefore, deeply intertwined with understanding questions based on intellectual standards: Was that clear? Is that accurate? Are we

being precise enough? Is that relevant to the question? Is that logical? Are we dealing with the complexities of the question (depth of thinking)? Do we need to consider some other points of view (broad-mindedness)?

Recognizing the relevance of intellectual considerations is, of course, highly dependent on our overall vision of education and whether or not we recognize the relevance of intellectual discipline. That intellectual discipline is intrinsic to intellectual development is itself not well understood by most teachers I have worked with.

## **Reculturing Schools**

To be successful in educational reform and restructuring, it is not enough to develop challenging curriculum and instruction on paper. It is not enough to ask teachers to provide more opportunities for critical thinking and inquiry-based learning. We must commit long-term resources to what Michael G. Fullan called “reculturing” schools. As he put it in a recent issue of the Phi Delta Kappan:

“Reculturing refers to the process of developing new values, beliefs, and norms. For systemic reform it involves building new conceptions about instruction . . . To put it bluntly, existing school cultures and structures are antithetical to the kinds of activities envisioned by systemic reform...What is at stake here is a fundamental redefinition of teachers and professionals that includes radical changes in teacher preparation, in the design and culture of schools, and in teachers’ day-to-day role . . . you cannot improve student learning for all or most students without improving teacher learning for all or most teachers.”

The process of school restructuring is not only complex, but if Fullan and I are correct, must of necessity be long-range and time-consuming. Genuine intellectual community — with teachers reading books that are intellectually significant and relevant to educational reform (like Stephen Covey’s *Seven Habits of Highly Effective People*, or Robert Reich’s *The Work of Nations*, or Mortimer Adler’s *How To Read A Book*, for example), and then discussing the application of the ideas that they are reading about to instruction (in intellectually disciplined discussions) — is not something that will emerge overnight. Long-range change requires long-range planning and many of the steps along the way are going to be unpredictable and non-linear in nature.

## **A Powerful Mission Statement Is Essential**

One of the most effective tools in long-range reform is a school mission statement with teeth. The mission statement should not read like a list of vacuous platitudes, but as a deeply integrated vision of basic principles and insights, each elaborated in a gloss accompanying the mission statement. Here is an example from the projected “National Coalition For Principle-based Education NCPE”:

The National Coalition for Principle-Based Education is conceived as a national network of schools, organizations, leading educators, business persons, and civic leaders

committed to the integration of personal, ethical, and intellectual development through principle-based teaching and learning and intellectually-based structure and standards. All students will be approached as thinkers and persons capable of unlimited development. The thinking and intellectual development of the teacher will be systematically nurtured by fostering intellectual community. All subjects will be taught as modes of thinking: history as historical thinking, science as scientific thinking, math as mathematical thinking . . . All instruction will highlight the modeling of disciplined thinking, the engagement in intellectual tasks, and systematic self-assessment. All students will be held responsible for their own learning.

Basic personal and ethical principles will be used as the basis for personal and ethical development. Critical thinking principles will be used as the basis for intellectual development. Instruction will highlight the power of questions in driving and disciplining thinking.

All pedagogy will focus on deep understanding. Socratic questioning will be a major instructional strategy. Students will learn how to put and pursue questions and problems, how to broker solutions, and how to work with abstractions and theoretical systems. Psychology will be relegated to its proper secondary role – as the oil, not the machinery of education. Students will read, write, and talk their way through all subjects, learning how to internalize new systems of thought. Computer usage will be a major tool for intellectual work.

Ethical reasoning will be taught with the same intellectual discipline as historical, sociological, or literary reasoning. In all instruction, the personal, the ethical, and the intellectual will be deeply integrated. Students will be expected to monitor their own development as persons, and, as thinkers, to become literate in both the cognitive and affective dimensions of their minds. The coalition will work with the NCECT, The Center for Critical Thinking and Moral Critique, The Covey Leadership Center, and other organizations committed to the goals of the coalition.

### **Each Teacher Writes a Personal Mission Statement**

Each teacher is asked to write a personal mission statement. By the teachers individually and collectively writing mission statements, intellectual community is fostered and deep thinking is encouraged about the nature and purpose of education.

### **Strong Intellectual Leadership is Required for the Process to Succeed**

But what if this process misfires — as it easily may. Suppose teachers write mission statements that place little or no emphasis on the intellectual, on disciplined reasoning, on . . . Suppose they do not recognize the present atmosphere as problematic. Suppose they see no basic problem in their own reasoning abilities. Suppose they consider articles such as this one to be “too intellectual, abstract, and theoretical” and, therefore, “not useful”. Suppose they continue to look for basic solutions in some new array of

psychologically based techniques and tactics. In this case, very strong intellectual leadership will be required.

Such leadership must not be coercive and resort to power, but it must nevertheless be powerfully reasoned through. It must make the necessary case for intellectually founded education in a multitude of ways. It must patiently model disciplined reasoning, while recognizing that its value will not be immediately recognized. It must, among other things, make the case for inservice that intellectually challenges teachers and administrators, that fosters their intellectual growth. For example, consider the need to develop a community-wide recognition of the need for intellectual discipline.

That intellectual discipline is intrinsic to intellectual development is itself not well understood by many teachers I have worked with. I am not referring here to the more or less commonplace recognition that virtually all forms of self-development require discipline of some sort. Most teachers recognize that skilled dancers, tennis players, scientists, engineers, and carpenters — all submit to a discipline in their special field. But most teachers do not recognize that to develop intellectually, broadly speaking, requires a special kind of inward intellectual discipline — not the discipline that is restricted to one domain of thinking, but the kind of discipline that one can carry into every domain of thinking. Most teachers do not recognize that students need to develop habits of thought that are not restricted to one subject domain, that they need to learn to think of themselves as subject to intellectual requirements inherent in the task they are seeking to accomplish (intellectually). Let me clarify this.

Whenever you use your mind to try to figure something out, explicitly or implicitly, you are focusing on a question. Any clearly formulated question imposes demands or requirements on the person who wants to settle the question. If I raise a mathematical question then there are mathematical requirements that I must meet to answer the question appropriately. If I raise a scientific question, then there are demands implicit in the concept and process of scientific inquiry. If I raise a moral question, then I am bound to respect moral principles in my reasoning. I must consider morally relevant evidence. I must be accurate in my characterizations. I must enter sympathetically into all relevant moral points of view inherent in the question I have set myself. As I become intellectually disciplined, I come to seek out and routinely impose requirements and limitations on my own thinking. Most students do not recognize this. Most teachers do not teach for this recognition.

If I am a disciplined thinker, I realize that I have no intellectual right to answer a question in any way that pleases me. By regularly reviewing in my mind the precise question I am asking and what that question requires of me, I regularly impose the discipline of those requirements on myself. I willingly submit to those requirements not because I like to constrict myself and make things more difficult, but precisely because I recognize that I can settle the question in no other way. This disciplined process becomes for the conscientious reasoner a matter of intellectual honesty, intellectual responsibility, and intellectual realism. How many of our teachers have a clear sense of this discipline and



how to teach for it? As a leader fostering long-range development I would have to facilitate this recognition over time.

I would have to recognize that part of the problem lies in the fact that focusing on the intellectual goes against the grain of our times. We do not live at a time in which most people are receptive to intellectual discipline. We do not live at a time in which most people are willing to accept intellectual standards or use them in their thinking. We live, rather, in an age of rampant subjectivity, in which people think they have a natural right to think or believe whatever they want, irrespective of evidence, knowledge, or quality of reasoning. People often say and believe just what they want to say and believe, whatever feels good, strokes their ego, or is commonly accepted. If it sounds good or looks good, then it is good. "If I believe it, then it is true for me." "Don't I have a right to my own opinion?" "Isn't my opinion as good as anyone else's?" "Who's to say what is right and wrong?" We have our work cut out for us.

### *Conclusion*

The intellectual dimension of school reform is the dimension of reform that has been given the least attention thus far. Most reform and restructuring efforts ignore it entirely. When it is touched upon, it is usually uncritically assumed that teachers are more or less prepared to deal with the "intellectual" dimension of learning. Nothing could be further from the truth.

Newmann and Wehlage are, unquestionably right. Student learning is the crucial test of school reform efforts. Student learning does depend on "intellectual quality," on teachers having "a vision of high quality intellectual work", on their being able to "gauge the intellectual quality of the pedagogy" they use. But, saying this is not enough, a very real and deep problem remains. How are we to develop the leadership to focus on this problem in a serious way. Precisely because it is a deep problem entails that it is unlikely that it will be significantly dealt with.

The word 'intellectual' is not a friendly word for most teachers. It doesn't play much of a role in most of today's classrooms. It is not a common word for teachers (or administrators) to use. It represents training and discipline for the mind that is rare for teacher, administrator, or student. It will not be an easy sell in Peoria, Tuscaloosa, or Tupelo. So, we must ask ourselves: Are we ready to bite the bullet? Are we ready to focus long-term inservice and staff development on such heady stuff as Socratic Questioning and the evaluation of reasoning — and face the ultimate dismissal phrase: "This is all too theoretical!" Or, "Shall we go around the reform merry-go-round a few more times looking for some of those elusive short cuts to educational quality?" — the strategies that do not require we take seriously such ugly, old-fashioned expressions as "intellectual work", "intellectual standards", and "intellectual discipline."

K-12 leadership, to be successful in this important endeavor must be local, unflappable, and long-suffering. It needs to meet the problem head-on, and probably take a lot of flak

(from those most anti-intellectual) for a long-term staff development plan of a sort very different from the usual: one that routinely challenges teachers intellectually. (Note that such inservice is very likely to be labeled by many teachers as “too theoretical,” “too abstract,” and “impractical”)

Let me close with a poignant thought from the past. Imagine for a moment that you and I are suddenly thrust back in time to a small Dublin church in 1852. From the pulpit we hear the clear ringing voice of the great 19th Century educator, John Henry Cardinal Newman, admonishing us with all his characteristic vigor and incisiveness:

“Do not say, the people must be educated when, after all, you only mean, amused, refreshed, soothed, put into good spirits and good humour, or kept from vicious excesses. I do not say that such amusements, such occupations of mind, are not a great gain; but they are not education . . . Education is a high word; it is the preparation for knowledge, and it is the imparting of knowledge in proportion to that preparation. We require intellectual eyes to know withal, as bodily eyes for sight. We need both objects and organs intellectual; we cannot gain them without setting about it; we cannot gain them in our sleep, and by haphazard.”