What Work Requires of Schools: Literacy and Control in Education for the "High-Perfomance Workplace"

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> In any term we can posit a world, in the sense that we can treat the world *in terms of* it, seeing all as emanations, near or far, of its light. Such reduction to a simplicity being technically reduction to a summarizing title or "God term," when we confront a simplicity we must forthwith ask what complexities are subsumed beneath it. (105)—Kenneth Burke, *A Grammar of Motives*

In the discourse of vocational education, especially that aimed toward adults, there is no more commonly invoked simplicity than the idea of literacy. In this essay I tease out some of the complexities of that idea within the changing discourse of vocational and workplace education. Note, for example, the meanings and powers granted to literacy in this representative passage from *The Bottom Line: Basic Skills in the Workplace*:

> No issue is as crucial to the future of America as illiteracy in the workplace. We simply cannot allow this nation to enter

the 21st century without a literate, skilled, flexible workforce. From individual businesses to entire industries, the effect of a workplace unprepared for an information-based, service oriented economy will be devastating. (19)

What does it mean, in these terms, to be illiterate? As the reference to an "information-based, service-oriented economy" makes clear, illiteracy is being defined as an inability to function within a particular network of production, a network that demands flexibility and skills and one that is crucial to the economic well-being of the country. Literacy is here defined, naturally, as an economic tool in service of business, industry, and nationalism.

In this essay, I look at two workplace educational initiatives (one national and one regional) predicated at least in part on this orientation to literacy. Starting in 1991, the U.S. Secretary of Labor's Committee for Achieving Necessary Skills (SCANS) began releasing a series of documents proposing broad educational reform centering around a list of "competencies" they presented as necessary to successful employment in the changing workplace. In 1992, Northwest Regional Educational Laboratories began a pilot project called *Northwest Workplace Basics (NWB) Curriculum Management and Assessment System* (hereafter *System*), providing a series of curricular and assessment tools designed to facilitate the teaching of similar "competencies." I am especially interested in how the lists of skills these documents provide act as definitions of literacy and thus become instruments of its transmission and measurement. SCANS has been especially influential, spurring dozens of local and national initiatives on education from primary through college levels.[1] NWB's *System* is directly tied to Adult Basic Education curricula emphasizing the teaching of their competencies.[2] Taken together, they are representative of what Diane Pullin refers to as "a movement unequalled since the founding of public vocational education in the

early part of this century" (32), and part of their newness, as I will argue, is the emphasis on lists of competencies.

These lists themselves do not explicitly introduce themselves as definitions of literacy. Indeed, the traditional definition of literacy—the ability to read and write—appears only as one aspect in these lists, basic skills in the NWB *System*. Instead, the lists present a series of personal characteristics and cognitive qualities—from self-esteem and leadership skills to organizing new information and listening—that make up (borrowing from the title of a crucial NWB source) "the essential skills employers want." These skills, though, are explicitly tied to what it means to be a literate American, as indicated above. Both SCANS and NWB explicitly link skills to national economic competitiveness, and both present elaborate and particular lists of those skills. Linking skills to competitiveness has a beguiling—in William Covino's terms, magical—logic to it, suggesting that training adults to function in "high-performance workplaces" (SCANS, *What Work Requires* 3) will serve several purposes, addressing individual needs to find good work, business needs to compete globally, and nationalistic goals to maintain international superiority and power.

At the level of the individual such learning could be argued as "student-centered" and take its place among a myriad of pedagogical principles and philosophies that carry that name; however, I want to argue that these new initiatives in large part use a student-centered rhetoric to promote a business-centered perspective. By examining SCANS documents and the NWB *System*, I demonstrate that the current concern with basic skills can be tied to an ongoing concern with control and with training students (in this case, adult students) to take their proper, and subordinate, place in the modern workforce. In particular, I examine the manipulation of the idea of literacy in this model of vocational education, a discourse in which the rhetoric of corporations, with a focus on profit, efficiency, and human capital, intersects with the romance of the classic literacy

narrative, in which students, by becoming literate, find employment and self-sufficiency and self-esteem. I argue that such an intersection creates literacy narratives in which the goals of adult learners are subordinated to business's bottom line (profit, that is, explicitly tied to the control of workers), and in which individual and community literacy narratives become less important than the narrative of national economic revitalization through a collective literacy.

After introducing these competencies, I examine four qualities that make them so effective rhetorically, so persuasive politically, and, in Burke's terms, so simple educationally: they appear as objective and measurable; they appear universal; they appear as agents of transformation; and they claim to erase cultural hierarchies. In their claim to erase cultural hierarchies, these lists describe a workplace devoid of status differences, in which teams of equals work together to produce high quality products and services, in which control of workers is unnecessary and non-existent. I argue that these "competencies" instead can be read as one aspect of sophisticated developments in control on the workplace; particularly when these initiatives are focused on disadvantaged students (in adult basic educational settings, for example), such an emphasis can be understood as preparing students for subordinate positions in the "high-performance workplace." My argument throughout is not that teachers of literacy should be unconcerned with the lives of work their students will face in the future (or already inhabit), but rather that we should always be critical of the mission statements we are asked to accept as our own educational agendas.

In her ethnography of a high school office training program, Linda Valli, following Paul Willis, notes three levels of institutional analysis: the official, "the formal purpose and goals of the institution," which "should never be mistaken for its real life"; the pragmatic, "the everyday practice . . . of institutional functionaries"; and the cultural, "the clients of the institution, who bring to the institution goals and practices and their own understandings and experiences of the social

world, their own expectations and ways of coping" (24). I am focused here on the official level of vocational education, as my interest is on the official process of defining literacy. Although this way of defining literacy does not determine the literacy enacted on the pragmatic and cultural levels, an analysis of the official level is necessary because these sorts of instruments of literacy inform a good many current debates about education and literacy. As James Paul Gee, Glynda Hull, and Colin Lankshear argue, "the 'world on paper' is important: how we think and write about the world has a great deal to do with how we act in it and thus, what it becomes in reality" (25).

The SCANS and NWB Lists

Since 1991, the Secretary's Commission for Achieving Necessary Skills has produced several documents detailing skills, policies needed to successfully enact them, and theoretical issues surrounding their recommendations. The first document, *What Work Requires of Schools*, introduces the skills, and subsequent documents detail relevance of these skills to workplaces, as well as the legal and political challenges to enacting these skills as part of a national workplace-related curriculum.

Based on questions asked hundreds of employers and thousands of employees, SCANS developed a highly ordered set of skills, divided into two areas, the competencies and the foundation (I will hereafter refer to both as SCANS skills), for families, schools, and workplaces to adhere to. The competencies include five categories, each with several subsets:

1. **Resources**: allocates time; allocates money; allocates material and facility resources; allocates human resources.

2. **Interpersonal**: participates as a member of a team; teaches others; serves clients/customers; exercises leadership; negotiates; works with cultural diversity.
3. **Information**: acquires and evaluates information; organizes and maintains information; interprets and communicates information; uses computers to process information.
4. **Systems**: understands systems; monitors and corrects performance; improves and designs systems.
5. **Technology**: selects technology; applies technology to task; maintain and troubleshoots technology.

Likewise, the foundation skills come in three categories, with several more subsets:

1. **Basic skills**: reading; writing; arithmetic; mathematics; listening; speaking.
2. **Thinking skills**: Creative thinking; decision making; problem solving; seeing things in the mind's eye; knowing how to learn; reasoning.
3. **Personal qualities**: responsibility; self-esteem; sociability; self-management; integrity/honesty. (*What Work Requires* xvii-xviii)

Each of these subsets includes elaborate explanation of how this skill operates in a job setting. "Seeing things in the mind's eye," for example, (a "thinking skill") has to do with the ability of a worker to organize and process "symbols, pictures, graphs, objects, and other information: for example, [the worker] sees a building from a blueprint, a system's operation from schematics" (*What Work Requires* C-2), and so forth. These skills appear as the necessary characteristics of America's 21st century worker, if America seeks to maintain global economic superiority. In a phrase reminiscent of E.D. Hirsch's

ambition, with his list of what all Americans should know, SCANS argues that these competencies will aid in "develop[ing] a better means of communication, a common vocabulary to guide the conversation between the business and school communities" (*What Work Requires* 5–6).

Like SCANS, the Northwest Workplace Basics *System* relies on a set of competencies and skills focused on employer needs. Designed for use by adult basic education programs in Oregon and Washington, the NWB *System* closely adapted competencies developed in *Workplace Basics: The Essential Skills Employers Want*. In its introduction to, and defense of, their *System*, the NWB designers excerpt a lengthy portion of that book, and then go on to present the following seven competencies "to reflect the needs of Northwest employers" (progress report 2, N. 1)[4]:

> **Learning to Learn**: Personal; Interpersonal; Cognitive.
> **Basic Skills**: Reading; Writing; Computation.
> **Communication:** Listening; Speaking.
> **Thinking Skills**: Problem Solving Skills; Higher Order Thinking Skills; Creative Thinking Skills.
> **Personal Management for the Job**: Self Esteem; Goal Setting-Motivation; Personal Development; Career Planning and Development; Life Skills.
> **Group Effectiveness**: Interpersonal; Negotiation; Teamwork.
> **Influence**: Organizational Effectiveness; Career Growth Within an Organization; Leadership.

Within each skill under each competency are several sub-skills, totaling to 125 components defining what it is that employers want. The NWB *System*, however, goes one step further than SCANS by providing specialized curriculum and assessment tools for use in teaching and measuring the competencies, for a total of three

weighty notebooks. I encountered this *System* in the fall and winter of 1992-93 as one of 10 Washington State adult basic education instructors chosen to implement it as part of the Washington Integrated Curriculum for Achieving Necessary Skills (I-CANS).[5]

"Real Things in the Real World": The Rhetoric of Literacy in the SCANS and NWB Lists

Any analysis of these lists must examine what makes them so rhetorically powerful. I argue here that their effectiveness is based in part on the creation of a literacy that seems to meet four central objectives: this literacy appears objective and measurable, universal, transformative, and able to erase cultural hierarchies. These objectives line up with cultural expectations about the function of education in the United States, so it is no surprise that such calls for reform have been widely answered.

Objective and Measurable

In the case of SCANS, by basing the skills on thousands of interviews with employers and employees, the commission appeals to the pre-existence of such a list; writing the list then becomes an act of discovery rather than one of creation. The authors of the NWB *System* make a similar claim. After starting with the skills from *Workplace Basics*, themselves based on extensive employer surveys, "both Oregon and Washington validated the competencies statewide. The project received approximately 415 validation surveys across the two states. Of the 415, 268 were from employers. The remainder came from government employees, educators, job trainers, and others" (progress report 2, N. 1). From these surveys, the NWB authors claim, "two missing competencies" were "uncovered"; even the language suggests the pre-existence of a list that must be scientifically discovered through surveys of experts, dug up like an archaeological find.

In addition, they claim the level of the competencies can be measured and tested. In *Learning a Living,* SCANS recommends that all students receive a document called the *Certification for Initial Mastery (CIM)* which would "contain information about courses taken, projects completed, and proficiency levels attained in each competency" (xix). The *CIM,* which they propose establishing at the eighth grade level, would be the equivalent of a resume, but would presumably give employers an accurate, and universally applicable, measure of the skill level of prospective employees: "The information would mean the same thing to everybody: this person has the SCANS workplace know-how noted here" (xix). Northwest Workplace Basics presents numerous assessment tools (diminutively referred to as "testlets")—from multiple choice questions to role-playing scenarios—designed to measure a student's competency level. By presenting several different measurement techniques to cover the range of competencies and sub-skills, NWB aspires to an objective measurement of a student's achievement. The testlets are divided up into appraisal, which determines the competencies a student needs to work on; pre- and post-tests, which determine a student's understanding of a competency before and after instruction; and certification testing "to verify what a learner has mastered" (1, N. 2). Taken together, the testlets promise to provide a broad and objective picture of a student's readiness to work.

Universal

SCANS and NWB also present their competencies as universally applicable for all people in all places. In a document called *Skills and Tasks for Jobs,* SCANS details the ways that each skill is used in different ways, with differing levels of complexity, by workers as diverse as a high level executive to an entry level machine operator. Writing, for example, is utilized at the highest level of complexity by an industry training specialist, who does everything from researching the training topic to "giv[ing] photocopied pages to the clerical staff

for the assembly and reproduction of the training manual" (2–56). At the lowest level of complexity, writing is utilized by the "Plastic Molding Machine Operator," who in documenting the failure of a machine records pertinent data and writes down conclusions. Thus, SCANS argues, everyone needs to learn the skills; they apply wherever paychecks are distributed.

The claim of universality also operates as a rhetorical device to persuade teachers, employers, administrators, and the public of the importance of implementing the policies behind the lists. SCANS, for example, maintains that the competencies play a part in every service and industry in the country:

> The competencies span the chasm between the worlds of schools and the workplace. They are the basis of the modern workforce dedicated to excellence. They are the hallmark of today's expert worker. And they lie behind every product and service offered on today's market—putting food on tables, travelers in rooms, airplane passengers at their destinations, patients in the operating room, and automobiles on the street. (*What Work Requires* 11)

The competencies, in other words, reflect the universal needs of business at all levels. And by making this connection, as the above quotation indicates, SCANS can make a case that these competencies will strengthen the link between "the worlds of schools and the workplace."

Transformative

At the same time, these lists present themselves as the agents of transformation. Businesses will become high-performance workplaces, schools will become more relevant and connected institutions of learning, and citizen-workers will become life-long learners. For example, in SCANS' vision of schools in the year 2000,

schools have taken the skills as the driving force behind their curricula, and the difference SCANS imagines this making demonstrates the alleged transformative power of their skills. Speaking from the vantage point of the year 2000, SCANS pictures institutions where

> [a]ll teachers, in all disciplines, are expected to incorporate [the SCANS skills] into their classwork . . . Students will find the content more relevant and challenging. Teachers will find their classes more attentive and interested. Employers and college officials will be delighted with the results because the curriculum will be tied to real things in the real world. (*What Work Requires* 21–22)

Embrace the skills, the commission suggests, and we will be safe: in their utopian vision of the year 2000, "students of all ages learn more per hour in schools of all sorts and workers earn more per hour on the job . . . our children are internationally competitive in math and science and, partly as a result, so are American goods and services" (*What Work Requires* 20).[6] Literacy, in the form of successful application of their model, transforms the learning and earning potential of individuals and the competitiveness of the United States.

Failure to teach, apply, and learn the skills, though, comes with the most severe of consequences. In an open letter to parents, employers, and educators that prefaces *What Work Requires of Schools*, the commission outlines the dire results of ignoring their list. Parents must emphasize SCANS at home by posting the competencies and talking about them with their children: "Unless you do," the commission warns, "your children are unlikely to earn a decent living" (vii). Employers ignore SCANS at their own risk: "If you do not develop a world class workforce, your business will inevitably be at risk" (viii). And educators have the greatest burden of potential failure on them: "If you do not [instill in students the perspectives on

results that the SCANS skills demand], you will be failing your students and your community as they try to adjust to the next century" (viii). All this adds up to the following premise (promise):

> A strong back, the willingness to work, and a high school diploma were once all that was needed to make a start in America. They are no longer. A well-developed mind, a passion to learn, and the ability to put knowledge to work are the new keys to the future of our young people, the success of our businesses, and the economic well-being of our nation. (*What Work Requires* 1)

Turn these around and the recommendations become threats, threats that parents and teachers will fail America's children, threats that businesses will go bankrupt, threats that the United States will lose economic superiority because its workers are not well-prepared for "high-performance workplaces."

As Glynda Hull has noted, workplace and vocational literacy programs "regularly take as a given that literacy is a requirement for everything and anticipates benefits from a literacy program, both for the worker and the company, that are numerous and wide-ranging, such as productivity, promotions, accuracy, on-time delivery, self-esteem, and job retention. There are almost no attempts at qualifying this rhetoric" ("Hearing Other Voices" 36–37). This rhetoric is fueled by the classic literacy narrative, in which transformation is the standard result of becoming literate. In vocational education, the transformation brought on by literacy is far-ranging. Individuals become more capable of finding and preserving jobs, they become more productive workers, companies are able to compete on the world stage, and the United States is able to maintain international economic superiority. The persuasive nature of this story means, as Glynda Hull points out, that the rhetoric of vocational education appeals not simply to "died-in-the-wool conservatives or right-

wingers" but also to "concerned teachers, committed literacy specialists, well-meaning business people, eager students, interested academics, progressive politicians, worried parents, and a host of others as well" ("Hearing Other Voices" 22). That appeal is directly tied to the transformational powers attached to literacy.[7]

Naturalizations of Cultural Hierarchies

Finally, in ways I argue are intimately connected with control, these competencies naturalize the institutional and power separation between workers and management. Richard Ohmann has argued that since the term "literacy" appeared in common usage in the late nineteenth century (as opposed to "illiterate," which had been in use much longer), it always operated as a way for the educated elite to maintain their cultural superiority in a seemingly objective manner:

> [The discourse of literacy] was a top-down discourse from the start, and its participants almost invariably took the underlying question to be: how can we keep the lower orders docile? . . . Once the lower orders came to be seen as masses and classes, the term "literacy" offered a handy way to conceptualize an attribute of theirs, which might be manipulated in one direction or the other for the stability of the social order and the prosperity and security of the people who counted. (677)

As a descriptive term, literacy is useful in distinguishing between classes; the competencies represent a particularly sophisticated method of promoting this separation at the same time that they disguise the very existence of hierarchical and power relations. One of the ways this occurs in the literature of competencies and skills, I have already noted, appears in the discussion of the "high performance workplace," which itself appears as an institution unfettered from bothersome hierarchies. But this erasure of hierarchies occurs most subtly in the ways that the curricular and

assessment documents, and the competencies themselves, include references to evolving forms of control in the workplace. As I will argue in the following section, the goals of the SCANS competencies and the testlets NWB attaches to them can be read as preparing workers to take their proper position in workplaces directed by simple, technical and bureaucratic control. In addition, these competencies promote a new method of control, one suggested by the calls for non-hierarchical, "high performance workplaces" in which workers take on for themselves the goals and successes of the company.

Control in the Competencies and the "Testlets"

In his history of workplace control in the United States, Richard Edwards describes a move from overt control—embodied in the relationship between worker and boss—to more covert forms of control—work dictated by technological forces or bureaucratic norms. Control becomes harder to link directly to the structure of business, shifting to technology and to the worker herself. The current trend in vocational education, I argue, works to evade notions of control through complicated descriptions of the "high-performance workplace" and the lists of skills workers need to be successful within that workplace. Control seemingly disappears as an issue on the job, as employees are handed more responsibility for decision making and provided more apparent autonomy.

Edwards presents the need to maximize productivity as central to understanding the organization of the work place in its many historical manifestations. Business and industry, he argues, must exercise adequate control over the labor force to ensure that they produce sufficient labor power to maximize profits, a process that Edwards claims "remains to be carried out in the workplace itself" (13). I read much of the current concern over vocational education— in the workplace, in community colleges, and in secondary schools— as a move to engage the dynamics of control beyond the workplace

itself, to enlist schools and educators, as well as industry, in the process of workplace control. In describing the formations this control has taken in the last 150 years, Edwards traces a movement from simple to structural, the latter having both a technical and a bureaucratic aspect. The current discourse of vocational education displays a concern with each level of control, but the language of high-performance workplaces and highly skilled workers present in the discourse, like the technical and bureaucratic control described by Edwards, seems to eliminate control as a job issue at all.

Edwards argues that simple control stems from the hierarchical nature of small, entrepreneurial enterprises, where one boss directs everyone. As businesses grew larger, this method remained in place with foremen and supervisors directing the work at each level, themselves directed from the top. Such a system, however, became unwieldy as the size of corporations grew. Workers rebelled against it, and as more and more layers appeared within corporations, efficiently exercising control through such structures became ineffective. And such a method of power became especially difficult to operate as workers began organizing in resistance to the growth of monopoly capitalism. As Roy Jacques points out, "unlike the foreman, the overseer, the 'gang boss,' the office in the new industrial army had to become proficient in coaxing and persuading. . . it was clear that the traditional system of physical punishment and coercion was out of place in the new order" (88).

Simple control's insufficiencies, Edwards argues, were addressed by technical and bureaucratic control, which he claims tend to make power "invisible in the structure of work" (110). These two forms, I want to suggest, particularly bureaucratic, exist implicitly in many of the NWB and SCANS competencies. Technical control operates by basing production on technologies that control the labor process. Pacing and direction are determined by technology, shifting the conflict from boss (as under simple control) to machine. Technical control operates through the machine, which manages, monitors, and

measures output, production, skill, and so forth. This coincides with what Jacques argues was a shift from an organization centered on workers to one centered on numbers and statistics: "Quantification implied a shift of knowledge (and thus authority) from the worker to the expert. It resulted in exteriorization of knowledge; it no longer resided in the worker, but in tables and slide rules which could be controlled differently" (106). This in turn facilitates a bureaucratic control, which "establishes the impersonal force of 'company rules' or 'company policy'" as its basis (Edwards 131). Workers receive intricate job descriptions and must learn the corporation's complicated sets of rules, thus making explicit "what the worker is supposed to do while at work" (Edwards 136). Bureaucratic control makes the behavior of workers more predictable and offers a useful way to define the qualities of a "good" employee. Edwards cites three behaviors which bureaucratic control rewards: rules orientation, "an awareness of the rules and a sustained propensity to follow them" (149); dependability and reliability ("one who works diligently within the rules of a normal situation . . . and who carries on in the spirit of the job description in situations where the rules do not quite apply" (150)); and the "internalization of the enterprise's goals and values" (150). Like technical control, bureaucratic control distances power from a supervisor, who acts only to enforce already existing rules; "power appear[s] to emanate from the formal organization itself" (145).

Edwards never addresses the notion that such efforts at control might not succeed in achieving the desired invisibility. As Linda Valli notes, attention to the culture of work suggests that bureaucratic control can fail in making power "invisible" in the workplace. While one insurance firm she studied "seemed to employ the most rigid form of bureaucratic control of any of the organizations I observed," workers there blamed not the company policies, but the supervisors, "for the strain, pressure, and demands under which they worked" (164). But Edwards' analysis helps foreground the ways that modes

of control have become increasingly more covert. In fact, a seeming lack of control operates as one of the hallmarks of the so-called "high-performance workplace," itself a central trope in most calls for vocational education reform. SCANS describes these new workplaces as "a model for a successful future. In this new environment, work is problem-oriented, flexible, and organized in teams; labor is not a cost but an investment" (*What Work Requires* 3). Anthony Carnevale, one of the authors of *Workplace Basics*, describes the "high performance work system" as one with the following characteristics:

> employees are involved, not passive . . . employees work face-to-face . . . spending most of the time interacting with co-workers or customers . . . workers are more autonomous in order to exploit more flexible work structures and technologies . . . work is more social, organized into teams and general community of practice . . . Everyone understands his or her role in the broader context of the entire work process from product design to customer, as well as the organization's strategy and vision. Everyone is responsible for the quality of the final product or service. (195, 240–42)

In such a vision, control is non-existent; employees take responsibility for everything in a near utopia of autonomy and teamwork and employers seem altogether absent, perhaps just more team players. On the surface, this could be a description of a worker-owned cooperative, in which workers are motivated in part by being direct beneficiaries of the profit. SCANS and Carnevale, however, are not describing worker-owned cooperatives. They are more likely describing firms that Richard Lakes describes as "hierarchical and privatized, run by corporate elites as self-defined oligarchies." In firms like these, Lakes argues, "high-performance workplaces are top-down management strategies used solely to enhance efficiency and productivity of the firm" (110).

Still, the ideal of the high-performance workplace becomes the basis for a new definition of a "good worker," a definition which includes reference to earlier forms of control—simple, technical, and bureaucratic—but which extends one step beyond bureaucratic control by universalizing this ideal worker's characteristics. As part of this trend, the extensive list of skills is not specific for one job in one industry, like a job description under bureaucratic control, but interchangeable from job to job and workplace to workplace. As I shall examine below, the skill "learning to learn" in the NWB system becomes shorthand for measuring the adaptability of employees to shifts in job requirements or jobs. As befits an economy in which workers will presumably move from job to job several times over a lifetime, these skills are meant to prepare workers for successful adaptation to a variety of work settings. At the same time, the outlining of these skills allows business to take a more directive role in shaping educational curricula; that is, instead of focusing on the individual skills of a single trade in direct vocational training, schools can now concentrate—indeed, have the obligation to concentrate—on a wide range of skills that prepare students to take their proper role in the new high performance workplaces.[8] Setting educational agendas, then, becomes one way of addressing what Gee et al call "the *core dilemma* of the new capitalism: how to 'control' empowered 'partners' in the absence of visible, overt top-down power" (60). As they argue, texts promoting the "high-performance workplace" typically include "a strong emphasis on bringing about a change in schools and thereby changing the values and attitudes of tomorrow's workers" (31).

The need for business to directly influence the goals of schooling is, of course, nothing new. Harvey Graff identifies one of early industrialization's principal problems as "the organization and indoctrination of the workforce" (66). Literacy, Graff argues, was not a necessary condition for industrial development (in a commonly perceived causal relationship); rather, industrial development

required a particular kind of literate worker. Industry created new demands for education, calling for the development of workers in its own image:

> Literacy, then, constitutes a training in being trained. A person who in childhood has submitted to some process of disciplined and conscious learning is more likely to respond to further training, whether in an army, a factory, or in participatory activities. This training is the critical job preparation and the problem for industrial development; simultaneously it has been the first task of school and one critical use of literacy. (Graff 67)

In their history of schooling, SCANS presents a deterministic model of schooling that reinforces the notion that the proper role of education is to prepare students for the workplace. In the past, SCANS reports in *Learning a Living*, "[t]he schools did a magnificent job of turning out just the kind of product required. Workers needed enough education to read, write, and comprehend instructions. Above all they needed to follow instructions faithfully and show up for work reliably" (12). Now, however, "[t]he enemy is rigid insistence on a factory model of schooling" (xviii), in which students are viewed not as "workers in the learning enterprise" but "as buckets to be filled" (12–13). Crucially, this model of schooling is vilified not because it prepares students for the models of control on the workplace, but because the models it teaches are out-dated. SCANS argues for a change in education reflecting a dissolution of three old rules of American work, themselves connected to simple and technical forms of control: "Rule one was that the boss was always right. Rule two was that the employees did what they were told. And rule three was that companies should standardize production because profitability depended on producing more and selling it cheaply" (11). SCANS seems to claim that "the factory model of schooling"

was appropriate under former and less subtle methods of control, since it prepared students for their proper position. This is the only place where they directly link the purpose of education to forms of control, but their call for schools to reflect changing conditions of work implies that a primary purpose of schooling is preparing students for the modes of control in the workplaces of the day.

The competencies themselves are full of direct parallels to methods of control in the workplace. Not surprisingly, they do not contain many references to simple control (though the NWB system, as we shall see, includes some). Though simple control, according to SCANS, is outdated in a high performance workplace, technical and bureaucratic control remain a cornerstone, and the competencies reflect that. Technical control, as I noted earlier, has the effect of making the machine, rather than the supervisor, the determiner of work, from pacing to technical responsibility; instead of being told to do something, a worker is guided by the demands of technology. SCANS provides technology as a distinct competency, in which the worker is meant to achieve proficiency in the selection, application, and maintenance of technology. SCANS defines the skill "Selects Technology" as "Judges which set of procedures, tools, or machines, including computers and their programs, will produce the desired results" (*What Work Requires* B-2). In both the SCANS and NWB competencies, the reasoning for including "Basic Skills" includes frequent reference to an employee's ability to understand technology. Quoting from *Workplace Basics*, the NWB authors report that workers need basic skills for operating and relating to machinery. A lack of skills, they claim, will make employees liabilities to a company in ways primarily, though not exclusively, related to technical control: "Deficiencies in such basic workplace skills create barriers that impair an employer's ability to meet strategic goals and to be competitive. They are reflected in productivity decline, increased accident rates, costly production errors, and the inability to effect critical job retraining" (Competency

5, N. 1). Learning to use technologies competently, then, is important insofar as it enhances the goals and competitiveness of business.

But the competencies are most clearly related to bureaucratic control. As Edwards described it, bureaucratic control distances control even further from the employers and management by making work contingent on policies and rules. Instead of the supervisor, the job description spells out details, and critical here is the worker's internalization of what it means to be a good worker. Edwards describes the hallmarks of a "good" employee as rules orientation, dependability and reliability, and the internalization of a company's goals and policies. The competencies stress this most strongly, these skills presumably being (along with "learning to learn," which I will describe later) the most transferable from workplace to workplace.

"Personal Qualities" in SCANS and "Personal Management" in the NWB *System* are the competencies that most promote this vision of the "good" worker. In the NWB *System*, "Personal Management" is by far the most comprehensive competency, with four sub-skills and 43 categories, including, under the sub-skill "Personal Development," the ability to "Identify appropriate behaviors and attitudes for keeping a job, e.g. punctuality, respect for others, good grooming, self-control." In the SCANS list, a person demonstrating competency in the sub-skill "Responsibility" is one who

> Exerts a high level of effort and perseverance towards goal attainment. Works hard to become excellent at doing tasks by setting high standards, paying attention to detail, working well, and displaying a high level of concentration even when assigned an unpleasant task. Displays high levels of attendance, punctuality, enthusiasm, vitality, and optimism in approaching and completing tasks. (*What Work Requires* C-2) [9]

Certainly, a student or worker who displays mastery in "Personal Qualities" or "Personal Management" is one who, among other attributes, is well-prepared to meet the demands of bureaucratic control, in which an employee has fully internalized the goals of the company. This ideal worker will need almost no supervision, happily completing the most onerous tasks in a timely way and with "enthusiasm, vitality, and optimism." In these circumstances, management is almost completely effaced as a reality, and this is the naturalizing of cultural hierarchies at its most insidious. Employees do not produce because they have to, or because they are told to, or because they are paid to; they produce because they want to. Work is done in teams, with equals, committed fully to the company's nearly socialistic vision. Indeed, the "high performance workplace" can be seen as the logical extension of bureaucratic control, where workers are motivated by personal commitment to their work and to the quality of their company's product or services.

The preparation for control is even more explicit in the NWB testlets. Here, students seem to be assessed most closely in regards to bureaucratic control. In the testlet focusing on "Group Effectiveness: Negotiation" (N. 2), for example, the following question is notable for its complete focus on rules:

Read the following question and select the best answer:

2. Ann has been working for the State Forest Service for one year, and there are some things that she would like to change about her job. Which of the things is Ann most likely to change through negotiation with her supervisor?

a. Changing the week she will take vacation this year.
b. Being excused from wearing her Forest Service uniform on days that she is not working with the public.

c. Reporting directly to the head of the State Forest Service, instead of to her regular supervisor.

d. Selecting the crews that go out to put out fires.

The correct response for the test item #2 is as follows: The job requirement to wear a uniform and the organizational structure of the Forest Service are elements of the job that an employee of one year is not likely to change. The correct response is, therefore, "Changing the week she will take vacation this year."

Here, rules, unattached to any person, direct Ann's conduct, which is the hallmark of bureaucratic control. The role of the worker, and the conditions that guide her job, are completely separated from employee hierarchies within the workplace (except insofar as spelling out whom Ann should report to [c] and whom she has authority over [d]). This is a focus not on negotiation, as the curriculum claims, but on recognition of rules.

In the assessments for Critical Thinking, which NWB borrows from the Comprehensive Adult Student Assessment System (CASAS), students are asked to read the following policy in a test of their ability to "[i]dentify appropriate behavior, attitudes, and social interaction for keeping a job and getting a promotion"[10]:

If an employee is going to miss work due to sickness, the following procedure should be followed:

1. Notify your supervisor that you will absent.
2. Immediately upon your return to work, complete a sick leave form and return it to your supervisor for signature. Please note the number of hours missed and the reason.
3. Observance of this procedure is mandatory for insurance purposes.

Students are then asked to consider the case of John, who was sick today and did not notify his supervisor: "If you were John's supervisor, what would you do?" CASAS provides sample responses for four different levels. In the highest, a "4" response, the respondent asks John why he didn't notify the supervisor, "because procedure should be followed and is mandatory for insurance purposes" (9). CASAS provides this "2" response, suggesting that what they are really testing for is not understanding of workplace requirements, but English proficiency: "I think I should tell John, next time you didn't notify, you are got a big problem with the boss. That's not the way to do" (9). (The "1" response likewise parodies the speech of a speaker with limited English proficiency.) Though the focus in the question is on understanding company policy, and the correct answer involves the student commenting on the necessity of following procedure, the sample answers reveal a system which marks difficulties speaking English as failures to demonstrate competency, the implication being that "deficiencies" in language skills signal deficiencies in other areas as well. Moreover, the relationship of this question to anything resembling "Critical Thinking" is tenuous at best. Here, critical thinking is defined simply as an ability to interpret rules (as well as an ability to speak standard English in the first place). Crucially, in no case does "Critical Thinking" ask students to question conditions on the job, relationships between workers and between labor and management, or conditions of employment and power relationships in the United States.

Like "Critical Thinking," "Learning to Learn" is a competency whose actuality falls short of the ideals suggested in its name. In *Workplace Basics*, the source of NWB's list of competencies, Carnevale et al. wax at great length to define "Learning to Learn" as the *sine qua non* of the competencies, the foundation skill that prepares students and workers for a productive life. The key to success in this competency is making the process explicit:

Individuals begin to develop informal learning-to-learn strategies in infancy and may subconsciously continue to make marginal improvement in the skill throughout their lives. It is probable, however, that in the absence of explicit training in this fundamental skill, many will reach a learning process plateau. (37)

But what is "learning to learn"? Carnavale et al. quote various apparent tautologies in their attempts to pin down the concepts. One author states that "[l]earning how to learn involves possessing, or acquiring, the knowledge and skills to learn effectively in whatever learning situation one encounters" (Smith, quoted page 37). Another calls it "the crucial difference between what we call normal thought and creative thought" (Minsky, quoted page 40).[11] The authors of *Workplace Basics* claim historical lineage with Socrates, Benjamin Franklin, Arnold Toynbee, and John Dewey, but the application of the concept (in this acknowledged paraphrase from the NWB *System*) limits it rather severely by squeezing "learning to learn" into a palatable format for employers:

> From the employer's perspective, an employee who knows how to learn is more cost-effective because time and resources spent on training can be reduced. Employers recognize that long-term relationships with employees are the most cost-effective; therefore, employee ability to adapt to company needs through retraining programs becomes crucial as technology creates shifts in job market demand and job content. Employers see the skill of knowing how to learn as the key to retraining efforts. But most important, the employees who know how to learn can greatly assist an employer in meeting its strategic goals and competitive challenges, by more efficiently applying new knowledge to job duties and tasks. (Competency 3, N. 1)

A brief analysis of this passage makes clear the role NWB sees for adult learners. Of the five independent clauses, three have the employee in some role as the agent of the sentence, but the actual agency is qualified in every case. In the first sentence, agency has a role only "from the employer's perspective." Calling an employee "cost-effective" likewise orients the concern to the employer. In the other situations, employees have agency only as they are able to "adapt to company needs" or "can greatly assist an employer." Employers, though, "see" and "understand"; they are granted vision and insight and perspective. As such, they do not need to "learn how to learn." Instead, they need students who have learned that learning involves the subordination of their goals to an employer's needs. The "learning to learn" testlets, divided into personal, interpersonal, and cognitive, constantly ask students to visualize their future role in these terms:

> Imagine that you are a food server in a restaurant. You arrive at work for your shift just as the manager of the last shift of the day is leaving. This manager says to you on the way out the door, "Make sure to refill all the sugar containers for tomorrow." You say goodbye to the manager and then walk into the kitchen to get the sugar. You discover that there is no sugar anywhere to be found. What would you do next? (cognitive testlet, N. 2)

Other questions ask students to "Imagine that you are a secretary for three different middle managers" or "Imagine that you are a worker who pumps gas at a gas station." These questions, designed to test "cognitive" learning to learn skills, implicitly define learning to learn as the ability to solve a problem without causing a loss of business profit and image and without bothering the employer. More importantly, though, these questions ask students to explicitly imagine themselves in terms of their relation to authority. In each

question, the student must deal with an incapacity to adhere to the orders of a boss; the cognitive challenge and demonstration of her learning to learn ability is handling the situation in such a way that minimizes impact on the business and employer, and maximizes her reputation as a hard-working and loyal employee (supposedly increasing her job security). Students successfully answer this question when they accept as natural their responsibility to refill the sugar container, because they were ordered to do so by a manager, even though there is "no sugar anywhere."[12]

Thus stated, "learning to learn" sounds remarkably like Graff's "training in being trained." Students need to know how to work out a problem in the workplace to suit the employer's bottom line. Knowing how to do that will ensure students a secure position with a regular income. In fact, Graff challenges the notion that this type of training has anything to do with cognitive goals: "it is precisely the non-cognitive functions of schooling which most directly relate to the creation of a workforce acceptable to modern industrial capitalism" (178). Though Graff's study applies here to nineteenth century Canada, I want to argue that it is these non-cognitive functions that are emphasized in NWB's "learning to learn." Students here are trained to imagine themselves in a subservient position; as Ohmann argues, that is a fundamental purpose of such literacy education. In the NWB system, this takes shape as lessons in which docility is the only reasonable alternative, in which the "prosperity and security" of employers and the United States economy becomes the natural goal of learners and teachers.

William Covino notes that SCANS "is remarkable for its encouragement of conformity and cooperation, identification of the individual with automatistic functions, abbreviation of complex processes into simple directives, and inattention to critical thinking" (112). One of the beguiling features of both sets of competencies, which Covino calls "official magic ritual formulas," is their relationship to seemingly natural forms of control in the workplace.

My intention is not to argue a conspiracy of capitalists set out to turn entry-level workers into brainwashed robots; as I have noted, these competencies, in conjunction with workplace literacy programs, have a wide appeal that crosses political, economic, and social differences. Instead, I want to argue that the very appeal of these competencies is the common-sense aspect of equity they portray. They seem to represent an attempt to help, to make students employable, and I am not questioning the sincerity of the authors or the teachers or the business leaders who seek to implement these competencies. My goal is to highlight the ways that these competencies, like sophisticated forms of control, reinforce hierarchies by seeming to do away with them all together, and the ways that these competencies train students to enter a workplace prepared to take their appropriate position in that murky hierarchy.

Conclusion

Most of the SCANS materials open with a disclaimer meant to put readers like me at ease. SCANS, they assure us, recognizes that education is more than just about learning to make a living: "A solid education is its own reward," they claim, and this attends to the development of the whole human being. Their focus is on only one aspect of education: "We do not want to be misinterpreted. We are not calling for a narrow work-focused education. Our future demands more" (*What Work Requires* v). At the same time, they urge that teachers in all subjects strive to incorporate SCANS skills consciously into their curricula, and they advocate a nationally standardized assessment form to measure students' achievement of the skills, which can be used as a kind of resume for future employment. Combined with the fact that the government is not putting together high level commissions directed at other functions of education (producing an active and engaged citizenry, for example), their disclaimer seems somewhat disingenuous. But the sincerity of the authors is not the question, really; as I have noted, I

assume that SCANS and other projects like it actively promote a reform they believe to be in the best interests of students, workers and businesses. Instead, I see such a disclaimer as in part relying on another traditional equation in discussions of literacy, one which places the economic functions of literacy training as a prerequisite to, and thus a priority over, other uses.

Kenneth Levine's history of the term "functional literacy," which examines ways in which the term became primarily associated with work, highlights the prioritizing of economic issues in defining literacy. According to Levine, "functional literacy" first appeared during World War II, when the United States government became alarmed at the inability of soldiers to carry out military tasks and functions. In 1947, the U.S. Bureau of the Census used the term in reference to people with a fifth grade education or less. UNESCO then took on the term as part of its international project for literacy, claiming that the "skills of reading and writing are not, however, an end in themselves. Rather they are the essential means to the achievement of a fuller and more creative life" (UNESCO 1949, qtd. in Levine 27). Literacy was linked to increased productivity and development, but the definition itself remained apart from work as late as 1956, when W.S. Gray defined a functionally literate person as one who could "engage in all those activities in which literacy is normally assumed in his culture or group" (qtd. in Levine 28). By 1964, however, Levine indicates that UNESCO had begun defining functional literacy in ways that highlighted its relation to work and employability. According to the final report of the 1965 Tehran World Conference of Ministers of Education on the Eradication of Illiteracy, "reading and writing should not only lead to elementary general knowledge but to training for work, increased productivity, a greater participation in civil [sic] life and a better understanding of the surrounding world, and should ultimately open the way to basic human culture" (UNESCO 1976, qtd. in Levine 31–32). In other words, functional literacy operated to enhance individuals and

cultures by first focusing on employment. In the United States, functional literacy became directly attached to the skills needed to get and hold a job. Kenneth Levine summarizes this as such:

> functional literacy was at an early stage adopted by parties in a series of political arenas, military, educational, and diplomatic, who needed a label for their convictions regarding the economic potential of, and justification for, mass training for adults in basic literacy skills. In the course of the extended battle for resources, "How basic?" was converted into an economic rather than an educational issue, while the original idealism underpinning the quest for universal literacy was itself transformed into an ideology about the bases of cultural modernity and the contemporary prerequisites of citizenship and employability. (35)

In a hierarchy of sorts, work skills became a necessary prerequisite for literacy that would lead to general individual and cultural improvement. In such a relationship, literacy still remains the "god term," to return to Burke's notion; work skills become a link in the connection of literacy to the improvement of the individual.

Rhetorically, perhaps the most effective response to these initiatives is to point out the complete lack of evidence that they are effective. To do this, of course, requires that the discussions move from the official to the cultural, from abstractions about "what employers want" to details about actual workplace practices. Charles Darrah remarks that this movement from the official to the cultural is notably absent in discussions of skills that future workers will need: "Expert interviews, survey instruments, and various 'round table' discussions are the methods used to elicit this information. Largely missing are observational studies that incorporate the understandings of the people who actually perform the work" (264). It's easy to see why commissions like SCANS and NWB would resist turning to

observational studies, since most of the ones that exist tend to demonstrate shortcomings and gaps in their utopian vision. Moving definitions of literacy into actual cultural realms almost invariably challenges broad generalizations about its form and consequences.

In an ethnography of a wire and cable shop-floor, for example, Darrah challenges the idea that general skills can be claimed as applicable in specific job settings. He notes that each machine operator handled such tasks as troubleshooting and machine adjustment in a unique way, suggesting that there is not one "skill" that can cover the process: "most operators lack numerous 'required' skills, yet they develop into valued and competent operators" (267). Sheryl Gowen argues that in the worksites she studied, workers, regardless of the claims of management,

> did not believe reading and writing text were necessary for completing tasks or for training new workers. They considered the best ways to learn to be through observation and practice, and they valued knowledge that was learned through action more highly than knowledge obtained from print. Writing text was a bother rather then a help in communicating. And they believed the text that management generated was often unnecessary, inaccurate, and politically loaded. (39–40)

These writers argue that the only way to understand the skills required in workplaces is to go to specific workplaces, where generalizations simply do not apply.

Ethnographies are also valuable in detailing what Francis Kazemek calls "the false promise of job literacy" that studying and demonstrating a set of skills will lead to better work. Glynda Hull (1993), for example, details a vocational program at a Bay Area community college which feeds students directly into part-time bank work with low wages, no benefits, and minimal job security, jobs where few of the skills they studied in school are applicable. Gowen

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notes of this false promise that it glosses over more pertinent social and economic issues involved in employment challenges:

> Young people in this country will not enjoy better employment opportunities until there are better jobs organized more equitably. Moreover, they will not seek or continue in these jobs unless they believe that they have the rights and opportunities to give them economic, social, and personal success of some measure. To assume that enhancing their literacy skills will accomplish these ends is to embrace a literacy myth that has long outlived its usefulness, even as a method of social control. (47)

The best foil for the list of competencies comes from cultural investigations, investigations which always suggest that the issues are far more complicated than list-makers would like them to be.

How, then, can the official discourse of vocational education be rewritten to acknowledge these cultural analyses? Though a full answer to this question is beyond the scope of this article, several educational theorists have worked to answer that question by rethinking the idea of education for work so that it moves beyond preparation of students for status quo. John Dewey, for example, suggests a role for literacy in a vocational education "which will not 'adapt' workers to the existing industrial regime . . . but one which will alter the existing industrial system and ultimately transform it" (quoted in Simon et al., 5). In *Learning Work: A Critical Pedagogy of Work Education*, Simon et al. provide a detailed curriculum which "encourages an understanding of the historical, cultural, and economic character of work as an exchange relation" (8). In one chapter, they detail ways for students to begin thinking about disparities and practices of pay in the workplace, challenging conventions of vocational education "that pay is a private, personal matter" and "that for students, especially 'lower-level' students who

are presumed to be headed for lower-level jobs, talk of pay only adds insult to injury" (165). And Richard Lakes points to the larger notion that a truly critical pedagogy of work ends not in the fictionally democratic "high-performance workplaces" but in democratically owned and run businesses: "Knowledge and learning in this context reflects the moral assumptions of workers, with free and open access to information, who use their democratic participation in the firm to work for the commonwealth" (121). Each of these visions calls for more complicated acts of creativity than simply to "imagine that you are a worker who pumps gas at a gas station"; rather, implementing these goals requires the imaginative act of participatory education, an education based not on the needs of experts, whether employers, educators, or policy makers, but on the lives and goals of students, people for whom education must be more than socialization to the status quo. The literacy demanded here must start by attending to lives of students, before, outside of, and in the classroom. This means that as literacy teachers, we must not accept the idea that what work requires of schools is the same as what students require, or even want, from schooling.

NOTES

[1] As examples of programs emphasizing the SCANS initiatives, see Roberts and Williams (1994), Arizona State Department of Education (1997), Mountain View College (1995), and Askov (1995). Also, Garay and Bernhardt's 1997 edited collection *Expanding Literacies* has several essays (especially Garay, Mikulecky, and Johnson and Taylor) that imagine possible fruitful relationships between English studies and SCANS. My point here is that SCANS represents a powerful voice in a changing and influential discourse of education.

[2] I have found no record that this document went beyond the initial pilot project which, as I indicate below, I was a part of as a teacher. Northwest Regional Educational Laboratories remains a valuable voice and resource for teachers at all levels in the Northwest, and by critiquing their *System* I by no means intend to critique the organization in general.

[3] This can be seen in many of the texts I cite in my first footnote. See also Gee et al. for a cogent analysis of commonalities between what they call "fast capitalist" discourse and current discussions of pedagogy at all levels.

[4] The notebooks in which this *System* appears are otherwise unpublished, as far as I have been able to ascertain. In referencing it, I have attempted to identify the notebook in which it appears, because page numbers are often unavailable. Notebook 1 (N. 1) is titled *Trainer's Manual and Curriculum Resource Guide*; N. 2, *Assessment Guide, Part I*; and N. 3, *Assessment Guide, Part II*.

[5] Were I to provide a pragmatic analysis of this *System*, in addition to the official analysis in this chapter, I would have to indicate that it met with a great deal of resistance from teachers and administrators who refused to implement it exactly as required by the designers, or who failed to give the tests on schedule or in the correct manner. Most of the ten instructors, including myself, found the *System* unwieldy to teach and overly directive, and test designers grew frustrated with our reluctance to follow their guidelines as they provided them to us. I have not been able to find any evidence that this program was developed past this pilot stage.

[6] This is not the only time that SCANS has fun with the rhyme between "earn" and "learn," as indicated by their pamphlet *Learning a Living*.

[7] But this opening sentence, from a SCANS based ESL teacher's guide in California (Marshall 1998), reminds us that no matter what their philosophy, educators might feel compelled to teach such competencies because unemployed students face the threat of losing welfare benefits: "California's version of welfare reform involves lifetime limits for receipt of welfare and an emphasis on short-term, intensive employment training, including ESL. English training instructors must make instruction more of an overt job-training tool which prepares students for the first available job" (1). Whether educators like it or not, this suggests, students often face an economic need to take any job they can get.

[8] Arthur McClure, James Riley Chrisman, and Perry Mock note, in their history of vocational education in the United States, that most vocational programs have traditionally focused on particular trades or occupations. While these programs dealt with general job skills, they were more concerned with particular job requirements, and they certainly had no lists of general skills comparable to the ones I discuss here. As such, this attention to general skills represents an important shift in the discourse of vocational education.

[9] William Covino points out that the definitions of SCANS competencies "are presented without human nouns or pronouns; there are no grammatical subjects, only behaviors. People charged with these behaviors have been abbreviated away, or at best standardized into ciphers—owner, client, worker, supervisor, operator, whose skills are entirely operational"(112). See also my reference to the job descriptions above for further evidence of this.

[10] This assessment appears in N. 3, a reprint of a 1991 CASAS document called "Critical Thinking Assessment Items for Employability: A Resource for Teachers." The exercise I cite appears on page 9 of that document.

[11] Carnavale et al. provide a helpful chart detailing various theories about learning to learn (behaviorist, structuralist, functionalist, and humanist). About the humanist assumptions, they write: "Being a better human being is considered a valid learning goal." One disadvantage to this approach, however, is that it "[c]an be a very inefficient, time consuming process"(44).

[12] The testlet does not come with correct answers. Rather, the test taker is to be encouraged to write down as many possible solutions to the problem as he can, or, with the aid of the teacher, to state them verbally. To elicit more answers, the test administrator is instructed to ask "And what would you do if that didn't work?" or "What would you do if you couldn't do that?" Students demonstrate "limited ability" if they can only come up with one "reasonable" solution, "competency" if they come up with two or three, and "proficiency " if they can generate more than three ways to deal with the lack of sugar.

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