

**NATURAL LEARNING:
THE BASIS FOR RAISING AND SUSTAINING HIGH STANDARDS OF
REAL WORLD PERFORMANCE**

GEOFFREY CAINE, LL.M.

RENATE N. CAINE, PH.D.

CHAPTER 5: IMPLICATIONS FOR EDUCATION IN THE UNITED STATES

Many individuals have grasped aspects of the underlying process for the purpose of academic learning. It is present to some extent in such notions as self regulated learning (Boekarts and Corno, 2005), self-directed learning (NWRL, 2004), experiential education (Luckner and Nadler, 1997) and project based learning (Barron, 1998).

The perception/ action dynamic lies at the heart of the success of these approaches. It is by engaging the natural perception/ action dynamic that students can both acquire academic knowledge in a way that makes it useful in life and find out how to plan and achieve goals, negotiate with others, master time lines, reflect adequately on ideas and generally become more competent human beings.

Accordingly, the time has come for education, both public and private, to more fully take advantage of natural learning.

Here are our recommendations. They apply to policy makers, philanthropic organizations, those in the business world with an interest in education, parents and researchers, as well as to all those in the world of education.

1. Change the end in view: Aim for real world competence

As Stephen Covey (1989) wrote, successful people begin with the ends in view. The time has come to intentionally and consciously change the focus of education, and to openly work towards real world competence. The essential

outcome of education should be real world competence at all ages, but with an eye towards Commencement Day for as long as that is the point in time towards which we are aiming.

We suggest that the place to begin is by clarifying the set of real world outcomes that we seek for students. These include:

- An academic foundation so that, as a minimum, they are well grounded in the basic knowledge and skills of any subject that is intended to prepare them for college.
- Everyday knowledge and skills so that irrespective of whether they enter the work force, start a business or set out to travel to places unknown they have adequate performance knowledge to get started.
- Self-discipline, so that they are able to set goals, think through and make good decisions, plan ahead, interact adequately with others and generally behave as adults.
- Adaptability to change so that they can creatively adapt to changes in the world.
- A grasp of and commitment to some higher good so that they are equipped to think about and act on behalf of the larger society as well as themselves.

One way to begin, we suggest, is to add, to all content standards and at all ages, the phrase “in the real world.” Thus, anything from the need to be able to “write complete sentences” to “explaining geological formations” should be demonstrated “in the real world.”

2. Insist on instruction that is grounded in natural learning

The principles of natural learning and the perception/action dynamic provide quite clear guidance for instruction.

Irrespective of subject matter and grade level, we recommend that that the three interactive elements introduced in Chapter 3 above are always used to frame and guide teaching and professional development.

- Relaxed alertness: The creation of an atmosphere in schooling and a state of mind in learners that we call relaxed alertness.
- Orchestrated immersion: The orchestrated immersion of learners in experiences in which content standards are embedded.
- Active processing of experience: The examination and consolidation of experience in order for its content to be understood and mastered.

Many superb approaches to instruction have been developed that engage these elements in varying ways, though often using different terms and labels. In our view, the element most frequently underutilized is active processing. Fortunately, there are also several approaches to instruction that emphasize this element, such as the Socratic method used in almost all law schools and sometimes offered to K-12 educators.

We recommend that educators seek to understand and employ an overall approach and model that systematically integrates all three elements. Our way of doing this is what we call the global experience model (Caine et. al., 2005).

3. Use appropriate modes of assessment and evaluation

The primary way that the United States currently uses to gage success is comparative results on tests, both domestically (e.g. NAEP: The National Assessment of Educational Progress) and internationally (e.g. TIMSS: Trends in International Mathematics and Science Study). The bipartisan attempt to raise standards through NCLB is therefore quite understandable.

The problem lies in a misunderstanding of the role of test results. The United States, like many other countries, is largely focused on the results themselves. The challenge, rather, is to teach for a more complex outcome – a richer and deeper quality of knowledge. This engages more of the natural learning capacities of students. The side effect is that most students then perform better on standardized tests..

Evidence of real world competence is real world performance (See e.g. Wiggins, 1998). Among other things, parents who teach their children to speak well embed language in the every day activities of life in progressively more complex ways. And right at the heart of the development of expertise is progression from the performance of a novice to mastery (Feltovich et. al., 2006.)

Clearly, assessment of performance poses multiple problems. For instance, there is the question about who is competent to assess performance, and how one can assess the assessor. So problems do not go away. They are just the right sorts of problems.

We recommend that

- All schooling should use indicators of real world performance as the primary basis of assessment. That means that educators need to be competent in the content areas that they teach.
- Standardized and other formal modes of assessment can and should be used in a secondary and supportive manner. The key is not to be dominated by them but to use them as tools.
- Times of assessment should be more variable, so that students can be assessed at more appropriate times in learning cycles.

4. Change the basis of scientifically based research.

There is a disconnect between research on education and research on how people learn. Thus, when specific instructional strategies are researched, for the most part the objective is surface knowledge and/or test results, and the bulk of what is known about how people learn is generally not considered.

We suggest that educational strategies can never be adequately researched until more basic issues have been addressed.

We recommend that

- Research on instructional strategies should include an overview of the theory of learning upon which the research is based;

- Educational procedures which seek to receive governmental endorsement pursuant to NCLB and other legislation, or funding from other sources, should show how the elements of natural learning addressed in this paper have been accounted for;
- Research which purports to show that educational results have been improved should address the differences between performance knowledge ,technical/ scholastic knowledge and surface knowledge.

CHAPTER 5: IMPLICATIONS FOR EDUCATION IN THE UNITED STATES

Many individuals have grasped aspects of the underlying process for the purpose of academic learning. It is present to some extent in such notions as self regulated learning (Boekarts and Corno, 2005), self-directed learning (NWRL, 2004), experiential education (Luckner and Nadler, 1997) and project based learning (Barron, 1998).

The perception/ action dynamic lies at the heart of the success of these approaches. It is by engaging the natural perception/ action dynamic that students can both acquire academic knowledge in a way that makes it useful in life and find out how to plan and achieve goals, negotiate with others, master time lines, reflect adequately on ideas and generally become more competent human beings.

Accordingly, the time has come for education, both public and private, to more fully take advantage of natural learning.

Here are our recommendations. They apply to policy makers, philanthropic organizations, those in the business world with an interest in education, parents and researchers, as well as to all those in the world of education.

1. Change the end in view: Aim for real world competence

As Stephen Covey (1989) wrote, successful people begin with the ends in view. The time has come to intentionally and consciously change the focus of education, and to openly work towards real world competence. The essential

outcome of education should be real world competence at all ages, but with an eye towards Commencement Day for as long as that is the point in time towards which we are aiming.

We suggest that the place to begin is by clarifying the set of real world outcomes that we seek for students. These include:

- An academic foundation so that, as a minimum, they are well grounded in the basic knowledge and skills of any subject that is intended to prepare them for college.
- Everyday knowledge and skills so that irrespective of whether they enter the work force, start a business or set out to travel to places unknown they have adequate performance knowledge to get started.
- Self-discipline, so that they are able to set goals, think through and make good decisions, plan ahead, interact adequately with others and generally behave as adults.
- Adaptability to change so that they can creatively adapt to changes in the world.
- A grasp of and commitment to some higher good so that they are equipped to think about and act on behalf of the larger society as well as themselves.

One way to begin, we suggest, is to add, to all content standards and at all ages, the phrase “in the real world.” Thus, anything from the need to be able to “write complete sentences” to “explaining geological formations” should be demonstrated “in the real world.”

2. Insist on instruction that is grounded in natural learning

The principles of natural learning and the perception/action dynamic provide quite clear guidance for instruction.

Irrespective of subject matter and grade level, we recommend that that the three interactive elements introduced in Chapter 3 above are always used to frame and guide teaching and professional development.

- Relaxed alertness: The creation of an atmosphere in schooling and a state of mind in learners that we call relaxed alertness.
- Orchestrated immersion: The orchestrated immersion of learners in experiences in which content standards are embedded.
- Active processing of experience: The examination and consolidation of experience in order for its content to be understood and mastered.

Many superb approaches to instruction have been developed that engage these elements in varying ways, though often using different terms and labels. In our view, the element most frequently underutilized is active processing. Fortunately, there are also several approaches to instruction that emphasize this element, such as the Socratic method used in almost all law schools and sometimes offered to K-12 educators.

We recommend that educators seek to understand and employ an overall approach and model that systematically integrates all three elements. Our way of doing this is what we call the global experience model (Caine et. al., 2005).

3. Use appropriate modes of assessment and evaluation

The primary way that the United States currently uses to gage success is comparative results on tests, both domestically (e.g. NAEP: The National Assessment of Educational Progress) and internationally (e.g. TIMSS: Trends in International Mathematics and Science Study). The bipartisan attempt to raise standards through NCLB is therefore quite understandable.

The problem lies in a misunderstanding of the role of test results. The United States, like many other countries, is largely focused on the results themselves. The challenge, rather, is to teach for a more complex outcome – a richer and deeper quality of knowledge. This engages more of the natural learning capacities of students. The side effect is that most students then perform better on standardized tests..

Evidence of real world competence is real world performance (See e.g. Wiggins, 1998). Among other things, parents who teach their children to speak well embed language in the every day activities of life in progressively more complex ways. And right at the heart of the development of expertise is progression from the performance of a novice to mastery (Feltovich et. al., 2006.)

Clearly, assessment of performance poses multiple problems. For instance, there is the question about who is competent to assess performance, and how one can assess the assessor. So problems do not go away. They are just the right sorts of problems.

We recommend that

- All schooling should use indicators of real world performance as the primary basis of assessment. That means that educators need to be competent in the content areas that they teach.
- Standardized and other formal modes of assessment can and should be used in a secondary and supportive manner. The key is not to be dominated by them but to use them as tools.
- Times of assessment should be more variable, so that students can be assessed at more appropriate times in learning cycles.

4. Change the basis of scientifically based research.

There is a disconnect between research on education and research on how people learn. Thus, when specific instructional strategies are researched, for the most part the objective is surface knowledge and/or test results, and the bulk of what is known about how people learn is generally not considered.

We suggest that educational strategies can never be adequately researched until more basic issues have been addressed.

We recommend that

- Research on instructional strategies should include an overview of the theory of learning upon which the research is based;

- Educational procedures which seek to receive governmental endorsement pursuant to NCLB and other legislation, or funding from other sources, should show how the elements of natural learning addressed in this paper have been accounted for;
- Research which purports to show that educational results have been improved should address the differences between performance knowledge ,technical/ scholastic knowledge and surface knowledge.