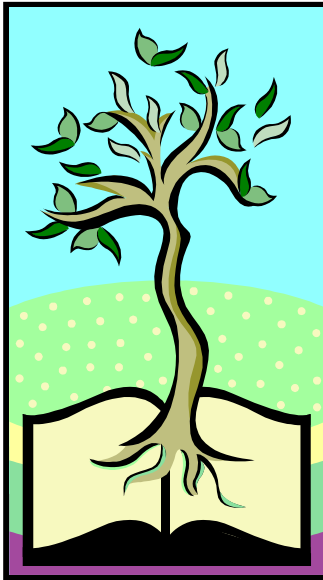# An Introduction to the Philosophy of

Process Education

An educational philosophy focusing on improving students' learning skills and creating self-growers.

Process *(Webster)*

1) a series of actions or functions bringing about a result;

2) a particular method of doing something, generally involving a number of steps or operations;

3) a sequence of steps, events, or activities which results in a change or produces something over a period of time;

4) continuing development involving many changes.

Education *(Webster)*

1) the process of educating or being educated;

2) the knowledge or skill developed by a learning process;

3) a program of instruction;

4) the field of study concerned with the pedagogy of teaching and learning;

5) an instructive or enlightening experience.

Process Education™

1) an educational philosophy focusing on improving students' learning skills and creating *self-growers*;

2) a philosophy which utilizes a continuous quality improvement approach towards the following key educational processes: teaching, learning, mentoring, assessment, curriculum design, and administration;

3) implementation of this philosophy involves the use of innovative concepts, processes, and tools to create learning environments which are instructive, enlightening, and assist students with improving their learning skills (in multiple domains) and assessment skills.

AN INTRODUCTION TO THE
PHILOSOPHY OF PROCESS EDUCATION

Table of Contents

Changes in Higher Education

As we look around the current landscape, there is no denying that a significant change process is underway in higher education. Some are calling it a *transformation*, others use the term (learning) *revolution*, while still others refer to a *paradigm shift*. Perhaps it is the beginning of what Peter Drucker forecast in his 1992 book, *Managing for the Future,* when he stated "it is a safe prediction that in the next fifty years schools and universities will change more and more drastically than they have since they assumed their present form 300 years ago when they organized themselves around the printed book" (p. 97).

Some of the changes taking place in higher education are the direct result of societal factors such as changing student demographics and the impact of technology. For example, there is a greater diversity among students today including greater numbers of nontraditional students, many of whom have part-time or full-time jobs as well as family responsibilities. There are also many students entering higher education who are not adequately prepared to succeed in college-level courses. In terms of technology, we see distance education, asynchronous education, and open or virtual universities all emerging in response to rapidly evolving technologies. An excerpt from the 1998 World Conference on Higher Education emphasizes the changes to come from *new information and communication technologies* (NICT). "The mass advent of the NICT in the years that lie ahead raises the question of how the teaching profession can prepare for these radical changes. The "new teachers" will have to master this new NICT environment and be mentally prepared for a radical change of role while adding to and updating their knowledge of their subject."

Still other changes in higher education, such as movements relating to student outcomes, improving student assessment, and refocusing institutional missions have their origins in reform movements initiated from within and from outside feedback. Both the *SCANS Report* produced in 1991 by the Department of Labor and the 1993 report, *An American Imperative: Higher Expectations for Higher Education* by the Wingspread Group, contained "open letters" to the public calling for change because of disturbing mismatches between what American society needs from its educational systems and what it is receiving. In the case of the SCANS Report, schools at all levels were called upon to transform themselves in to high performance organizations with a focus on a new set of competencies (resources, interpersonal skills, information, systems, and technology) and certain foundation skills (basic skills, thinking skills, and personal qualities). The Wingspread Group report focused on higher education and presented their findings based on three fundamental issues: putting student learning first, creating a nation of learners, and taking values seriously. In both cases, the findings challenge us to consider the primary goal or mission of higher education. Do our colleges and universities exist to provide instruction and "educate" students; or is their purpose to produce "learning" in students through the growth and development of an encompassing set of learning skills?

The article, *From Teaching to Learning—A New Paradigm Shift for Undergraduate Education* (Barr and Tagg, 1995), refers to changes taking place in higher education in terms of a paradigm shift from a teacher-centered "instruction paradigm" to a student-centered "learning paradigm." This new paradigm involves creating environments and experiences that allows for discovery and the construction of knowledge. George Boggs, President of Palomar College, points out in his paper, *Accepting Responsibility for Student Learning*, that the criteria for success will change as institutions shift from one paradigm to the other. Criteria for success in the instruction paradigm pertain to enrollment growth, high participation rates, revenue growth, curriculum expansion, and physical resources while successful institutions using the learning paradigm identify goals for learning and student success, and document these achievements. The key difference being a focus on the quality of *exiting* students and their learning skills and not the quality of *entering* students.

The paper, *A Paradigm Shift from Instruction to Learning,* by Gwyer Schuyler identifies changes involved in shifting to a learning paradigm. Some of these changes include:

- Judgment of institutional success is based on the quality of student learning.

- A shared responsibility exists for student learning (ultimate responsibility is upon the student).

- The institution views itself as a learner; so that over time it produces more learning (with each graduating class and entering student).

- The learning environments that are created support discovery and student construction of knowledge rather than simply a transfer of content or knowledge.

- Education that involves "the mastery of functional, knowledge-based intellectual frameworks rather than the short-term retention of fractionated contextual cues."

Of the changes taking place in higher education, the most profound requires us to look at the mission of higher education. In this regard, Terry O'Banion states "The amount and kind of change going on in education today is enormous, and no institution is untouched by that change.Even if there were no major reform effort in progress, there would be major changes in the use of information technology, in governance and control, in student demographics, in funding and resources, in alliances and partnerships, and in innovations in teaching and management. But it is important not to mistake these related changes for the new emphasis on learning. These other changes will happen whether championed or not because they are natural processes reflecting transformations in the larger society. But it is possible for all these changes to develop over the next decade without a new emphasis on learning. A decade from now, great changes in education will be clearly evident, but the traditional architecture of education could be pretty much in place, and learning could still not be the primary mission and outcome of educational institutions" (O'Banion 1997).

The Philosophy of Process Education

The term "Process Education" was first used in the early 1970's and referred to the process of educating students rather than the end product of that education. In 1994, Pacific Crest began using the term to articulate a philosophy which encompassed and impacted each of the key educational processes (teaching, learning, mentoring, curriculum design, and assessment) they focused on. Process Education is a fitting term for what Pacific Crest is advocating with respect to growing learner performance and utilizing self-reflective thinking.
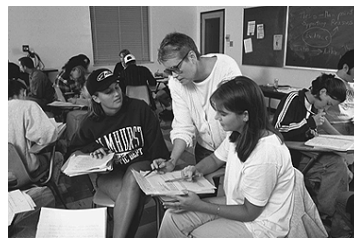
The articulation of Process Education has evolved over time and reflects a synthesis of the change processes taking place in higher education. Elements of all of the following are found in Process Education: active learning, student-centered learning, mentoring, assessment, use of technology and the learning paradigm.

A concise definition for Process Education (PE) is as follows:

> an educational philosophy which focuses on building students' learning skills (in all domains) and developing "self-growers."

Elaboration of three terms within the definition can help to clarify its meaning.

Philosophy

Process Education is a philosophy rather than a particular method or set of methods. Each *process educator*, guided by this philosophy and its underlying principles (see page 8), must choose how to best implement the philosophy by customizing an approach (from a broad set of techniques, processes, and tools) to suit his or her own unique context and learning environment.

Learning Skills

A team of educators worked with Pacific Crest to research and identify key processes and skills fundamental to learning in multiple contexts. The resulting *Classification of Learning Skills for Educational Enrichment and Assessment* identifies 15 key processes and more than 275 specific skills from four domains: cognitive, social, affective, and psychomotor (see page 12 for more information). Building students' proficiency with skills from this extensive classification is a primary objective of Process Education. This objective significantly influences decisions made with regard to creating productive learning environments and determining criteria for student performance in a course.

Self-grower

Learners can be described and classified according to their level of performance in the learning process. The two endpoints on this continuum of performance are *trained individuals* and *self-growers*. Self-growers are high performing individuals who have a highly developed set of skills across all domains. They have especially strong self-assessment skills which allow them to self-mentor their own growth and continually improve upon their performances. See page 13 for more information about the levels of learner performance and self-growers.

Overview of Process Education

The following diagram presents an overview or "big picture" of Process Education. Key components of PE are identified and placed within a general framework.

The **need for change** in higher education

(see Changes in Higher Education, page 4)

has lead to research, study, and the **articulation of a philosophy**

(see Philosophy of PE, page 6)

which is based upon certain **principles**

(see Principles of PE, page 8)

which require the utilization of certain **processes and tools**

(see Processes and Tools, pages 9-10)

which produce **learning and assessment skills** in students

(see Classification of Learning Skills, page 12)

which leads to the development of **self-growers**.

(see Levels of Learner Performance, page 13)

Principles of Process Education

The following principles form the base from which the philosophy of Process Education is built.

1. Each person's learning processes can always be improved.

2. There is no measurable limit to one's potential for learning; one's potential is not constrained by perceived ability.

3. At times, everyone requires help with learning, but one's goal is to become a capable, self-sufficient learner.

4. Methodologies, which serve to model processes, are extremely helpful for learning to perform and use processes more effectively.

5. Educators must assess their students regularly; not only for purposes of feedback, but also to model the assessment process and help students learn to self-assess better.

6. An empowered learner is able to effectively use learning processes and self-assess to improve future learning and performance.

7. A quality learning environment involves facilitators who focus on improving students' learning skills in specific, defined areas through timely, appropriate, and constructive interventions.

8. An educational system can be continually improved by:

   a. improving the quality of instruction,

   b. improving the management of the educational system with better performance criteria and measures,

   c. improving the quality of curricula, and

   d. empowering learners to continually improve their performance in the context of the defined system.

9. Implementation of Process Education involves utilizing a set of ideas, processes, and tools, which improve through ongoing research and application with continuous quality assessment.

The Learning College

The American Council on Education and the American Association of Community Colleges jointly published a book by Terry O'Banion titled, *A Learning College for the 21st Century*. A learning college is described as a place where learning comes first and educational experiences are provided for learners anyway, anyplace, and anytime. The concept of a learning college is one that fits well within the philosophy of Process Education. In fact, the Principles of Process Education (on page 8) match up well and support the six principles on which the learning college is based. These principles are described in the following excerpt from the Learning College website at <http://www.pbs.org/als/revolution>. *Note that the corresponding Process Education principle(s) which support each Learning College principle have been added.*

If institutions of higher education decide to place learning first as a priority, a new model must replace the current educational system—the model of the Learning College. Building upon a set of six principles as its framework, colleges and universities need to adapt these principles to their own experience and within the limitations of their resources.

Colleges initiating reform efforts to become more learning-centered will begin at various points. Regardless of the point of departure, it will be beneficial to have a framework to build upon. This frame of reference (the learning college) is a set of principles which serve as a catalyst for institutions to develop their own guidelines towards becoming more learning-centered. The learning college is based upon six key principles:

Supporting PE principle(s)

1. The learning college creates substantive change in individual learners. — *#1, #2, #3, #6*

2. The learning college engages learners in the learning process as full partners, assuming primary responsibility for their own choices. — *#2, #3, #4, #6*

3. The learning college creates and offers as many options for learning as possible. — *#7, #8*

4. The learning college assists learners to form and participate in collaborative learning activities. — *#3*

5. The learning college defines the roles of learning facilitators by the needs of the learners. — *#5, #7*

6. The learning college and its learning facilitators succeed only when improved and expanded learning can be documented for its learners. — *#5, #8, #9*

Student Processes and Tools

A student performing in a learner-centered, active learning environment uses processes and tools which include the following:

Student Processes

- *language development*
- *writing*
- *reading*
- *information processing*
- *literary analysis*
- *mathematical reasoning*
- *communication*
- *teamwork*
- *self-management*

- *critical thinking*
- *problem solving*
- *personal development*
- *educational planning*
- *creating a life vision*
- *self-assessment*
- *journal writing*
- *research*
- *tool usage*

Student Tools

- *learning journals*
- *methodologies*
- *study groups*
- *peer assessments*
- *peer tutoring*
- *portfolios*
- *software tools*
- *the Internet*

- *mentors*
- *learning assessment journals*
- *interactive learning systems*
- *self-assessment papers*
- *life vision plan*
- *learning communities*
- *undergraduate research*

"A paradigm shift is taking hold in American higher education. In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exits to produce learning. This shift changes everything. It is both needed and wanted."

" From Teaching to Learning– A New Paradigm for Undergraduate Education" by Robert B. Barr and John Tagg. *Change*, November/December 1995, pgs 13-25.

Characteristics of a Quality Student

A quality student...
- *is an active participant in the learning process,*
- *focuses on improving his/her learning skills,*
- *takes individual responsibility for learning,*
- *has developed a life vision,*
- *makes use of and applies appropriate tools on a regular basis, and*
- *seeks to continually develop his/her self-assessment skills.*

Faculty Processes and Tools

The role of an educator goes beyond that of *content expert* to encompass a broader perspective, that of a *mentor*, who facilitates student growth. By assessing student performance, educators can provide quality feedback which leads to improved learning/performance skills. The following are some of the key processes and tools used by educators when implementing the philosophy of Process Education.

Faculty Processes

- *mentoring*
- *assessment*
- *evaluation*
- *communication*
- *facilitation*
- *planning*
- *curriculum design*
- *peer coaching*

- *designing a syllabus*
- *building knowledge maps*
- *constructing methodologies*
- *designing performance criteria*
- *creating a quality learning environment*
- *developing performance measures*

Traditionally, the acquisition of skills essential to life and work has been considered a by-product of study, not something requiring explicit attention on campus... These skills can be learned. If they are to be learned, however, they must be taught and practiced, not merely absorbed as a result of unplanned academic experience.

"An American Imperative– Higher Expectations for Higher Education," Wingspread Group on Higher Education, The Johnson Foundation, Inc. Copyright ©1993

Faculty Tools

- *active learning*
- *guided-discovery learning*
- *applied critical thinking*
- *structured self-reflective thought*
- *constructive interventions*
- *open-ended labs*

- *cooperative learning*
- *journal writing*
- *technology*
- *project work*
- *problem-based learning*
- *facilitation*

Characteristics of a Quality Educator

A quality educator...
- *uses many of the above-mentioned tools and processes on a regular basis,*
- *mentors the growth and development of learners,*
- *uses student-centered approaches to teaching,*
- *helps learners to inventory and assesses individual learning skills,*
- *designs, implements, and assesses quality curricula, and*
- *shifts control and ownership of the learning process to the learner.*

Classification of Learning Skills

The *Classification of Learning Skills©* is a key component for articulating and implementing the philosophy of Process Education. This extensive list of processes and skills specifically identifies what is generally referred to as "learning skills" in the definition of Process Education. The *Classification* represents an eight-year research effort by a team of educators who created a resource to assist with the holistic development of their students. Used by both faculty and students, this valuable tool identifies 15 key processes and more than 275 specific skills fundamental to learning. It provides the framework for making quality assessments of performance, and serves as a guide for improving assessment and self-assessment skills.

The four-sided pyramid diagram below provides a visual representation of the *Classification of Learning Skills.* The entire classification consists of four *domains*, each containing a series of *processes* (in a hierarchical order) which are made up of *general skill areas* and *specific skills*. The diagram below shows the four domains (cognitive, social, affective, and psychomotor) and their associated processes. Note that each domain starts with the common base process of language development and ends with the common capstone process of assessment.

For a complete listing of skills, which includes general skill areas and specific skills, contact Pacific Crest or refer to the website <http://www.pcrest.com>.
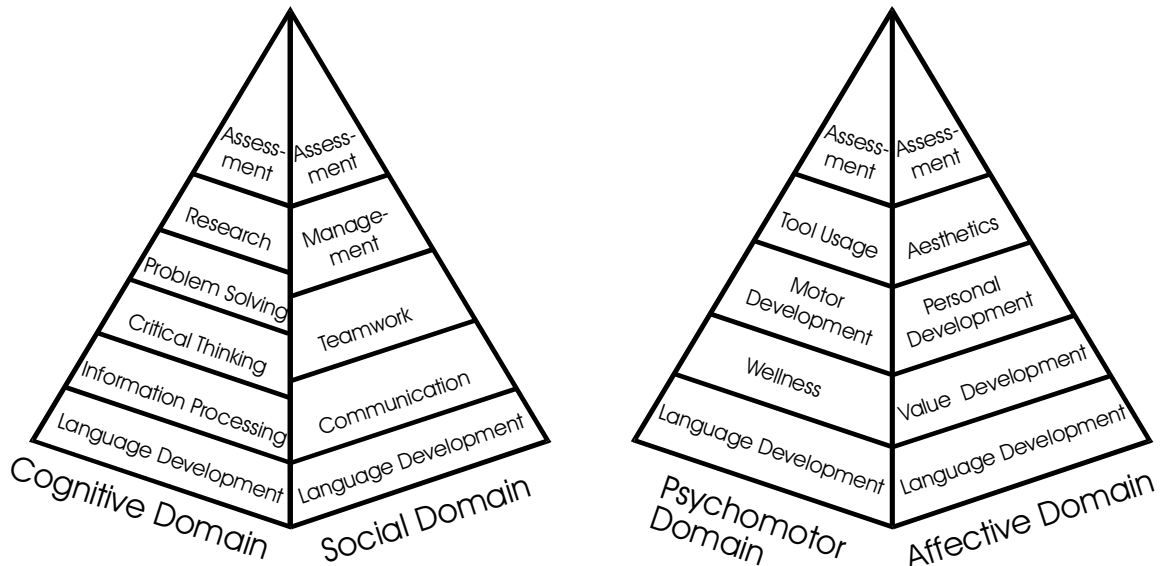
Levels of Learner Performance

Learners can be described and classified according to their level of performance in the learning process. The five levels identified by Pacific Crest are as follows (in increasing level of performance):

Trained Individuals, who have developed a specific knowledge base, with specific skills for a specific context.

Learned Individuals, who have acquired a broad base of general knowledge and can apply it to related contexts.

Lifelong Learners, who have developed the skills and motivation to self-facilitate their ongoing learning and can apply it to a variety of contexts.

Enhanced Learners, who have developed a higher level of performance skills and actively seek new knowledge and contexts for application in a constantly changing environment.

Self-growers, who continually grow by using strong self-assessment skills to improve future performance. This highest level of learner performance is characterized by the following:

- Seek to improve their own learning performance with every experience.
- Create their own challenges.
- Serve as a leader and mentor to others.
- Take control of their own destiny — "there are no bounds."
- Self-assess and self-mentor to facilitate their own growth.

Bloom's Taxonomy and Associated Cognitive Processes

Bloom's Taxonomy	Description	Cognitive Process
Recall	Learning pieces of information such as facts and definitions enough so that you are able to repeat them.	Information processing
Comprehension	Understanding enough about a topic so that you are able to explain it to someone else.	Critical thinking
Application	Putting what has been learned into practice; applying what you know.	Higher order critical thinking
Analysis	Breaking a topic into specific parts and studying the interaction of the parts.	Problem solving
Synthesis	Integrating prior knowledge and creativity to gain insights into a topic.	Research
Evaluation	Knowing a topic so well that you can judge its quality according to established criteria.	Assessment

Knowledge Map for Process Education

A *knowledge map* is used to categorize the content within a particular discipline area. Content/ knowledge is organized and presented according to the following components: *concepts*, *processes*, *tools*, *contexts*, *ways of being*, and *rules*. Knowledge maps are excellent resources for obtaining overviews of discipline areas. They allow the user an opportunity to quickly note key concepts, identify important processes and tools, and gain insights into associated behaviors. Below is a knowledge map for Process Education.

Key Concepts

learner ownership
empowerment
mutually shared respect
performance-based learning
learning skills
activities
personal growth
rate of learning
life vision
mentor
self-grower
lifelong learner
time-pressured learning
performance criteria
levels of knowledge

Processes

assessment
mentoring
constructive intervention
curriculum design process
learning
facilitation
faculty development
personal development
teamwork
activity management
peer coaching
grading/evaluating
designing quality measures
creating methodologies
constructing knowledge maps

Tools

cooperative learning
portfolios
interactive learning system
learning communities
reflection time
foundations course
Classification of Learning Skills
learning assessment journal
concept models
problem-based learning
technologies
activity sheets
methodologies
peer assessment
self-growth paper

Contexts

community colleges
research universities
liberal arts colleges
technical schools
professional schools
continuing education
distance learning
within a department

developmental education
within learning communities
within one school
self study
tech Prep
corporate training
home schooling

Success in becoming more learning-centered can be gauged by embedding two questions in the culture of the institution: Does this action improve and expand learning? and How do we know this action improves and expands learning?
Terry O'Banion. *A Learning College for the 21st Century,* 1997.

Way of Being for a Process Educator

A way of being represents a set of behaviors, actions and use of language. The following describes a way of being for an educator who believes in the philosophy of Process Education. A process educator...

- wants to see growth in others,
- trusts and respects students,
- is a risk-taker,
- is willing to shift control to students,
- can handle and adapt to change,
- has the desire to be a self-grower,
- enjoys assessment and is open to feedback,
- utilizes self-assessment to improve future performance,
- works well with others, and
- is a highly productive person.

Education is not the filling of a pail, but the lighting of a fire.
—William Butler Yeats

Implementing Process Education

Process Education is a philosophy; not a set a of methods to be executed in a particular manner. There is no one way to implement Process Education but rather each person must customize an approach from a broad set of techniques and tools to suit his/her unique context and learning environment. However, certain generalizations can be made regarding implementation of PE. They include focusing one's efforts on:

- developing students' learning skills in all domains (cognitive, social, affective, and psychomotor) using active-learning tools and techniques;
- using content material to facilitate student growth (with clear goals and measurable outcomes);
- creating student-centered learning environments with high criteria for performance;
- developing a course assessment system (to be used separately from the course evaluation system);
- developing students' self-assessment skills so that they are better able to grow and improve;
- adhering to a set of principles which are based on the unlimited potential in each learner;
- improving the following key processes associated with education: teaching, learning, mentoring, curriculum design, assessment, retention and educational administration.

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About Pacific Crest

Pacific Crest is an educational consulting and publishing company working to improve the quality of educational outcomes by focusing on five key processes: teaching, learning, mentoring, curriculum design, and assessment.

Pacific Crest has:

- worked with higher education for the past 15 years,
- visited more than 1,800 colleges and universities,
- facilitated faculty development events for more than 12,000 faculty, and
- worked with more than 20,000 students in classroom situations.

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Pacific Crest
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