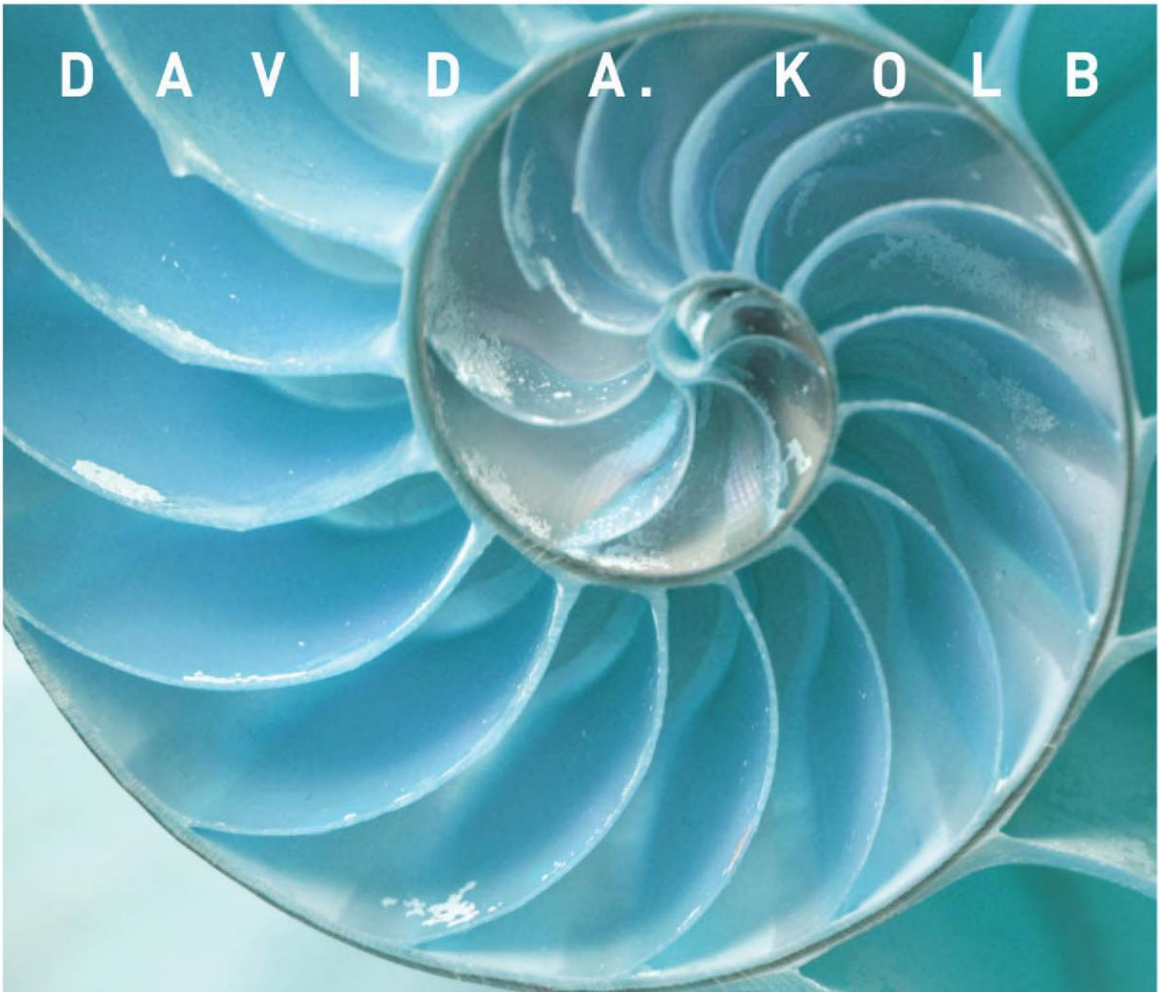

DAVID A. KOLB

EXPERIENTIAL LEARNING

EXPERIENCE AS THE SOURCE OF LEARNING AND DEVELOPMENT

SECOND EDITION

EXPERIENTIAL LEARNING

Experience as the Source of Learning and Development

Second Edition

DAVID A. KOLB

EXPERIENCE BASED LEARNING SYSTEMS, INC.

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Foreword

Foreword to the First Edition

This is a very special and important book. I say that at the outset because the book is written with such grace and gentleness, with such clarity and directness, that you will know that David Kolb has written an excellent treatise on learning theory, certainly for educators and quite possibly for Educated Persons, whatever that means. But as you read on—as *I* read on, I had to catch my breath every once in a while, wondering if the velocity of my excitement would ever cease.

Kolb has written a wonderful book, one I've been waiting for—without quite realizing it—for a long time. It's a book (I'm only guessing here) that he took a very, *very* long time to write, since it is crafted so carefully and is so deeply nuanced that you are certain that it's been filtered and re-set and redrafted many times, like a precious stone, turned and polished into a lapidary's gem.

Why this excitement? Well, the hyper-ventilation I alluded to above is based on Kolb's achievement in providing the missing link between theory and practice, between the abstract generalization and the concrete instance, between the affective and cognitive domains. By this BIG achievement he demonstrates conclusively—and is the first to do so—that learning is a social process based on carefully cultivated experience which challenges every precept and concept of what nowadays passes for "teaching." And with this major achievement he knowingly shifts the ecology of learning away from the exclusivity of the classroom (and its companion, the Lecture) to the workplace, the family, the carpool, the community, or wherever we gather to work or play or love.

The significance for educators is profound because, among other things, Kolb leads us (again, so gently) away from the traditional concerns of credit hours and calendar time toward competence, working knowledge, and information truly pertinent to jobs, families, and communities.

The book is no "piece of cake." Despite its graceful aesthetic and illuminating diagrams, from mandalas to tight-lipped 2 × 2 tables that management professors love to show on the overhead screen, the author takes us on a fascinating but densely written journey in and around some of the most seminal thinkers who laid the foundations of "experience-based learning"—great minds such as Dewey, Lewin, and Piaget. Nor does he neglect other auxiliary players like Maslow, Rogers, and Erikson. Aside from creating a framework that removes whatever residual guilt those of us have felt or feel when using experience-based learning within the formal classroom boundaries, Kolb provides

a thick texture of understanding by building his framework on the wonderful armatures of that trinity: Dewey, Lewin and Piaget.

As I say, this is an important book, one the field has been waiting for, worth every ounce of energy it takes to read. But, because of its revolutionary undertones, read it at your own risk. For each reader must take the risk of creating a life of his or her own. When you think about it, you are the thread that holds the events of your life together. That's what Kolb gets us to understand.

Warren Bennis, 1925–2014

In fond remembrance of Warren,
my mentor and friend.

About the Author

David Kolb is the Chairman of Experience Based Learning Systems (EBLS), an organization that he founded in 1980 to advance research and practice on experiential learning. EBLS conducts basic research on Experiential Learning Theory and has developed many experiential exercises and self-assessment instruments including the latest Kolb Learning Style Inventory 4.0. The EBLS program of research on experiential learning is ongoing in collaboration with an international network of researchers, practitioners and learning partners.

He received his BA in psychology, philosophy, and religion at Knox College and his Ph.D. in Social Psychology from Harvard University. He was a professor of organizational behavior and management at the MIT Sloan School of Management and at the Weatherhead School of Management, Case Western Reserve University, where he is currently Emeritus Professor of Organizational Behavior.

He is best known for his research on experiential learning and learning styles described in this book, *Experiential Learning: Experience as the Source of Learning and Development*. Other books include *Conversational Learning: An Experiential Approach to Knowledge Creation, Innovation in Professional Education: Steps on a Journey from Teaching to Learning*, and *Organizational Behavior: An Experiential Approach*. In addition, he has authored many journal articles and book chapters on experiential learning. David Kolb has received several research recognition awards and four honorary degrees recognizing his contributions to experiential learning in higher education.

For more information about his work, go to www.learningfromexperience.com.

Preface

To the Revised Edition

This revised edition of *Experiential Learning* is the most comprehensive and up to date statement of experiential learning theory (ELT), a work that marks the centerpiece of my 50-year academic career. My involvement with experiential learning has been one of the most stimulating and rewarding associations of my adult life. As I described in the 1st edition, I didn't create experiential learning theory, but discovered it in the works of prominent twentieth-century scholars who gave experience a central role in their theories of human learning and development—notably John Dewey, Kurt Lewin, Jean Piaget, Lev Vygotsky, William James, Carl Jung, Paulo Freire, Carl Rogers, and Mary Parker Follett. The rewards of this long involvement have been multifaceted, ranging from the discovery of an intellectual perspective on human learning and development that is at once pragmatic and humanistic, to techniques of experience-based education that have added vitality to my teaching and to a perspective on adult development that has influenced my own personal growth and development as well as others.

I have been sustained and inspired in my work by a growing network of thousands of colleagues in over 30 academic disciplines from all over the world who share my excitement about experiential learning. Each year I have the pleasure of reviewing 300–400 research articles that have cited *Experiential Learning* and other ELT-related research papers for inclusion in the Experiential Learning Theory Bibliography (Kolb and Kolb, 2014). The scope of this work is broad and innovative, making immeasurable contributions to experiential learning theory research and practice. More personally, it is a source of endless inspiration for my own work. Even deeper satisfaction has come from supervising well over a hundred theses and Ph.D. dissertations at MIT and Case Western Reserve University and consulting with many other similar scholars at institutions around the world. I am filled with gratitude and admiration for the multiyear commitment they have made to advancing experiential learning theory. Engaging in the "nitty gritty" of ELT research as part of the dissertation process has given us the opportunity to explore theoretical, methodological, and practical issues in great depth and has produced lifelong friendships as well. Some of these scholars have carried research work on experiential learning forward into their own distinguished careers.

The Plan for This Revised Edition

I have chosen to keep the text of the first edition intact and add research updates and reflections at the end of each chapter. In this way the original text and theoretical statement of *Experiential Learning* is preserved and differentiated from the contemporary

additions. The Update and Reflections (U&R) sections of the chapters include developments in experiential learning theory research and theory since the publication of the first edition of *Experiential Learning* as well as my reflections on critical reviews of experiential learning theory and on theoretical issues raised by other research since the 1984 book.

Part I, "Experience and Learning," begins in Chapter 1 with a review of the history of experiential learning as it emerged in the works of Dewey, Lewin, and Piaget. It includes an analysis of the contemporary applications of experiential learning theory in education, organization development, management development, and adult development. The Chapter 1 Update and Reflections adds other foundational scholars of experiential learning and their particular contributions to experiential learning theory. The communalities among these scholars in their theories, methods, and careers are examined.

Chapter 2 compares the learning models of Dewey, Lewin, and Piaget and identifies the common themes that characterize the experiential learning process. The Chapter 2 Update and Reflections examines the process aspects of experiential learning with particular focus on the learning cycle. It explores the connections between learning and life in the concept of "autopoesis" developed by Maturana and Varela. Parallels between this spiral of life and the spiral of learning from experience are examined. Misunderstandings and critiques of the learning cycle and its application are also examined.

Part II, "The Structure of Learning and Knowledge," begins in Chapter 3 with a structured model of the learning process depicting two basic dimensions—a prehension or "grasping" dimension and a transformation dimension. Philosophical, physiological, and psychological evidence for this model are reviewed. The Chapter 3 Update and Reflections examines recent research on the brain and its links with the learning cycle, with particular emphasis on the work of James Zull.

Chapter 4 focuses on individuality in learning with the development of a typology of learning styles based on the structural model of learning presented in Chapter 3. Assessment of individual learning styles with the Learning Style Inventory is described. Data are presented relating individual learning styles to personality type, educational specialization, professional career, current job, and adaptive competencies. In the Chapter 4 Update and Reflections, the latest Kolb Learning Style Inventory 4.0 with nine learning styles and the assessment of learning flexibility will be examined in the context of the concept of conceptions of the self and individuality.

Chapter 5 presents a typology of social knowledge structures—formism, contextualism, mechanism, and organicism—and relates these knowledge structures to academic fields of study and career paths. The Chapter 5 Update and Reflections examines research on the spiral of knowledge creation with particular emphasis on tacit knowledge. The latest research on Pepper's world hypotheses is examined with its implications for disciplinary learning spaces.

Part III, "Learning and Development," begins in Chapter 6 with a statement of the experiential learning theory of development wherein adult development is portrayed in three stages—acquisition, specialization, and integration. The chapter describes how conscious experience changes through these developmental stages via higher levels of learning. The Chapter 6 Update and Reflections examines the latest research on adult development and its implication for ELT development theory.

Chapter 7 documents specialization as the major developmental process in higher education. It describes the knowledge structures of different fields of study and the consequences of matches and mismatches between student learning styles. Relationships between professional education and later career adaptation are also examined. The section called "managing the learning process" describes applications of experiential learning theory to teaching and administration. The Chapter 7 Update and Reflections describes our latest research on learning spaces and educator roles involved in teaching around the learning cycle and the assessment and development of learning skills.

Chapter 8 describes the challenges of integrative development in adulthood by examining the life structures of integrated and adaptively flexible individuals. Integrity is posed as the pinnacle of development, conceived as the highest form of learning. The Chapter 8 Update and Reflections focuses on lifelong learning and the learning way; describing how learners can use practices of deliberate experiential learning to respond to a changing world where lifelong learning is the norm.

David A. Kolb
Kaunakakai, Hawaii

Introduction

To the Second Edition

Pleasure is the state of being
Brought about by what you
Learn.
Learning is the process of
Entering into the experience of this
Kind of pleasure.
No pleasure, no learning.
No learning, no pleasure.

—Wang Ken, Song of Joy

Revisiting *Experiential Learning* after 30 years to prepare this second edition is a great pleasure for me. The book has been the centerpiece of my career as a scholar. Try as I might to escape it, inquiry about experiential learning has continued to inspire and fascinate, always drawing me back to explore new questions and ideas. Heidegger said that any thinker has but one central thought in life, one essential intuition, and I guess experiential learning is mine.

I still remember vividly the experience that gave rise to my intuition about the power of experience in learning. It was in the summer of 1966 at a two week T-group at the National Training Laboratory in Bethel, Maine. Early in the morning that began the second week, I was standing on the porch of the old Victorian house where we held our meetings. The sun was rising through the trees bringing its warmth to the morning chill. Its light bathed the woods in a golden glow that seemed to emanate from everything it struck. The surreal vividness of the scene was matched by the intensity of my emotions as I marveled at the closeness I felt to my group members who only a week before had been total strangers. We had shared our life stories with one another, but more powerfully had experienced one another deeply in the here-and-now. I had experienced a transformation in myself and witnessed transformation in others flowing from the contact. I was so eager to begin our next week together. The scene before me became blurred and sparkled like crystal as my eyes teared up in the sun. Fully experiencing such intense emotion was not typical for me, and it highlighted my sense that there was magic in the sensitivity training model of group dynamics that Kurt Lewin and his associates had created (see Chapter 1, p. 10).

I resolved to learn more and thus began a lifetime of inquiry into experiential learning. That fall my colleagues and I began experimenting with T-groups in our introductory course on Organizational Behavior at MIT's Sloan School of Management. Later we used them in our Peace Corps training programs. In both cases, these efforts met with mixed results in spite of our persistent attempts. While some students and trainees "got it" and were as profoundly influenced by their experience as I was, for many it was more about "emotional intelligence" than they were ready for. The lack of structure and deviation from the traditional classroom learning process they were accustomed to was too confusing for them to get much from the unstructured groups.

These difficulties spurred us to reflect more deeply in a search for a way to extract the "active experiential learning ingredient" that made these groups so powerful, and harness it to produce a more effective learning process. What we extracted was the experiential learning cycle based on Lewin's laboratory method. T-groups were typically introduced by saying, "We are going to share *experiences* together, *reflect* and share their meaning for us and together *think* about the implications for or group. From this understanding we can *act* to create the kind of group we want." We ask ourselves if this learning cycle might be a way to structure learning experiences.

For me this marked the beginning of my research based on the works of those who I have come to call the Foundational Scholars of Experiential Learning—William James, Kurt Lewin, John Dewey, Jean Piaget, Lev Vygotsky, Carl Jung, Carl Rogers, Paulo Freire, and Mary Parker Follett. I chose the word "experiential" to describe a particular perspective on the learning process that originated in the work of these scholars of experiential learning (see Chapter 1 Update and Reflections). Some have suggested that the term experiential learning is redundant since learning itself is generally conceived to be the result of experience as opposed to genetics, biological development, or instinct (e.g., Fenwick, 2003). However, the behaviorist approaches to the study of learning that dominated psychology in the first half of the twentieth century reduced objective experience to reinforcements and denied any role for subjective conscious experience in learning. The foundational scholars all stood at the margins of this dominant tradition placing subjective, conscious, and intentional experiencing at the center of the learning process.

In *Experiential Learning*, I developed Experiential Learning Theory (ELT) to integrate the common themes in their work into a systematic framework that can address twenty-first century problems of learning and education. My intention was to describe a theoretical perspective on the individual learning process that applied in all situations and arenas of life. Experiential learning theory was developed following Lewin's plan for the creation of scientific knowledge by conceptualizing phenomena through formal, explicit, testable theory. In his approach, "before a system can be fully useful the concepts in it have to be defined in a way that (1) permits the treatment of both the qualitative and quantitative aspects of phenomena in a single system, (2) adequately represents the conditional-genetic (or causal) attributes of phenomena, (3) facilitates the measurement

(or operational definition) of these attributes, and (4) allows both generalization to universal laws and concrete treatment of the individual case" (Cartwright, 1951, p. ix).

Having studied experiential learning for nearly 50 years, my views have evolved and deepened but not changed substantially. In many ways I have moved forward by moving backward, studying more deeply the works of the foundational scholars, recalling the line of T. S. Eliot at the beginning of Chapter 2, "We shall not cease from exploration. And the end of all our exploring. Will be to arrive where we started. And know the place for the first time." In revisiting *Experiential Learning* for this second edition, I cannot say that I know it definitively, but I can see that countless cycles through the learning spiral have deepened and expanded my views about learning and development.

What Is Experiential Learning?

The most important of these spirals of learning was a continuing inquiry into the nature of experience and the process of learning from it. The research literature on experiential learning contains much confusion and debate about its meaning. My inquiry took me back to William James' (1912) creation of the philosophy of radical empiricism in a search for an epistemological perspective that would help explain the ELT meaning of experiential learning and clarify the differences with other uses of the term. If I were to rewrite *Experiential Learning* today, I would promote James to equal status with Dewey, Lewin, and Piaget in the book. My further study of his work (James, 1912; Taylor and Wozniak, 1996) after its publication revealed in radical empiricism an epistemological foundation for experiential learning theory and a detailed analysis of the role of experience in learning. His description of the learning cycle (see Chapter 1 Update and Reflections, page 24) may well have been the first.

Experiential Learning as an Educational Technique or Type of Learning

A common usage of the term "experiential learning" defines it as a particular form of learning from life experience; often contrasted it with lecture and classroom learning. Keeton and Tate (1978) offered this definition, "Learning in which the learner is directly in touch with the realities being studied. It is contrasted with the learner who only reads about, hears about, talks about, or writes about these realities but never comes into contact with them as part of the learning process." In this view of experiential learning, the emphasis is often on direct sense experience and in-context action as the primary source of learning, often down-playing a role for thinking, analysis, and academic knowledge. Many educational institutions offer experiential education programs such as internships, field projects, and classroom experiential learning exercises to add a direct experience component to their traditional academic studies. Here it is thought of as an educational technique like service learning, problem-based learning, action learning, or team

learning. Lifelong learning is often conceived as a process of learning from direct life experiences that is controlled by the individual.

Buchmann and Schwille (1983) argue against education based on this type of experiential learning and further propose that the purpose of formal education is to overcome the biases inherent in the process of learning from ongoing life experience. They cite numerous sources of error in judgments based on experience such as Tversky and Kahneman's (1973) availability heuristic where the availability of objects and events in memory such as those experienced firsthand tend to be overused. Similarly vivid experiences tend to be weighted more highly than objective data. One's experience is necessarily influenced by their political and social context and thus is biased in judging social and political issues from other perspectives in the social order. They argue that reading is in some ways superior to reflection on personal experience because it broadens possibilities and perspectives. Secondhand knowledge is more generalizable and can go beyond what is known from experience. They conclude, "The measure of education is the degree to which it allows all people to access the objective contents of thought, to theoretical systems, problems and ideas with a range of implications not yet known" (1973, p. 46).

In a series of experiments examining performance after repeated decision making with outcome feedback called action-based or experiential learning, Eisenstein and Hutchinson (2006) conclude that "managers and consumers should increase their use of objective analyses and decrease reliance on experience or intuition" (2006, p. 256). Their studies showed that learning from experience was dependent on learning goals. "Some goals direct attention toward information that results in learning that transfers across situations, but other goals result in learning that is distorted by the characteristics of the stimuli that were considered most goal relevant. Contrary to popular wisdom, we found that reliance on this type of experiential learning is likely to be a risky proposition because it can be either accurate and efficient or errorful and biased" (2006, p. 257).

Brehmer (1980) cites studies showing that experienced experts are often no better than novices at making clinical judgments; for example, a study that compared clinical psychologists' and secretaries' ability to diagnose brain damage showed no difference between these two groups. He also describes studies that show that people have a number of biases that prevent them from using the information that experience provides. He concludes that experience does not necessarily lead to better judgment and decisions "because it stems from an untenable conception of the nature of experience, a conception that assumes that truth is manifest and does not have to be inferred . . . if we do not learn from experience, this is largely because experience often gives us little information to learn from" (1980, pp. 239–240).

In *The Ambiguities of Experience* the great organizational theorist James March contrasts his definition of experiential knowledge, "lessons extracted from the ordinary course of life and work," with academic knowledge "generated by systematic observation and analysis by expert and transmitted by authorities" (2010, p. 9). He attributes the

problems and pitfalls of learning from experience to the incomprehensible nature of experience. "Experience is rooted in a complicated causal system that can be described adequately by a description that is too complex for the human mind" (2010, p. 47). "As a result, the lessons derived from experiential learning are rife with unjustified conclusions, superstitious associations, misleading correlations, tautological generalizations, and systematic biases" (2010, p. 107).

When experiential learning is defined as a naturalistic ongoing process of direct learning from life experiences contrasted with the systematic learning of formal science and education, the picture that emerges is that experiential learning is haphazard, unreliable, and misleading, and it must be corrected by academic knowledge. The characterization of experiential learning conjures images of the ordinary persons blindly groping their way through daily experiences while academic knowledge is created by extraordinary persons who are presumably immune to the biases of learning from ordinary experience. For all humans, experience does not yield reliable knowledge easily. The experiential learning biases described above apply in the scientific laboratory as well as on the street. Scientists also learn from experience and are equally challenged by the difficulties of overcoming the biases involved. What the above cost/benefit analyses of experiential and academic knowledge fail to consider are the biases and limitations of generalized academic knowledge. Judgments and decisions based on "objective" knowledge can also be incorrect and unreliable because of unjustified assumptions in the analysis of data, professional tunnel vision that reinforces an availability heuristic in judgment, and many of the other problems cited above that are associated with learning in the course of ordinary life. Further, the context-free nature of generalized knowledge which is often considered its strength can become a liability in practice through the misapplication of generalized knowledge to a specific context. The first chapter of Mary Parker Follett's *Creative Experience* offers an excellent analysis of the limitations of the expert's generalized knowledge and the process through it is applied: "The social process is not, first, scientific investigation, then some method of persuading the people to abandon their own experience and thought, and lastly an acclaiming populace. The social process is a process of cooperating experience. But for this every one of us must acquire the scientific attitude of mind. This will not make us professional experts; it will enable us to work with professional experts and to find our place in a society which needs the experience of all, to build up a society which shall embody the experience of all" (1924, p. 30).

Experiential Learning in ELT

The above definition of experiential learning as in-context experiencing and action is not the meaning of experiential learning as defined in ELT. My intention in using the term "experiential" was to describe a theoretical perspective on the individual learning process that applied in all situations and arenas of life, a holistic process of learning that can aid in overcoming the difficulties of learning from experience enumerated above.

The aim of ELT is to create, through a synthesis of the works of the foundational scholars, a theory that helps explain how experience is transformed into learning and reliable knowledge. Truth is not manifest in experience; it must be inferred by a process of learning that questions preconceptions of direct experience, tempers the vividness and emotion of experience with critical reflection, and extracts the correct lessons from the consequences of action.

Dewey, himself, struggled with the incomprehensibility of experience to the point that, in preparing a new introduction to his master philosophical work *Experience and Nature* (1988/1925), he considered changing the title. In his 1951 draft for a new introduction, he wrote, "Were I to write (or rewrite) *Experience and Nature* today I would entitle the book *Culture and Nature* and the treatment of specific subject-matters would be correspondingly modified. I would abandon the term 'experience' because of my growing realization that the historical obstacles which prevented understanding of my use of 'experience' are, for all practical purposes, insurmountable. I would substitute the term 'culture' because with its meanings as now firmly established it can fully and freely carry my philosophy of experience." In this respect, he may have been influenced by the work of Vygotsky who emphasized the powerful influence of cultural artifacts and tools such as language on experience.

Dewey came to the realization that most experience is culturally mediated by many previous trips around the learning cycle:

> Experience is already overlaid and saturated with the products of the reflection of past generations and by-gone ages. It is filled with interpretations, classifications, due to sophisticated thought, which have become incorporated into what seems to be fresh naïve empirical material. It would take more wisdom than is possessed by the wisest historical scholar to track all off these absorbed borrowings to their original sources. [Dewey, 1925, p. 40]

He called this "empirical experience" which was conservative, tradition bound, and prone to conformity and dogmatism. He emphasized that this traditional flow of experience must be interrupted to initiate reflection and learning. While he argued that it was necessary to reflect on experience in order to draw out the meaning in it and to use that meaning as a guide in future experiences, he observed that the reflective process seemed to be initiated only when we are "stuck" with a problem or difficulty or "struck" by the strangeness of something outside of our usual experience (Dewey, 1933). Paulo Freire made a similar point arguing that an intense direct experience, such as a majestic sunrise, which he called "espanto" or shock, was necessary for deep learning.

In this formulation, Dewey echoes his collaborator William James, whose radical empiricism was foundational for the later development of the philosophy of pragmatism. James proposed radical empiricism as a new philosophy of reality and mind, which resolved

the conflicts between nineteenth-century rationalism and empiricism as expressed in the philosophies of idealism and materialism. Speaking of "tangles" created by philosophical and psychological inquiry in his time, he succinctly describes the central principles of both philosophies: "It seems to me that if radical empiricism be good for anything, it ought, with its pragmatic method and principle of pure experience, be able to avoid such tangles, or at least simplify them somewhat. The pragmatic method starts from the postulate that there is no difference of truth that doesn't make a difference of fact somewhere; and it seeks to determine the meaning of all differences of opinion by making the discussion as soon as possible hinge on some practical or particular issue. The principle of pure experience is also a methodological postulate. . . . Everything real must be experiencable somewhere, and every kind of thing experienced must be somewhere real" (1943, pp. 159–160).

For James, everything begins and ends in the continuous flux and flow of experience. In short, experience is all there is—"we start with the supposition that there is only one primal stuff or material in the world, a stuff of which everything is composed . . . we call that stuff 'pure experience'" (1943, p. 4). In this formulation, the duality between the mind (thought) and physical world (thing) is resolved since both are experienced but with different characteristics. Thought is the concrete here-and-now experience "redoubled" in reflection—"If it be the self-same piece of pure experience taken twice over that serves now as thought and now as thing . . . how comes it that its attributes should differ so fundamentally in the two takings? As thing, the experience is extended; as thought, it occupies no space or place. As thing, it is red, hard, and heavy; but who ever heard of a red, hard, or heavy thought" (1943, pp. 27–28).

James was influenced in this view by Husserl's phenomenological view of experience which Calvin Scrhag in *Experience and Being* says, "conveys the unity of insight and action, perception and conception, knowledge and valuation, theory and practice. Experience has to do with seeing into a situation and acting within it. It includes in its range perceptual acts and the anticipation of concepts. It involves both the knowledge and evaluation of objects, events, and situations. Thus experience in its primitive presence lies beyond any conflict between theory and practice, subject and object, intellect and will" (cited in Hopkins, 1993, p. 53). Dewey set forth the postulate of immediate empiricism to describe radical empiricism. He argued that the significance of the principle is that of a philosophical method of analysis, "If you wish to find out what subjective, objective, physical, mental, cosmic, psychic, cause, substance, purpose, activity, evil, being, quantity—any philosophical term, in short—means go to experience and see what it is experienced *as*" (1905, p. 399).

The implication of the philosophy of radical empiricism for experiential learning theory and the experiential learning cycle is that it is not only the Concrete Experience mode of learning that is experiential, all modes of the learning cycle (see Figure 2.5, p. 51) are included in experience. Both modes of grasping experience—Concrete Experience (CE)

and Abstract Conceptualization (AC)—and both modes of transforming experience—Reflective Observation (RO) and Active Experimentation (AE)—are part of the experiential learning process. Many use the term experiential learning to refer to exercises and games used to involve students in the learning process. However, a classroom lecture may be an abstract experience, but it is also a concrete one, when, for example, a learner admires and imitates the lecturer. Likewise a learner may work hard to create an abstract model in order to make sense of an internship experience or experiential exercise. From the learner's perspective, solitary reflection can be an intensely emotional concrete experience, and the action of programming a computer can be a highly abstract experience.

Returning to my vivid sunrise experience in Bethel, Maine, for Dewey I was struck, for Freire it was a shock, for James it was a pure experience. It was, of course, not totally a pure experience, being surrounded by many thoughts. I had read about Lewin's laboratory method and Rogers, emphasis on experiencing in the change process. But the experience had the effect of focusing my attention and drawing me more deeply into a commitment to explore it more deeply. As Dewey said, I was provoked by it into critical reflection, a reflection that led to an idea (the learning cycle) which we tried out in action, the consequences of which provided new stuckness (e.g., student and Peace Corps volunteer resistance) and other trips around the learning cycle. All of these were experiences—the concrete "pure experience," the critical reflection, thinking about ideas, and the process of implementing actions. The critics of learning from direct experience cited above describe how the vividness of a personal experience can cause it to have undue weight in decisions and judgments. Whether it was undue or not, I certainly gave it a lot of weight. It captured my interest and attention and thus created a continuity of selected experiences that continues to this day, following James interest–attention–selection cycle.

James in *The Principles of Psychology* describes how attention plays its focus "like a spotlight" across the field of consciousness in a way that is sometimes involuntary, as when the shock of pure experience "captures" our attention, but is often voluntary. James defines the voluntary process as a spiral of interest–attention–selection that creates a continuous ongoing flow of experience summarized in the pithy statement: "My experience is what I agree to attend to" (1890, p. 403). He defines interest as an "intelligible perspective" that directs attention and ultimately selection of some experiences over others. Selection feeds back to refine and integrate a person's intelligible perspective serving as "the very keel on which our mental ship is built" (James cited in Leary, 1992, p. 157).

Experiential Learning Theory Research Today

The most gratifying and motivating result of experiential learning theory for me has been in the way it has stimulated and focused a scholarly research conversation about experiential learning. Experience Based Learning Systems was created in 1980 to facilitate experiential learning theory research and communication among researchers and practitioners of experiential learning through its website www.learningfromexperience.com.

Since its first statement in 1971 (Kolb, 1971; Kolb, Rubin, and McIntyre, 1971), there have been many studies using experiential learning theory to advance the theory and practice of experiential learning. Since experiential learning theory is a holistic theory of learning that identifies learning style differences among different academic specialties, it is not surprising to see that experiential learning theory research is highly interdisciplinary, addressing learning and educational issues in many fields. An analysis of the 1,004 entries in the 1999 bibliography (Kolb, Boyatzis, and Mainemelis, 2001) shows 207 studies in management, 430 in education, 104 in information science, 101 in psychology, 72 in medicine, 63 in nursing, 22 in accounting, and 5 in law. About 55 percent of this research has appeared in refereed journal articles, 20 percent appeared in doctoral dissertations, 10 percent appeared in books and book chapters, and 15 percent appeared in conference proceedings, research reports, and others.

Since 2000 experiential learning theory research in these fields around the world has more than quadrupled. A 2013 review of management education research (Arbaugh, Dearmond, and Rau) showed that 27 percent of the top cited articles in management education journals were about experiential learning and learning styles. Research in engineering, computer science, and health care has increased substantially. The current experiential learning theory bibliographies include nearly 4,000 entries from 1971–2014. Kolb and Kolb (2013) have summarized selected studies of the experiential learning method and the Learning Style Inventory (LSI) applied in 30 different professions and academic disciplines. The studies cover a broad range of applications using experiential learning theory and the Learning Style Inventory. Some studies have used the LSI and the experiential learning cycle to understand and manage differences between students and faculty learning styles. Some educators have used an experimental design to compare the effectiveness of an experiential learning method with a more traditional course format, whereas others have developed and implemented instructional methods using the experiential learning model as a framework.

Included are research studies from every region of the world with many contributions coming from the United States, Canada, Brazil, the United Kingdom, China, India, Australia, Japan, Norway, Finland, Sweden, the Netherlands, and Thailand. These studies support the cross-cultural validity of experiential learning theory and the Kolb Learning Style Inventory (KLSI) and also support practical applicability across cultures. The KLSI has been translated into many languages including English, Spanish, French, Portuguese, Arabic, Russian, Dutch, German, Swedish, Chinese, Romanian, Persian, Thai, and Japanese. The value of the holistic ELT framework for understanding cultural differences has been show in a number of studies on cross-cultural management (Kayes, Kayes, and Yamazaki, 2005; Kayes, Kayes, and Yamazaki, 2006; Yamazaki, and Kayes, 2004; Yamazaki and Kayes, 2007).

There have been two comprehensive reviews of the experiential learning theory literature, one qualitative and one quantitative. In 1991, Hickox extensively reviewed the

theoretical origins of experiential learning theory and qualitatively analyzed 81 studies that focused on the application of the experiential learning theory model as well as on the application of the concept of learning style in accounting and business education, helping professions, medical professions, post-secondary education, and teacher education. She concluded that, overall, 61.7 percent of the studies supported experiential learning theory, 16.1 percent showed mixed support, and 22.2 percent did not support experiential learning theory. In 1994, Iliff conducted a meta-analysis of 101 quantitative LSI studies culled from 275 dissertations and 624 articles that were qualitative, theoretical, and quantitative studies of ELT and the KLSI (LSI, Kolb, 1971, 1985, 1999a, 2005). Using Hickox's evaluation format, he found that 49 studies showed strong support for the LSI, 40 showed mixed support, and 12 studies showed no support. About half of the 101 studies reported sufficient data on the LSI scales to compute effect sizes via meta-analysis. Most studies reported correlations that fell in the .2 to .5 range for the LSI scales. In conclusion, Iliff suggested that the magnitude of these statistics is not sufficient to meet standards of predictive validity, while noting that the LSI was not intended to be a predictive psychological test like IQ, GRE, or GMAT. The LSI was originally developed as a self-assessment exercise and a means for construct validation of experiential learning theory.

Judged by the standards of construct validity, experiential learning theory has been widely accepted as a useful framework for learning-centered educational innovation, including instructional design, curriculum development, and life-long learning. Academic field and job classification studies viewed as a whole also show a pattern of results consistent with the experiential learning theory structure of knowledge theory. Most of the debate and critique in the ELT/LSI literature has centered on the psychometric properties of the LSI. Results from this research have been of great value in revising the LSI in 1985, 1999, 2005, and most recently in 2011. The Kolb Learning Style Inventory 4.0 (Kolb and Kolb, 2011; see Chapter 4 Update and Reflections). Recent critique (see Chapter 2 Update and Reflections) has been more focused on the theory than the instrument examining the intellectual origins and underlying assumptions of experiential learning theory from what might be called a critical theory perspective where the theory is seen as individualistic, cognitivist, and technological (e.g., Vince, 1997; Holman, 1997; Hopkins, 1993). Kayes (2002) has reviewed these and other critics of experiential learning theory and offered his own critique of the critics. He suggests that critics have overlooked the role of Vygotsky's social constructivist learning theory in the experiential learning theory of development and the role of personal knowledge and social knowledge in experiential learning. He proposes an extension of experiential learning theory based on Lacan's post-structuralist analysis that elaborates the fracture between personal and social knowledge and the role that language plays in shaping experience.

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The Foundations of Contemporary Approaches to Experiential Learning

The modern discovery of inner experience, of a realm of purely personal events that are always at the individual's command and that are his exclusively as well as inexpensively for refuge, consolidation and thrill, is also a great and liberating discovery. It implies a new worth and sense of dignity in human individuality, a sense that an individual is not merely a property of nature, set in place according to a scheme independent of him . . . but that he adds something, that he makes a contribution. It is the counterpart of what distinguishes modern science, experimental hypothetical, a logic of discovery having therefore opportunity for individual temperament, ingenuity, invention. It is the counterpart of modern politics, art, religion and industry where individuality is given room and movement, in contrast to the ancient scheme of experience, which held individuals tightly within a given order subordinate to its structure and patterns.

—John Dewey, Experience and Nature

Human beings are unique among all living organisms in that their primary adaptive specialization lies not in some particular physical form or skill or fit in an ecological niche, but rather in identification with the process of adaptation itself—in the process of learning. We are thus the learning species, and our survival depends on our ability to adapt not only in the reactive sense of fitting into the physical and social worlds, but in the proactive sense of creating and shaping those worlds.

Our species long ago left the harmony of a nonreflective union with the "natural" order to embark on an adaptive journey of its own choosing. With this choosing has come responsibility for a world that is increasingly of our own creation—a world paved in concrete, girded in steel, wrapped in plastic, and positively awash in symbolic communications.

From those first few shards of clay recording inventories of ancient commerce has sprung a symbol store that is exploding at exponential rates, and that has been growing thus for hundreds of years. On paper, through wires and glass, on cables into our homes—even in the invisible air around us, our world is filled with songs and stories, news and commerce interlaced on precisely encoded radio waves and microwaves.

The risks and rewards of mankind's fateful choice have become increasingly apparent to us all as our transforming and creative capacities shower us with the bounty of technology and haunt us with the nightmare of a world that ends with the final countdown, ". . . three, two, one, *zero*." This is civilization on the high wire, where one misstep can send us cascading into oblivion. We cannot go back, for the processes we have initiated now have their own momentum. Machines have begun talking to machines, and we grow accustomed to obeying their conclusions. We cannot step off—"drop out"—for the safety net of the natural order has been torn and weakened by our aggressive creativity. We can only go forward on this path—nature's "human" experiment in survival.

We have cast our lot with learning, and learning will pull us through. But this learning process must be reimbued with the texture and feeling of human experiences shared and interpreted through dialogue with one another. In the over-eager embrace of the rational, scientific, and technological, our concept of the learning process itself was distorted first by rationalism and later by behaviorism. We lost touch with our own experience as the source of personal learning and development and, in the process, lost that experiential centeredness necessary to counterbalance the loss of "scientific" centeredness that has been progressively slipping away since Copernicus.

That learning is an increasing preoccupation for everyone is not surprising. The emerging "global village," where events in places we have barely heard of quickly disrupt our daily lives, the dizzying rate of change, and the exponential growth of knowledge all generate nearly overwhelming needs to learn just to survive. Indeed, it might well be said that learning is an increasing *occupation* for us all; for in every aspect of our life and work, to stay abreast of events and to keep our skills up to the "state of the art" requires more and more of our time and energy. For individuals and organizations alike, learning to adapt to new "rules of the game" is becoming as critical as performing well under the old rules. In moving toward what some are optimistically heralding as "the future learning society," some monumental problems and challenges are before us. According to some observers, we are on the brink of a revolution in the educational system—sparked by wrenching economic and demographic forces and fueled by rapid social and technological changes that render a "frontloaded" educational strategy obsolete. New challenges for social justice and equal opportunity are arising, based on Supreme Court decisions affirming the individual's right of access to education and work based on proven ability to perform; these decisions challenge the validity of traditional diplomas and tests as measures of that ability. Organizations need new ways to renew and revitalize themselves and to forestall obsolescence for the organization and the people in it. But perhaps most

of all, the future learning society represents a personal challenge for millions of adults who find learning is no longer "for kids" but a central lifelong task essential for personal development and career success.

Some specifics help to underscore dimensions of this personal challenge:

- Between 80 and 90 percent of the adult population will carry out at least one learning project this year, and the typical adult will spend 500 hours during the year learning new things (Tough, 1977).
- Department of Labor statistics estimate that the average American will change jobs seven times and careers three times during his or her lifetime. A 1978 study estimated that 40 million Americans are in a state of job or career transition, and over half these people plan additional education (Arbeiter et al., 1978).
- A study by the American College Testing Program (1982) shows that credit given in colleges and universities for prior learning experience has grown steadily from 1973–74 to 1980–82. In 1980–82, 1¼ million quarter credit hours were awarded for prior learning experience. That learning is a lifelong process is increasingly being recognized by the traditional credit/degree structure of higher education.

People do learn from their experience, and the results of that learning can be reliably assessed and certified for college credit. At the same time, programs of sponsored experiential learning are on the increase in higher education. Internships, field placements, work/study assignments, structured exercises and role plays, gaming simulations, and other forms of experience-based education are playing a larger role in the curricula of undergraduate and professional programs. For many so-called nontraditional students—minorities, the poor, and mature adults—experiential learning has become the method of choice for learning and personal development. Experience-based education has become widely accepted as a method of instruction in colleges and universities across the nation.

Yet in spite of its increasingly widespread use and acceptance, experiential learning has its critics and skeptics. Some see it as gimmicky and faddish, more concerned with technique and process than content and substance. It often appears too thoroughly pragmatic for the academic mind, dangerously associated with the disturbing anti-intellectual and vocationalist trends in American society. This book is in one sense addressed to the concerns of these critics and skeptics, for without guiding theory and principles, experiential learning can well become another educational fad—just new techniques for the educator's bag of tricks. Experiential learning theory offers something more substantial and enduring. It offers the foundation for an approach to education and learning as a lifelong process that is soundly based in intellectual traditions of social psychology, philosophy, and cognitive psychology. The experiential learning model pursues a framework for examining and strengthening the critical linkages among education,

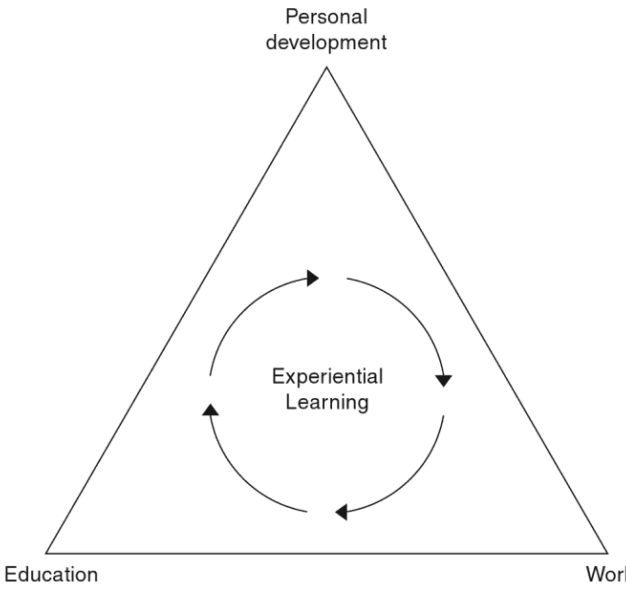

Figure 1.1 Experiential Learning as the Process that Links Education, Work, and Personal Development

work, and personal development. See Figure 1.1. It offers a system of competencies for describing job demands and corresponding educational objectives, and it emphasizes the critical linkages that can be developed between the classroom and the "real world" with experiential learning methods. It pictures the workplace as a learning environment that can enhance and supplement formal education and can foster personal development through meaningful work and career-development opportunities. And it stresses the role of formal education in lifelong learning and the development of individuals to their full potential as citizens, family members, and human beings.

In this chapter, we will examine the major traditions of experiential learning, exploring the dimensions of current practice and their intellectual origins. By understanding and articulating the themes of these traditions, we will be far more capable of shaping and guiding the development of the exciting new educational programs based on experiential learning. As Kurt Lewin, one of the founders of experiential learning, said in his most famous remark, "There is nothing so practical as a good theory."

Experiential Learning in Higher Education: The Legacy of John Dewey

In the field of higher education, there is a growing group of educators—faculty, administrators, and interested outsiders—who see experiential education as a way to revitalize the university curriculum and to cope with many of the changes facing higher education today. Although this movement is attributed to the educational philosophy of John Dewey,

its source is in reality a diverse group spanning several generations. At a conference of the National Society for Internships and Experiential Education (NSIEE), a speaker remarked that there were three identifiable generations in the room: the older generation of Deweyite progressive educators, the now middle-aged children of the 1960s' Peace Corps and civil-rights movement, and Vietnam political activists of the 1970s. Yet it is the work of Dewey, without doubt the most influential educational theorist of the twentieth century, that best articulates the guiding principles for programs of experiential learning in higher education. In 1938, Dewey wrote *Experience and Education* in an attempt to bring some understanding to the growing conflict between "traditional" education and his "progressive" approach. In it, he outlined the directions for change implied in his approach:

> If one attempts to formulate the philosophy of education implicit in the practices of the new education, we may, I think, discover certain common principles. . . To imposition from above is opposed expression and cultivation of individuality; to external discipline is opposed free activity; to learning from texts and teachers, learning through experience; to acquisition of isolated skills and techniques by drill is opposed acquisition of them as means of attaining ends which make direct vital appeal; to preparation for a more or less remote future is opposed making the most of the opportunities of present life; to static aims and materials is opposed acquaintance with a changing world. . . .
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> I take it that the fundamental unity of the newer philosophy is found in the idea that there is an intimate and necessary relation between the processes of actual experience and education. [Dewey, 1938, pp. 19, 20]

In the last 40 years, many of Dewey's ideas have found their way into "traditional" educational programs, but the challenges his approaches were developed to meet, those of coping with change and lifelong learning, have increased even more dramatically. It is to meeting these challenges that experiential educators in higher education have addressed themselves—not in the polarized spirit of what Arthur Chickering (1977) calls "either/orneriness," but in a spirit of cooperative innovation that integrates the best of the traditional and the experiential. The tools for this work involve many traditional methods that are as old as, or in some cases older than, the formal education system itself. These methods include apprenticeships, internships, work/study programs, cooperative education, studio arts, laboratory studies, and field projects. In all these methods, learning is experiential, in the sense that:

> . . . the learner is directly in touch with the realities being studied. . . . It involves direct encounter with the phenomenon being studied rather than merely thinking about the encounter or only considering the possibility of doing something with it. [Keeton and Tate, 1978, p. 2]

In higher education today, these "traditional" experiential learning methods are receiving renewed interest and attention, owing in large measure to the changing educational

environment in this country. As universities have moved through open-enrollment programs and so on, to expand educational opportunities for the poor and minorities, there has been a corresponding need for educational methods that can translate the abstract ideas of academia into the concrete practical realities of these people's lives. Many of these new students have not been rigorously socialized into the classroom/textbook way of learning but have developed their own distinctive approach to learning, sometimes characterized as "survival skills" or "street wisdom." For these, the field placement or work/study program is an empowering experience that allows them to capitalize on their practical strengths while testing the application of ideas discussed in the classroom.

Similarly, as the population in general grows older and the frequency of adult career change continues to increase, the "action" in higher education will be centered around adult learners who demand that the relevance and application of ideas be demonstrated and tested against their own accumulated experience and wisdom. Many now approach education and midlife with a sense of fear ("I've forgotten how to study") and resentment based on unpleasant memories of their childhood schooling. As Rita Weathersby has pointed out, "adults' learning interests are embedded in their personal histories, in their visions of who they are in the world and in what they can do and want to do" (1978, p. 19). For these adults, learning methods that combine work and study, theory and practice provide a more familiar and therefore more productive arena for learning.

Finally, there is a marked trend toward vocationalism in higher education, spurred on by a group of often angry and hostile critics—students who feel cheated because the career expectations created in college have not been met, and employers who feel that the graduates they recruit into their organizations are woefully unprepared. Something has clearly gone awry in the supposed link between education and work, resulting in strong demands that higher education "shape up" and make itself relevant. There are in my view dangerous currents of anti-intellectualism in this movement, based on reactionary and counterproductive views of learning and development; but a real problem has been identified here. Experiential learning offers some avenues for solving it constructively.

For another group of educators, experiential learning is not a set of educational methods; it is a statement of fact: People *do learn* from their experiences. The emphasis of this group is on assessment of prior experience-based learning in order to grant academic credit for degree programs or certification for licensing in trades and professions. The granting of credit for prior experience is viewed by some as a movement of great promise:

> The great significance of systematic recognition of prior learning is the linkage it provides between formal education and adult life; that is, a mechanism for integrating education and work, for recognizing the validity of all learning that is relevant to a college degree and for actively fostering recurrent education. [Willingham et al., 1977, p. 60]

Yet it has also raised great concern, primarily about the maintenance of quality, since such assessment procedures might easily be abused by "degree mills" or mail-order diploma operations. To respond to both these opportunities and these concerns, in 1973 the Cooperative Assessment of Experiential Learning (CAEL) project was established in cooperation with the Educational Testing Service to create and implement practical and valid methodologies for assessing what people have learned from their prior work and life experience.[1]

As might be expected, researchers and practitioners in this area are more concerned with *what* people learn—the identifiable knowledge and skill outcomes of learning from accumulated experience—than they are with *how* learning takes place, the process of experiential learning. This emphasis on the outcomes of learning and their reliable assessment is critical to the establishment of effective links between education and work, since this linkage depends on the accurate identification and matching of personal skills with job demands. Since the Supreme Court's *Griggs v. Duke Power* decision, establishing an equitable and valid matching process has become a top priority in our nation's efforts toward equal employment opportunity. In that case, Griggs, an applicant for a janitorial job, sued to challenge a requirement that applicants have a high school diploma. In supporting Griggs, the court ruled that no test, certificate, or other procedure can be used to limit access to a job unless it is shown to be a valid predictor of performance on that job. This ruling, which has since been extended and supported by other high-court rulings, has set forth a great challenge to educators, behavioral scientists, and employers—to develop competence-based methods of instruction and assessment that are meaningfully related to the world of work.

Taken together, the renewed emphasis on "traditional" experiential learning methods and the emphasis on competence-based methods of education, assessment, and certification signal significant changes in the structure of higher education. Arthur Chickering sees it this way:

> . . . there is no question that issues raised by experiential learning go to the heart of the academic enterprise. Experiential learning leads us to question the assumptions and conventions underlying many of our practices. It turns us away from credit hours and calendar time toward competence, working knowledge, and information pertinent to jobs, family relationships, community responsibilities, and broad social concerns. It reminds us that higher education can do more than develop verbal skills and deposit information in those storage banks between the ears. It can contribute to more complex kinds of intellectual development and to more pervasive dimensions of human development required for effective citizenship. It can help students cope with shifting developmental tasks imposed by the life cycle and rapid social change.

1. CAEL has since changed its name to the Council for the Advancement of Experiential Learning to reflect its broader interests in experiential learning methods as well as assessment.

If these potentials are to be realized, major changes in the current structures, processes, and content of higher education will be required. The campus will no longer be the sole location for learning, the professor no longer the sole source of wisdom. Instead, campus facilities and professional expertise will be resources linked to a wide range of educational settings, to practitioners, field supervisors, and adjunct faculty. This linking together will be achieved through systematic relationships with cultural organizations, businesses, social agencies, museums, and political and governmental operations. We no longer will bind ourselves completely to the procrustean beds of fixed time units set by semester, trimester, or quarter systems, which stretch some learning to the point of transparency and lop off other learning at the head or foot. Instead, such systems will be supplemented by flexible scheduling options that tailor time to the requirements for learning and to the working realities of various experiential opportunities. Educational standards and credentials will increasingly rest on demonstrated levels of knowledge and competence as well as on actual gains made by students and the value added by college programs. We will recognize the key significance of differences among students, not only in verbal skills and academic preparation but also in learning styles, capacity for independent work, self-understanding, social awareness and human values. Batch processing of large groups will be supplemented by personalized instruction and contract learning.

The academy and the professoriat will continue to carry major responsibility for research activities, for generating new knowledge, and for supplying the perspectives necessary to cope with the major social problems rushing toward us. That work will be enriched and strengthened by more broad-based faculty and student participation and by its wide-ranging links to ongoing experiential settings. [Chickering, 1977, pp. 86–87]

Experiential Learning in Training and Organization Development: The Contributions of Kurt Lewin

Another tradition of experiential learning, larger in numbers of participants and perhaps wider in its scope of influence, stems from the research on group dynamics by the founder of American social psychology, Kurt Lewin. Lewin's work has had a profound influence on the discipline of social psychology and on its practical counterpart, the field of organizational behavior. His innovative research methods and theories, coupled with the personal charisma of his intellectual leadership, have been felt through three generations of scholars and practitioners in both fields. Although the scope of his work has been vast, ranging from leadership and management style to mathematical contributions to social-science field theory, it is his work on group dynamics and the methodology of action research that have had the most far-reaching practical significance. From these

studies came the laboratory-training method and T-groups (T = training), one of the most potent educational innovations in this century. The action-research method has proved a useful approach to planned-change interventions in small groups and large complex organizations and community systems. Today this methodology forms the cornerstone of most organization development efforts. The consistent theme in all Lewin's work was his concern for the integration of theory and practice, stimulated if not created by his experience as a refugee to the United States from Nazi Germany. His classic studies on authoritarian, democratic, and *laissez faire* leadership styles were his attempt to understand in a practical way the psychological dynamics of dictatorship and democracy. His best-known quotation, "There is nothing so practical as a good theory," symbolizes his commitment to the integration of scientific inquiry and social problem solving. His approach is illustrated no better than in the actual historical event that spawned the "discovery" of the T-group (see Marrow, 1969). In the summer of 1946, Lewin and his colleagues, most notably Ronnald Lippitt, Leland Bradford, and Kenneth Benne, set out to design a new approach to leadership and group-dynamics training for the Connecticut State Interracial Commission. The two-week training program began with an experimental emphasis encouraging group discussion and decision making in an atmosphere where staff and participants treated one another as peers. In addition, the research and training staff collected extensive observations and recordings of the groups' activities. When the participants went home at night, the research staff gathered together to report and analyze the data collected during the day. Most of the staff felt that trainees should not be involved in these analytical sessions where their experiences and behavior were being discussed, for fear that the discussions might be harmful to them. Lewin was receptive, however, when a small group of participants asked to join in these discussions. One of the men who was there, Ronald Lippitt, describes what happened in the discussion meeting that three trainees attended:

> Sometime during the evening, an observer made some remarks about the behavior of one of the three persons who were sitting in—a woman trainee. She broke in to disagree with the observation and described it from her point of view. For a while there was quite an active dialogue between the research observer, the trainer, and the trainee about the interpretation of the event, with Kurt an active prober, obviously enjoying this different source of data that had to be coped with and integrated.
>
> At the end of the evening the trainees asked if they could come back for the next meeting at which their behavior would be evaluated. Kurt, feeling that it had been a valuable contribution rather than an intrusion, enthusiastically agreed to their return. The next night at least half of the 50 or 60 participants were there as a result of the grapevine reporting of the activity by the three delegates.
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> The evening session from then on became the significant learning experience of the day, with the focus on actual behavioral events and with active dialogue

about differences of interpretation and observation of the events by those who had participated in them. [Lippitt, 1949]

Thus the discovery was made that learning is best facilitated in an environment where there is dialectic tension and conflict between immediate, concrete experience and analytic detachment. By bringing together the immediate experiences of the trainees and the conceptual models of the staff in an open atmosphere where inputs from each perspective could challenge and stimulate the other, a learning environment occurred with remarkable vitality and creativity.

Although Lewin was to die in 1947, the power of the educational process he had discovered was not lost on the other staff who were there. In the summer of 1947, they continued development of the insights they had gained in a three-week program for change agents, this time in Bethel, Maine. It was here that the basic outlines of T-group theory and the laboratory method began to take shape. It is important to note that even in these early beginnings, the struggle between the "here-and-now" experiential orientation and the "there-and-then" theoretical orientation that has continued to plague the movement was in evidence:

> There resulted a competition between discussing here-and-now happenings, which of necessity focused on the personal, interpersonal and group levels; and discussing outside case materials. This sometimes resulted in the rejection of any serious consideration of the observer's report of behavioral data. More often it led eventually to rejection of outside problems as less involving and fascinating. [Benne, 1964, p. 86]

Later, in the early years of the National Training Laboratories,[2] this conflict expressed itself in intense debates among staff as to how conceptual material should be integrated into the "basic encounter" process of the T-group. And still later, in the 1960s, on the waves of youth culture, acid rock, and Eastern mysticism, the movement was to be virtually split apart into "West Coast" existential factions and "East Coast" traditionalists (Argyris, 1970). As we shall see later in our inquiry, this conflict between experience and theory is not unique to the laboratory-training process but is, in fact, a central dynamic in the process of experiential learning itself.

In its continuing struggle, debate, and innovation around this and other issues, the laboratory-training movement has had a profound influence on the practice of adult education, training, and organization development. In particular, it was the spawning ground for two streams of development that are of central importance to experiential learning, one of values and one of technology. T-groups and the so-called laboratory method on which they were based gave central focus to the value of subjective personal experience in learning, an emphasis that at the time stood in sharp contrast to

2. Now known as the NTL Institute for Applied Behavioral Sciences.

the "empty-organism" behaviorist theories of learning and classical physical-science definitions of knowledge acquisition as an impersonal, totally logical process based on detached, objective observation. This emphasis on subjective experience has developed into a strong commitment in the practice of experiential learning to existential values of personal involvement, and responsibility and humanistic values emphasizing that feelings as well as thoughts are facts.

To the leaders of the movement, these values, coupled with the basic values of a humanistic scientific process—a spirit of inquiry, expanded consciousness and choice, and authenticity in relationships—offered new hope-filled ideals for the conduct of human relationships and the management of organizations (Schein and Bennis, 1965). More than any other single source, it was this set of core values that stimulated the modern participative-management philosophies (variously called Theory Y management, 9.9 management, System 4 management, Theory Z, and so on) so widely practiced in this country and increasingly around the world. In addition, these values have formed the guiding principles for the field of organization development and the practice of planned change in organizations, groups, and communities. The most recent and comprehensive statement of the relationship between laboratory-training values and experiential learning is the work of Argyris and Schon (1974, 1978). They maintain that learning from experience is essential for individual and organizational effectiveness and that this learning can occur only in situations where personal values and organizational norms support action based on valid information, free and informed choice, and internal commitment.

Equally important, there has emerged from the early work in sensitivity training a rapidly expanding applied technology for experiential learning. Beginning with small tasks (such as a decision-making problem) that were used in T-groups to focus the group's experience on a particular issue (for example, processes of group decision making), there has developed an immense variety of tasks, structured exercises, simulations, cases, games, observation tools, role plays, skill-practice routines, and so on. The common core of these technologies is a simulated situation designed to create personal experiences for learners that serve to initiate their own process of inquiry and understanding. These technologies have had a profound effect on education, particularly for adult learners. The training and development field has experienced a virtual revolution in its methodology, moving from a "dog and pony show" approach that was only a fancy imitation of the traditional lecture method to a complex educational technology that relies heavily on experience-based simulations and self-directed learning designs (Knowles, 1970). Indeed, there are many who share the view of Harold Hodskinson, a former director of the National Institute for Education and the current president of the NTL Institute, that these private-sector innovations in educational technology are challenging the ability of the formal educational establishment to compete in an open market. Along with the American Society for Training and Development (ASTD), specialized associations of academics and training and development practitioners have been formed to extend experiential approaches that were initially focused on the human-relationship issues

emphasized in T-groups to other content areas, such as finance, marketing, and planning through the use of computer-aided instruction, video recording, structured role-play cases, and other software and hardware techniques. In addition, there are countless small and relatively large organizations specializing in the various educational technologies that have grown to support the $50 billion training and development industry in the United States. Although the laboratory-training movement has not been responsible for all these developments, it has had an undeniable influence on many of them.

Jean Piaget and the Cognitive-Development Tradition of Experiential Learning

The Dewey and Lewin traditions of experiential learning represent external challenges to the idealist or, as James (1907) terms them, rationalist philosophies that have dominated thinking about learning and education since the Middle Ages; Dewey from the philosophical perspective of pragmatism, and Lewin from the phenomenological perspective of Gestalt psychology. The third tradition of experiential learning represents more of a challenge from within the rationalist perspective, stemming as it does from the work of the French developmental psychologist and genetic epistemologist Jean Piaget. His work on child development must stand on a par with that of Freud; but whereas Freud placed his emphasis on the socioemotional processes of development, Piaget's focus is on cognitive-development processes—on the nature of intelligence and how it develops. Throughout his work, Piaget is as much an epistemological philosopher as he is a psychologist. In fact, he sees in his studies of the development of cognitive processes in childhood the key to understanding the nature of human knowledge itself.

It was in Piaget's first psychological studies that he came across the insight that was to make him world-famous. He began to work as a student of Alfred Binet, the creator of the first intelligence test, standardizing test items for use in IQ and aptitude tests. During this work, Piaget's interests began to diverge sharply from the traditional testing approach. He found himself much less interested in whether the answers that children gave to test problems were correct or not than he was in the process of reasoning that children used to arrive at the answers. He began to discover age-related regularities in these reasoning processes. Children at certain ages not only gave wrong answers but also showed qualitatively different ways of arriving at them. Younger children were not "dumber" than older children; they merely thought about things in an entirely different way. In the 50 years that followed this discovery, these ideas were to be developed and explored in thousands of studies by Piaget and his co-workers.

Stated most simply, Piaget's theory describes how intelligence is shaped by experience. Intelligence is not an innate internal characteristic of the individual but arises as a product of the interaction between the person and his or her environment. And for Piaget, action is the key. He has shown, in careful descriptive studies of children from infants

to teenagers, that abstract reasoning and the power to manipulate symbols arise from the infant's actions in exploring and coping with the immediate concrete environment. The growing child's system of knowing changes qualitatively in successively identifiable stages, moving from an enactive stage, where knowledge is represented in concrete actions and is not separable from the experiences that spawn it, to an ikonic stage, where knowledge is represented in images that have an increasingly autonomous status from the experiences they represent, to stages of concrete and formal operations, where knowledge is represented in symbolic terms, symbols capable of being manipulated internally with complete independence from experiential reality.

In spite of its scope and the initial flurry of interest in his work in the late 1920s, Piaget's research did not receive wide recognition in this country until the 1960s. Stemming as it did from the French rationalist tradition, Piaget's work was not readily acceptable to the empirical tradition of American psychology, particularly since his clinical methods did not seem to meet the rigorous experimental standards that characterized the behaviorist research programs that dominated American psychology from 1920 to 1960. In addition, Piaget's interests were more descriptive than practical. He viewed with some disdain the pragmatic orientation of American researchers and educators who sought to speed up or facilitate the development of the cognitive stages he had identified, referring to these interests in planned change and development as the "American question."

Piaget's ultimate recognition in America was due in no small part to the parallel work of the most prominent American cognitive psychologist, Jerome Bruner. Bruner saw in the growing knowledge of cognitive developmental processes the scientific foundations for a theory of instruction. Knowledge of cognitive developmental stages would make it possible to design curricula in any field in such a way that subject matter could be taught respectably to learners at any age or stage of cognitive development. This idea became at once a guiding objective and a great challenge to educators. A new movement in curriculum development and teaching emerged around this idea, a movement focused on the design of experience-based educational programs using the principles of cognitive-development theory. Most of these curriculum-development efforts were addressed to the subject matters of science and mathematics for elementary and secondary students, although related efforts have been made in other subject areas, such as social studies, and such experience-based curricula can be found in some freshman and sophomore college-level courses. The major task addressed by these programs was the translation of the abstract symbolic principles of science and mathematics into modes of representation that could be grasped by people at more concrete stages of cognitive development. Typically, this representation takes the form of concrete objects that can be manipulated and experimented with by the learner to discover the scientific principle involved. Many of these were modifications of Piaget's original experiments—for example, allowing children to pour water back and forth from tall, thin beakers to short, fat ones to discover the principle of conservation.

When introduced in the proper climate, these experience-based curricula had the same exhilarating effect on the learning process as Lewin's discovery of the T-group. Children were freed from the lockstep pace of memorizing (or ignoring) watered-down presentations of scientific and mathematical principles that in some cases actually made learning more advanced principles more difficult; for example, to spend years learning to count only in base 10 makes learning base 2, 3, and so on, much more difficult. Learning became individualized, concrete, and self-directed. Moreover, the child was learning about the process of discovering knowledge, not just the content. Children became "little scientists," exploring, experimenting, and drawing their own conclusions. These classrooms buzzed with the excitement and energy of intrinsically motivated learning activity. These experience-based learning programs changed the educational process in two ways. First, they altered the *content* of curriculum, providing new ways of teaching subjects that were formerly thought to be too advanced and sophisticated for youngsters; and second, they altered the learning *process*, the way that students went about learning these subjects.

Even though in many quarters these innovations met an enthusiastic reception and eventual successful implementation, they also provoked strong reaction and criticism. Some of these criticisms were justified. This new way of learning required a new approach to teaching. In some cases, teachers managed the learning process well, and intrinsically motivated learning was the result. In others, the climate for learning was somehow different; students did not learn the principle of conservation by experimenting with the water jars, they just learned how to pour water back and forth. Other criticisms seem to me less valid. Some have blamed the decline on SAT scores on the new math and other self-directed curricula that made learning appear to be fun and lacking in disciplined practice of the basics. In spirit, these debates are strongly reminiscent of the controversy surrounding Dewey's progressive-education movement and the experience/theory conflicts concerning T-groups.

The cognitive-development tradition has had a less direct but equally powerful effect on adult learning. Although Piaget's stages of cognitive development terminated in adolescence, the idea that there are identifiable regularities in the development process has been extended into later adulthood by a number of researchers. In method and conceptual structure, these approaches owe a great deal to the Piagetian scheme. One of the first such approaches was Lawrence Kohlberg's extension of Piaget's early work on moral development (see Kurtines and Greif, 1974). Kohlberg began his research on schoolchildren but soon found that only the early stages of moral judgment that he had identified were actually achieved in childhood and that for many adults, the challenges of the later stages of moral judgment still lay before them. William Perry, in his outstanding book, *Forms of Intellectual and Ethical Development in the College Years* (1970), found similar patterns in the way Harvard students' systems of knowledge evolved through the college years, moving from absolutist, authority-centered, right/wrong views of knowl-

The implication here is that these two modes of knowing or grasping the world stand as equal and complementary processes. This position stands in sharp contrast to that of Piaget and other cognitive theorists, who consider concrete, experience-oriented forms of knowing as lower developmental manifestations of true knowledge, represented by abstract propositional reasoning.

A full exploration of this issue requires examination of the philosophical literature, particularly the domains of metaphysics and epistemology. Here also, the scientific rational traditions have been dominant, even though challenged since the early years of this century by the pragmatism of Dewey, James, and others, and certain scientists and mathematicians like Michael Polanyi and Albert Einstein, who in their own work came upon the limitations of rational scientific inquiry. Of special relevance is the work of the philosopher and metaphysician Stephen Pepper (1966, 1942), who developed a system of world hypotheses on which he bases a typology of knowledge systems. With this framework as a guide, we shall be able to explore the relationships between the learning process and the knowledge systems that flow from it.

Figure 1.2 summarizes seven themes that offer guidance and direction for programs of experiential learning. These themes stem from the work of Dewey, Lewin, and Piaget. From Kurt Lewin and his followers comes the theory and technology of T-groups and action research. The articulation of the democratic values guiding experiential learning is to be found in both Lewin's work and the educational philosophy of John Dewey. Dewey's pragmatism forms the philosophical rationale for the primary role of personal experience in experiential learning. Common to all three traditions of experiential learning is the emphasis on development toward a life of purpose and self-direction as the organizing principle for education. Piaget's distinctive contributions to experiential learning are his description of the learning process as a dialectic between assimilating experience into concepts and accommodating concepts to experience, and his work on epistemology—the relationship between the structure of knowledge and how it is learned.

These themes suggest guiding principles for current and emerging applications of experiential learning theory. In the case of social policy and action, experiential learning can be the basis for constructive efforts to promote access to and influence on the dominant technological/symbolic culture for those who have previously been excluded: minorities, the poor, workers, women, people in developing countries, and those in the arts. In competence-based education, experiential learning offers the theory of learning most appropriate for the assessment of prior learning and for the design of competence-centered curricula. Lifelong learning and career-development programs can find in experiential learning theory a conceptual rationale and guiding philosophy as well as practical educational tools. Finally, experiential learning suggests the principles for the conduct of experiential education in its many forms and for the design of curricula implementing Bruner's manifesto: "Any subject can be respectably taught at any level."

learning on any lesser scale is to doom ourselves to frustration, isolation or failure. [1979, p. 42]

The Dewey, Lewin, and Piagetian traditions of experiential learning have produced a remarkable variety of vital and innovative programs. In their brief histories, these traditions have had a profound effect on education and the learning process. The influence of these ideas has been felt in formal education at all levels, in public and private organizations in this country and around the world, and in the personal lives of countless adult learners. Yet the future holds even greater challenges and opportunities. For these challenges to be successfully met, it is essential that these traditions learn from one another and cooperate to create a sound theoretical base from which to govern practice. Although in practice these traditions can appear very different—a student internship, a business simulation, a sensitivity training group, an action research project, a discovery curriculum in elementary science study—there is an underlying unity in the nature of the learning process on which they are based. It is to an examination of that process that we now turn.

Update and Reflections

Foundational Scholars of Experiential Learning Theory

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If I have seen further it is by standing on the shoulders of giants.

—Isaac Newton

Chapter 1 described the conceptual foundations of experiential learning theory (ELT) with particular emphasis on the works of John Dewey, Kurt Lewin, and Jean Piaget who at the time were the particular scholars who informed my research on experiential learning and learning style. I also included other scholars—William James, Carl Rogers, Paulo Freire, Lev Vygotsky and Carl Jung—who influenced the development of other parts of the theory. I discovered Mary Parker Follett some time after the book was published and have used her work ever since. From their varied professions and cultural perspectives, these great Western scholars have had a profound impact on our thinking about learning and development, challenging and inspiring us to better ways of learning and growing as human beings. Their contributions span 100 years beginning at the end of the nineteenth century with William James, John Dewey, and Mary Parker Follett and ending at the end of the twentieth century with the deaths of Carl Rogers and Paulo Freire (refer to Figure 1.1). In spite of the Western origins of their work, their influence today is global; East and West, North and South. Their approaches were in many respects more consistent with the East Asian Confucian and

cis Crick, reviewing the philosophical implications of biological advances in our understanding of consciousness, has invoked James as a guiding philosopher who had said it all a hundred years ago" (Taylor and Wozniak, 1996, p. xxxii). His examination of the role of attention in conscious experience and his ideo-motor theory of action, addressing how consciousness of one's learning process can be used to intentionally improve learning, were foundational for the later work on metacognition and deliberate experiential learning described in the Chapter 8 Update and Reflections. He is also recognized as the founder of the contemporary concept of dual processing theories (Evans, 2008) derived from his dual knowledge concepts of apprehension and comprehension.

Lev Vygotsky, whose prodigious brilliantly creative career was ended prematurely by his death from tuberculosis at age 38, was called the Mozart of psychology by Stephen Toulmin. This is in spite of the fact that he never had any formal training in psychology, being interested in literature, poetry, and philosophy when he was young. The Soviet authorities of his time kept him under pressure to toe the ideological Marxist line in his theories, and after his death the government repudiated his ideas. Today, however, his work is hugely influential in education around the world (Tharpe and Gallimore, 1988), and his ideas about the role of culture in the development of thought are widely cited as foundational for liberation ideologies, social constructionism, and activity theory (Bruner, 1986; Holman, Pavlica, and Thorpe, 1997).

These scholars not only studied experiential learning; they lived it. They approached their scientific inquiry as learning from experience, examining their own personal experience, using careful observation, building sophisticated and creative theoretical systems, bringing a passionate advocacy for their ideas for the betterment of humanity. I suspect they would all subscribe to Carl Rogers' description of his approach to research, "I have come to see both research and theory as being aimed toward the inward ordering of significant experience. Thus research is not something esoteric, nor an activity in which one engages to gain professional kudos. It is the persistent, disciplined effort to make sense and order out of the phenomena of subjective experience. Such effort is justified because it is satisfying to perceive the world as having order and because rewarding results often ensue when one understands the orderly relationships which appear to exist in nature. One of these rewarding results is that the ordering of one segment of experience in a theory immediately opens up new vistas of inquiry, research, and thought, thus leading one continually forward. (I have, at times, carried on research for purposes other than the above to satisfy others, to convince opponents and sceptics, to gain prestige, and for other unsavory reasons. These errors in judgment and activity have only deepened the above positive conviction.)" (1959, p. 188).

Most, like Rogers, also chaffed at the confines of conventional disciplinary inquiry methods, "In the invitation to participate in the APA study, I have been asked to cast our theoretical thinking in the terminology of the independent-intervening-dependent variable, in so far as this is feasible. I regret that I find this terminology somehow uncongenial.

Interracial Commission to combat racial and religious prejudice that led to the creation of the T-Group (see Chapter 1, pp. 8–12). His development of the action research methodology in these projects has had a great continuing influence.

Often described as the founder of social psychology, Lewin's influence in the field is so pervasive that it is hard to define. Warren Bennis said simply, ". . . we are all Lewinians." John Thibaut, one of Lewin's research assistants at MIT, said, ". . . it is not so difficult to understand why he was influential. He had an uncanny intuition about what problems were important and what kinds of concepts and research situations were necessary to study them. And though he was obsessed with theory, he was not satisfied with the attainment of theoretical closures but demanded of the theory that its implications for human life be pursued with equal patience and zeal" (cited in Marrow, 1969, p. 189). Yet, paradoxically, he too was a liminal scholar, working for the most part outside the psychological establishment. "No prestigious university offered him an appointment. (His significant work was done in odd settings, such as the Cornell School of Home Economics and the Iowa Child Welfare Research Station.) The American Psychological Association never selected him for any assignment or appointed him to any important committee. . . ." (Marrow, 1969, p. 227).

My deep admiration for Lewin stems from the many students and colleagues he nurtured and developed to become outstanding scholars in their own right. His influence in the field came not so much from his published works, which can be hard to find, but from those who worked with him. He consistently put their names forward in publications. Jerome Frank, a graduate student of Lewin's, describes how he accomplished this, "Each new idea or problem seemed to arouse him, and he was able to share his feelings with colleagues and juniors. . . . Seminars were held in his home, and it was hard to distinguish the influence of his ideas from the influence of his personality. Because Lewin could be critical without hurting, he stimulated creativity in all those around him. . . . He seemed to enjoy all kinds of human beings and, open and free as he was, shared his ideas immediately—even if they were half-formed—eager for comments and reactions while the original idea was still being developed" (cited in Marrow, 1969, p. 54).

Contributions to Experiential Learning

The following summary of the key contributions of the foundational scholars to experiential learning can only highlight the influence of their work in experiential learning theory. Their respective approaches will be elaborated on in subsequent chapters.

William James (1841–1910)

In the introduction, I have already described how James, among the foundational scholars, is the originator of experiential learning theory in his philosophy of radical empiricism and the dual knowledge theory, knowing by apprehension (CE) and comprehension

to achieve praxis, making a difference in their world. He contrasted this educational approach to the "banking concept of education" where ideas are deposited in learners' heads.

Freire's work was inspirational for us in the creation of our theory of conversational learning in *Conversational Learning: An Experiential Approach to Knowledge Creation* (Baker, Jensen, and Kolb, 2002). We had a chance to work with him in 1994 in one of his last U.S. appearances before his death. He was the keynote speaker and workshop leader in *The International Experiential Learning Conference: A Global Conversation about Learning* jointly sponsored by The Council for Adult and Experiential Learning, The International Consortium for Experiential Learning, and The National Society for Experiential Education. Our CWRU Organizational Behavior Department designed a plan to conduct the Conference in terms of the principles of conversational learning and Freire's dialogue culture groups. The 1,500 participants were divided into diverse 10–12 person Exploration and Reflection groups that met regularly with a facilitator throughout the conference presentations and workshops. The aim was to counter-balance the "banking" format typical of most conventions and conferences with good conversation. In Freire's sessions, he modeled dialogue and conversation with other conference participants.