

***Consciousness-Based*SM Education: Principles, Practice, and Research**

Susan Levin Dillbeck and Michael C. Dillbeck

**Maharishi University of Management
Fairfield, Iowa, U.S.A.**

Adapted from *Modern Science and Vedic Science*, vol. 1, no. 4, 1987, pp. 383–431, by permission of Maharishi University of Management Press.

This paper presents evidence that the highest goals of education can be achieved by adding the Maharishi Transcendental Meditation and TM-Sidhi(SM) programs to the existing curricula of schools and universities. This technology of Consciousness-Based education develops the full value of the three fundamental aspects of education: the knower, or student; the known, or subject matter; and the processes of knowing, which connect knower to known. The first section gives a brief overview of the basic principles from Maharishi Vedic Science(SM) that are the foundation of this approach to education. Section 2 analyzes knower, known, and process of knowing. It suggests that the deficiencies in education today result from the knower's limited experience of his or her own infinite potential, and that these deficiencies can be eliminated by stabilizing in the awareness of student and teacher the experience of the full potential of the mind, transcendental consciousness. Section 3 describes how the theory and experience of transcendental consciousness, which are provided by the Transcendental Meditation and TM-Sidhi programs and the Science of Creative Intelligence®, are applied in an educational system. Section 4 reviews the scientific research documenting the success of Consciousness-Based education. Sections 5 and 6 describe how this approach solves current educational problems and is giving rise to new, more powerful principles for guiding educational practice.

Introduction: Education for the Full Development of Human Life

The study of education grew out of a desire to improve the quality of schools and universities. The knowledge available in this area of study, however, has not given any educational system what it needs to produce wise, mature, and fulfilled citizens or a peaceful world. Students are dissatisfied, teachers are discouraged, and the public is not happy with the results. Hundreds of published reports over the past century—dozens in the last few years—have identified the failures of education but have not provided the means to assure its success. Clearly, if the knowledge available in this field is responsible for its outcomes, more profound knowledge is needed.

Over the past 30 years, Maharishi Mahesh Yogi has suggested that the solution to the problems in education lies in developing the limitless inner potential of students and teachers. Toward this end Maharishi has revived from the tradition of ancient Vedic Science the knowledge for systematically unfolding the full range of human consciousness. This knowledge is the Maharishi Technology of the Unified Field, and includes the Maharishi Transcendental Meditation and TM-Sidhi programs.

Transcendental Meditation is the foundation of Maharishi's educational programs. This technology has been found to prepare students to learn and teachers to teach by increasing their intelligence, creativity, and vitality. TM has been learned by more than three million people worldwide and implemented in public and private educational institutions in over 20 countries. Extensive research and experience

demonstrate that this program is uniquely effective in enabling educational systems to realize their highest aims. This article discusses Maharishi's contribution to education in the following sections:

1. Overview of Maharishi's Theory of Education;
2. Analysis of the Educational Process: Knower, Known, and Process of Knowing;
3. Realizing the Full Potential of Education through *Consciousness-Based* Education;
4. Validation of the Success of *Consciousness-Based* Education: Results of Scientific Research and Applications;
5. Meeting Current Educational Challenges;
6. New Principles of Education Based on Knowledge and Experience of the Unified Field.

1. Overview of Maharishi's Theory of Education

A few fundamental principles form the basis of Maharishi's approach to education. These ideas, briefly introduced below, are explained more fully in subsequent sections.

1. The creative potential of the mind is unlimited, having its source in the field of pure consciousness.

Maharishi explains that the thoughts and feelings of the conscious mind are limited expressions of a vast, unbounded reservoir of creative potential at the basis of all thought. The basis of thought, he explains, is the field of pure consciousness or pure intelligence, the most fundamental level of existence in man and nature. Only by experiencing pure consciousness can individuals use their full mental and physical potential in daily life. "As long as that basic field of creative intelligence does not come to the conscious level of the mind, life does not become as strong or as powerful as is its capacity to be" (lecture, February 12, 1971).

2. The field of pure consciousness is the unified field of natural law.

Progress in quantum physics during the past twenty years has led to theories that describe the complete unification of all particles and forces of nature in a single unified field. Physicists characterize the unified field as self-interacting, self-sufficient, and infinitely dynamic, creating from within itself all the laws of nature governing the universe. These and other characteristics have led Maharishi and prominent unified field theorists to conclude that the unified field being investigated today by modern science is the same field known by Vedic Science for thousands of years as pure consciousness (Hagelin, 1987).

Maharishi's Vedic Science describes the unified field as the unmanifest, unchanging basis of all subjective and objective existence, a field of infinite creativity and intelligence containing all the laws of nature in "seed" form. Maharishi describes the unified field as the concentrated source of all the innumerable qualities in the universe that guide life in a progressive and evolutionary direction (Maharishi Mahesh Yogi, 1986, pp. 24–27).

3. The unified field, or pure consciousness, can be experienced through the practice of the Maharishi Technology of the Unified Field, which includes the Transcendental Meditation and TM-Sidhi programs.

Transcendental Meditation (TM) is an easily learned, natural technique during which the individual experiences the unified field of natural law in his own awareness as transcendental consciousness (Alexander, Boyer, & Alexander, 1987). As Maharishi states,

In Transcendental Meditation the conscious mind comes to the simplest form of human awareness, where consciousness is open to itself. This self-referral state of consciousness is the unified field of natural law. (Maharishi International University, in press, p. 1)

The TM-Sidhi program is an advanced practice of the Maharishi Technology of the Unified Field. This program trains individuals to think and act while their awareness is established at the level of the unified field; it greatly enhances the coordination between mind and body and the ability to fulfill one's desires.

4. As the individual repeatedly experiences transcendental consciousness the functioning of the entire nervous system becomes more integrated and efficient, leading to improved mental abilities, health, and social behavior.

Through the regular practice of Transcendental Meditation for 15–20 minutes twice daily, the infinite creativity and perfect orderliness of the unified field become increasingly lively in daily life. At the same time the TM technique gives deep rest and releases stresses that impede optimal functioning of mind, body, and behavior (Wallace, 1986).

Over 350 scientific research studies conducted in the past 17 years confirm that the Maharishi Transcendental Meditation and TM-Sidhi programs benefit physiological, psychological, and sociological development (Maharishi International University, 1984). (See Section 4 of this paper.)

5. Continued practice of the TM and TM-Sidhi programs develops higher states of consciousness in which one enjoys a permanent state of fulfillment while spontaneously benefiting oneself and society.

According to Maharishi, when transcendental consciousness is experienced as a continuous reality along with waking, dreaming, and sleeping, individuals spontaneously use the full potential of the mind, easily accomplishing their goals without damaging themselves or the environment. Maharishi explains that this capacity is inherent in the human nervous system: "The structure of life is complete; that completeness has only to be lived. And this is the goal of education, to make the individual be at least what he is—total life" (lecture, February 12, 1971).

Maharishi calls the culmination of human development "unity consciousness": the unbounded field of transcendental consciousness is present in every boundary—in every perception, thought, and feeling. This gives an unbroken wholeness or unity to life; every object, event, and person is experienced as a blissful expression of oneself.

6. Practice of the Maharishi Transcendental Meditation and TM-Sidhi programs in large groups creates an influence of coherence and positivity in the whole society, reducing negative trends and improving the quality of life.

Research has repeatedly shown that when the TM and TM-Sidhi programs are practiced in one place by a relatively small group of people—on the order of the square root of one percent of a population—crime, accidents, sickness, violence, and other negative trends in society decrease, and positive trends, such as economic vitality, increase. (See Section 4 of this paper.) This finding, which has been replicated many times worldwide, has practical significance for educational institutions. Any school or university of sufficient size can be a source of coherence and harmony for the nation as a whole, and if the group is large enough, for the world.

Maharishi summarizes the results of using the knowledge and technology of Consciousness-Based education:

The creative genius of the student blossoms as his awareness is identified more and more fully with the unified field of all the laws of nature. Instinctively his thoughts are right; he does not make mistakes; his behavior is spontaneously evolutionary. He grows in ideal

citizenship—the ability to fulfill his own interests and promote the interests of society simultaneously. The natural simplicity of his life radiates the dignity of higher states of consciousness. (Maharishi International University, 1984, p. 34)

2. Analysis of the Educational Process: Knower, Known and Process of Knowing

Maharishi describes education as having three basic components: the learner, or knower; that which is to be learned, or the known; and the process of knowing or learning, which connects the knower with the known. The processes of knowing include sense perception, thought, intellectual analysis, and intuition (see Figure 1).

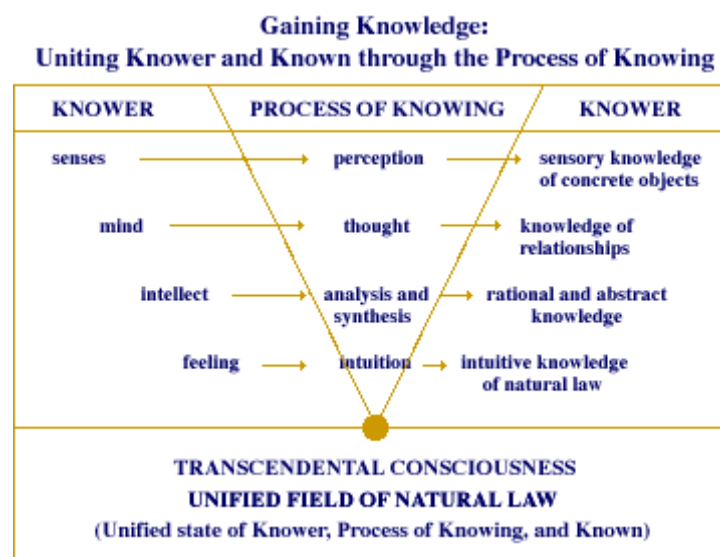


Figure 1. This figure illustrates the levels of the mind and the relationship among knower, process of knowing, and known. The level of awareness of the knower determines the corresponding process of knowing, as well as the nature of the knowledge gained. Education traditionally trains the knower to use deeper levels of the mind to gain more useful and fulfilling knowledge. When the deepest level of the mind, the unified field, is lively in the knower's awareness, all levels of the knower and all processes of knowing are integrated and functioning at their full potential. Knower and known are united on the ground of transcendental consciousness. The result is complete knowledge of natural law, and on that basis, thought and action are spontaneously most effective.

This model of knower, known, and knowing is useful for analyzing the strengths and limitations of educational practice. Educators throughout history have recognized how weakness in any of these three areas creates weakness in the entire process of imparting knowledge. For example, stress in students' lives, superficial or incoherent content, teaching that fails to stimulate deeper thinking processes—these are signs of weakness in knower, known, and process of knowing that ultimately preclude the educational system from achieving its goals.

Unfortunately, most educators have not understood the primary importance of the knower in the interaction of these three components, nor how to improve all three simultaneously, nor what to expect when the potential of each is fully realized. This section describes the consequences of incomplete development of each of these three aspects of the educational experience. It also outlines how Maharishi's Vedic Science fully unfolds and unifies knower, known, and process of knowing, thereby

making education most rewarding and complete.

THE KNOWER—In Maharishi's analysis, educational systems have organized formal schooling without complete knowledge of the creative potential of the individual or how to develop it. Research suggests that students' entering levels of cognitive and emotional development largely determine their success in school (B. Bloom, 1976). Yet programs for improving these aspects of the students' lives have not been found by research to be consistently successful. As a result, students who graduate with high motivation and intelligence are the same students who entered the schools and universities with these qualities, and generally those who came without them leave without them (Astin, 1977).

Of equal concern is the failure of our institutions to foster in the student the traits and values that uphold the integrity and progress of society—enlightened self-interest, rationality, compassion, justice, breadth of vision (A. Bloom, 1987). These more subtle values have long been associated with liberal education. Yet no educational system has been able to consistently produce graduates who embody the highest qualities of human life. It is evident that without more fundamental knowledge of human potential, society will always be hindered by what John Goodlad (1984, p. 57) calls the "education gap: the distance between man's most noble visions of what he might become and present levels of functioning."

Maharishi has said that to make these highest ideals a reality, education cannot depend solely on teachers, curriculum, and parents. The students themselves must develop their own enormous untapped potential. When students are not growing in receptivity, depth, inner discipline, or enthusiasm for learning, they themselves become frustrated, teachers become exhausted, and the whole environment suffers from lack of creativity, coherence, and progress.

Without this vitality in the schools many teachers entering the profession with a high level of commitment and high standards find it difficult to maintain their initial level of energy. From his extensive study of high schools, which included 1350 teachers, Goodlad (1984) reports:

The teachers in our sample, on the whole, went into teaching because of these inherent professional values. However, they encountered in schools many realities not conducive to professional growth...Even if the best in pedagogy is practiced for a few years, the demands on teachers are such that some will turn to routines that make the least physical and emotional demands. (p. 194)

Even in higher education, where students are more motivated to advance in their chosen specialization, it is rare to find students whose educational experience is contributing to the growth of their own wisdom, happiness, and holistic development:

Most professors are specialists, concerned only with their own fields, interested in the advancement of those fields in their own terms...They have been entirely emancipated from the old structure of the university, which at least helped to indicate that they [the specializations] are incomplete, only parts of an unexamined and undiscovered whole. So the student must navigate among a collection of carnival barkers, each trying to lure him into a particular sideshow. This undecided student is an embarrassment to most universities, because he seems to be saying, "I am a whole human being. Help me to form myself in my wholeness and let me develop my real potential," and he is the one to whom they have nothing to say. (A. Bloom, 1987, p. 339)

Face to face with the graduates of our educational system, the public has come to expect not much more than reading, writing, and arithmetic from its schools, and no better product from its universities than a qualified specialist. In an address at the 1973 annual conference of the American Association for Higher Education, Maharishi defined the problem and offered a solution:

It is obvious that education has been facing problems for decades, for centuries. It has not

been satisfactory... What is lacking should be obvious to all. If we look into the process of gaining knowledge we find there are two sides to knowledge—the object of knowledge and the subject of knowledge, the knower. What the present system of education provides is knowledge of the object; what it misses is knowledge of the subject, knowledge of the knower.

To Maharishi, "knowledge of the knower" includes more than being aware of one's thoughts and feelings. It refers to the individual's direct subjective experience of the full range of his own consciousness, from the most active surface level of thought to the deepest inner silence of transcendental consciousness, the field of the total potential of the mind (Maharishi Mahesh Yogi, 1986). (See Figure 1.)

Education until now has offered no procedures to give students access to the full range of the mind. Though occasionally experienced by exceptional individuals, the deepest reservoirs of creative intelligence are not lively in the daily existence of millions of students in the world. And this lack, from Maharishi's perspective, impoverishes life:

When the attention is always kept on the outer sphere of life and not drawn to the inner, the link between the inner and the outer life is obviously missing, and the harmony between the two is lost on the conscious level of appreciation. This makes the outer life devoid of the glories of inner life, and the worldly life becomes a struggle, full of ignorance and suffering. The tree becomes dry and dull when the connection with the roots is not maintained. (Maharishi Vedic University, 1986, p. 258)

In Maharishi's view, lack of access to the deepest, nonchanging level of the mind is the source of widespread personal dissatisfaction among students:

The foundation of knowledge is the consciousness of the knower. If the knower is in doubt, if the knower doesn't know himself, then the whole structure of knowledge has no basis to it. And such baseless knowledge can only be non-fulfilling. (1973)

According to Maharishi, when the expanding understanding of the outer world does not bring expansion of personal fulfillment and self-knowledge, a continuous thirst develops that is never satisfied. There are persistent doubts and unanswered questions: Where is this going? To what end? These questions arise not only in students. Even highly educated people often find that the satisfaction and mastery they gain from their particular areas of expertise are not experienced in the rest of their lives.

Maharishi describes transcendental consciousness as the total potential of the individual's creativity and intelligence, as a field of unbounded awareness, as the common ground underlying both knowledge and knower, as the home of all knowledge, and as a field of inner bliss. As the student regularly experiences this field through the practice of Transcendental Meditation, the problems of education that arise from limited experience of the self disappear. Maharishi (1973) states:

Here is a technique, a clue, to satisfaction, even if one cannot go through the study of all subjects and through that basis become proficient in every field of life. If one's conscious mind is open to the field of pure consciousness the home of all knowledge is structured on the level of one's awareness, and on this basis it becomes possible to be at home with everything. This can be the overall gift of education.

Maharishi explains that experience of the full potential of the mind in transcendental consciousness not only brings inner satisfaction but confers mastery in the field of action; thought and action are more powerful and effective. Education has always aspired to develop in the individual increasing mastery over life. In the words of the educational theorist Paul Hirst, education should have the effect of "freeing reason from error and illusion and freeing man's conduct from wrong" (1974, p. 31). The

National Institute of Education's 1984 report on higher education recognized the need for education to culture such broad abilities:

...no one knows precisely how new technologies will affect the skills and knowledge required by our future labor force. We thus conclude that the best preparation for the future is not narrow training for a specific job, but rather an education that will enable students to adapt to a changing world. (p. 43)

From Maharishi's perspective, the most effective way to prepare for a changing world is to develop the spontaneous ability to think and act correctly in every situation. This, he has explained, naturally occurs when awareness is established in "the transcendental field in which reside...the laws of nature responsible for the whole manifest universe" (Maharishi Vedic University, 1985, p. 101). When one's awareness is open to this fundamental field then thoughts are always in harmony with the orderly and evolutionary trends of natural law. One's decisions and actions—in one's discipline or profession, in relationships with others, in every aspect of life—are spontaneously right for the individual and for the environment. In every case they lead to progress. Inherent in the human brain is this capacity to think without error (Maharishi Mahesh Yogi, 1986, pp. 32, 97–98).

This section has proposed that fulfillment of our highest educational goals—whether intellectual, moral, or social—requires more complete development of the knower. This is most effectively attained through the experience of the full potential of the mind, transcendental consciousness. How this experience reveals the full value of the object of knowledge, the known, is discussed next.

THE KNOWN—"The known" is the content of the disciplines, the objects of knowing. For centuries, Western thought has been directed toward investigation of the objects of knowing. In this approach the investigator views nature as separate from himself. He attempts to minimize the role of subjectivity in gaining knowledge, because the subjective approach to knowledge has not proved reliable. The objective approach has been formalized in the concepts and methods of modern science. Using increasingly refined tools of inquiry, scientists explore the outer world, bringing to light subtler levels of nature's functioning.

Objective knowledge, as embodied in the course content of curricula, has received the most systematic and sustained attention from educators; education today focuses mainly on the known. As schools and universities continue to incorporate the methods and findings of science in their curricula, society has continued to progress in knowledge of the outer, objective field of life.

Maharishi points out, however, that exclusive emphasis on the known in our educational systems without commensurate development of the knower has several unfortunate consequences: the knowledge students possess will never be sufficient to make them competent in every area of their lives; their knowledge can never be wholly reliable, complete, or fulfilling; and individuals can never be sure that their knowledge will have only good effects in society.

This section elaborates these points and suggests how the experience of transcendental consciousness can resolve the problems arising from limited comprehension of the known.

Educational institutions are dedicated to offering the knowledge students need to become self-sufficient members of society. But as society becomes more complex and areas of knowledge become increasingly specialized, schools teach less of all there is to know.

More and more young people emerge from high school ready neither for college or for work. This predicament becomes more acute as the knowledge base continues its rapid expansion. The number of traditional jobs shrinks, and new jobs demand greater sophistication and preparation. (The National Commission on Excellence in Education, 1983, p. 12)

Maharishi observes that by teaching only the content of the disciplines, we cannot give students what they need to fully prepare them for life. They can learn in one lifetime only a few of the innumerable laws of nature—a few from chemistry, physics, grammar, or mathematics. This, in Maharishi's terms, is an education that gives partial knowledge of natural law, as contrasted with knowledge of the totality of natural law available in the subjective experience of the unified field (Maharishi Mahesh Yogi, 1986, pp. 31–33). As discussed in the previous section, it is the repeated experience of the totality of natural law that develops competence in every sphere of activity. Maharishi (1973) explains that by offering only partial knowledge of natural law, education cannot hope to give the students mastery over their lives:

An educated person is expected to be proficient in every phase of his life and his environment. Yet the time doesn't allow all disciplines and aspects of life to be mastered. And with continued scientific research, knowledge is increasing rapidly in every field.

Maharishi offers the solution to this problem of incomplete knowledge of the laws of nature.

Now Vedic Science offers the knowledge to develop a fully integrated individual, whose mind, body, intellect, and behavior are in perfect accord with all the laws of nature... Human awareness has the ability to identify completely with the total potential of natural law... and spontaneously exhibit natural law in daily life. Thereby all aspects of life come to be always in the direction of evolution... (Maharishi Mahesh Yogi, 1986, p. 32)

Maharishi has also pointed out that only when the individual's awareness is established in transcendental consciousness is his knowledge completely reliable. Otherwise perception of the object varies, depending on the fluctuating awareness of the perceiver. Scientific methodology is designed to reduce the effects of the observer's variable subjective states on what is observed. But even in the physical sciences, which have been most successful in applying this objective approach, the observer still has been found to influence the object of observation.

Maharishi (1973) explains:

When we consider consciousness, there are different states of consciousness. We are aware that consciousness changes from night to morning to noon to evening. Sometimes we're dull, sometimes asleep, sometimes very wide awake in the morning. Consciousness is a changing value. And knowledge changes with the changing value of consciousness... Different states of consciousness have different values of knowledge. There has to be a way to have reliable knowledge. Otherwise, as the values of consciousness change, knowledge is apt to change. And in the changing spheres of knowledge one finds inconsistency, chaos, confusion. A stable level of consciousness is required, one that will not change, so that the knowledge of an object could be reliable. A non-variable level of consciousness has to be structured in the level of one's awareness. There is a level of consciousness that can be made to be non-variable. That is transcendental consciousness, unbounded awareness.

With repeated experience of transcendental consciousness one begins to maintain it as a continual background of awareness throughout the changes of waking, dreaming, and deep sleep. This more integrated and stable style of functioning, which is called cosmic consciousness, establishes reliable knowledge of any object on the foundation of the nonchanging consciousness of the knower.

Education that pursues objective knowledge alone has another limitation: it cannot deliver complete knowledge of the object. Maharishi points out that as sophisticated as scientific tools become they will not be able to penetrate to the deepest laws of nature that structure the object. This is because the ultimate reality of what is observed cannot be known as separate from the observer; both observer and

observed have their basis in the unified field of natural law. It is a fundamental precept of Maharishi's Vedic Science that in order to fully know any object—its manifest and unmanifest structure and function—the knower has to know the basis of the object, the unified field, experienced as the simplest form of the knower's own awareness.

In this state, according to Maharishi, one fully knows the rose, from the surface appearance of its yellow petals, to the unmanifest laws of nature that give rise to the rose. Furthermore, one experiences it not as a phenomenon apart from oneself, but as expressions of one's Self, of the "unbounded infinity of the observer" (Maharishi Ayur-Veda®, in press).

In a lecture on this topic given in London in 1959, Maharishi said,

All the universities are simply hovering on the surface of knowledge. If, along with the study of each subject, the experience of [pure consciousness] is taught to the students, then they will be able to fathom the deeper levels of that subject, and the whole range of that subject will be studied properly. When the two extremities of that subject—the gross, expanded value and the transcendental value—are connected, then the field of that subject will be complete, and the study of that subject will bring something real and useful in life. (Maharishi Vedic University, 1986, p. 269)

Maharishi further explains that only when one experiences the transcendental reality at the basis of the subject of study, can one cognize the most fundamental laws of nature governing that subject. These laws are discovered in one's own most settled state of consciousness, when one realizes the deepest reality of the object to be one with the deepest reality of the Self. With this level of awakening one's mastery of natural law extends from one area of study to all areas of life:

Knowledge of the universe can't be gained fully and precisely unless the underlying unified reality is known. The very word "universe" indicates variety and unity coexisting; the huge variety of the universe is sustained in unified wholeness. Knowledge of the universe is necessary for anyone to be successful in the universe. You must know the territory you are in if you want to be master of it. The better you know the territory, the better you govern it. (Maharishi Mahesh Yogi, lecture, November 8, 1983)

The practical value of gaining knowledge of the territory is that one gains greater organizing power. For example, if children with a chemistry set try to carry out a chemistry experiment with no set procedures and no formula, they have little organizing power. When students follow an established procedure they gain greater organizing power. Knowing chemical laws so thoroughly that they can conduct their own experiments brings even greater organizing power; but to know how the unified field gives rise to those basic laws of chemistry yields the greatest organizing power. That is why Maharishi urges schools and universities to offer the knowledge of the unified field:

Knowledge has organizing power. The unified field is the field of all knowledge in seed form. All the laws of nature are absolutely vital on that level. It is the source of all organizing power, the source of all streams of power. Once human awareness is open to the field of all knowledge in the unified field, then human awareness is lively in all the organizing power of nature. (Lecture, November 8, 1983)

Maharishi explains that Consciousness-Based knowledge of the object is not only complete; it is personally fulfilling. It brings bliss to the subject, the knower, while conferring the full range of organizing power available at that finest level of natural law. For all the above reasons Maharishi (1986) recommends that modern science expand its areas of investigation:

If progress is to continue, a shift is required from the science of one category to a total science. Vedic Science is that total science. It uncovers the knowledge of the total potential of natural law in its completeness... The very methodology of gaining knowledge

through Vedic Science is such that as one sees the knowledge of natural law on the intellectual level one begins to live that natural law in daily life in a most spontaneous way... If human intelligence is to proceed on the more fulfilling levels of knowledge and existence on earth, now is the time for the complete knowledge of life to be brought to human awareness. (pp. 32–35)

Disproportionate emphasis on objective knowledge not only leaves the individual inept in many areas of life, but gives rise to imbalance in the whole collective consciousness of the nation or world. Knowledge of the electronic and nuclear levels of natural law, for example, has led to expansion of destructive nuclear power without commensurate expansion of the ability to create harmony and lasting peace. As in the previous cases, Maharishi (1986) locates the source of this problem in insufficient knowledge:

If survival is perceived as a problem, it is because modern science has only the objective approach to knowledge of natural law. If the existence of the world is threatened, it is because the knowledge of natural law is superficial; it is knowledge of only the electronic and nuclear levels. (p. 32)

How is it possible to use the laws of nature only for the good of the world, never for the destruction of life? The history of this century demonstrates that this competence cannot be gained only by the objective study of laws of nature. According to Maharishi (1986), the ability to spontaneously gain and apply knowledge in a manner that always nourishes oneself and the whole environment has its basis in knowledge and direct experience of the unified field:

...the conscious mind identifies itself with the self-referral unified field, the fountainhead of all streams of activity in nature. As we gain more and more familiarity with that self-referral performance, our thoughts and actions spontaneously begin to be as orderly and evolutionary as all the activity of nature. (p. 97)

This quality of action naturally results from one who fathoms the full range of the object of knowledge, the known. Maharishi (1977, p. 144) states that a single individual possessing this knowledge does a lifetime of good in society; and that many such individuals can reset the trends of history, establishing the conditions for creating and perpetuating an ideal society.

THE PROCESS OF KNOWING—The processes of knowing are the different perceptual and cognitive systems the knower uses to assimilate the known. These can be arranged hierarchically, from least to most powerful processes of knowing: sense perception, thought, intellect, and intuition. (See Figure 1.) This section describes the types of knowledge that can be gained from these different processes of knowing, considers the limits to which current education develops the knowing process, and describes the full development of the process of knowing, as found in Maharishi's Vedic Science.

Maharishi has pointed out that the subtler the process of knowing, the greater command over natural law it confers. For example, the senses perceive the sun sinking into the sea. Knowledge of the sun gained from this level of sense perception doesn't bring much mastery, since on a cloudy day the sun cannot even be located. Through thought, a subtler process of knowing, one can know that the earth moves around the sun whether the eye sees it or not. The discriminating intellect understands the equations describing the planets' orbits around the sun; finer processes of knowing bring greater reliability and predictive power, and therefore greater mastery.

Intuition, a process of knowing using a still more refined level of intellect and feeling, can yield insights into the workings of the cosmos that transcend and unify previous knowledge of individual laws of nature. An example is the initial intuition of Newton that planetary motion and motion due to gravity on the surface of the earth are both expressions of a single force. The intuitive level of knowing is spontaneously employed by the greatest minds of every age, and bestows a level of mastery and satisfaction that is rare. Even though these insights still must be validated, intuition is a powerful

source of original and fruitful ideas in all areas of human activity.

As indicated in Figure 1, each of these processes of gaining knowledge involves particular physiological and psychological structures of the knower. Jean Piaget's work has shown that cognitive abilities develop in stages from infancy to adolescence in the direction of more abstract, more powerful processes of knowing—from senses to mind to intellect (Piaget & Inhelder, 1969). The stages of growth in cognitive ability also are associated with measurable developments in brain maturation (Epstein, 1974, 1980).

Educators sequence learning experiences to culture more subtle processes of knowing. In learning mathematics, for example, the student progresses from manipulating colorful blocks, to adding and subtracting numbers, to proving theorems. Yet even the most advanced instructional techniques have not been successful in fostering the most subtle processes of intellect and intuition in the general population of students. This is unfortunate because research indicates that the most creative and innovative people in every area of life rely on their intuition and fine level of discrimination to guide their thinking (Ghiselin, 1952; Maslow, 1968).

Furthermore, it is rare to find, even among these people, creative inspiration continuously bubbling up; dry spells are common. One works hard and hopes for the illuminating "aha"; but it is the common experience of great scientists and artists that their deepest insights into natural law and their most sublime artistic expressions occur unexpectedly and briefly (Ghiselin, 1952).

These moments of great awakening have been in the past regarded as fortuitous accidents because the knowledge of how to produce or sustain them has not been available. The educational challenge, therefore, is to develop in the students that refinement of the nervous system that can permanently sustain the most refined and powerful processes of knowing.

Maharishi (1986) has said that it is possible to establish the awareness of the individual permanently in its most creative state, in the completely self-referral state of pure consciousness:

The self-referral state of pure consciousness, while remaining uninvolved with the creative process in nature, is an infinitely dynamic, inexhaustible source of energy and creativity. On that basis the whole creation goes on perpetually in its infinite variety, multiplying itself all the time... Human awareness can identify itself with this most basic, self-referral value of consciousness in the state of... transcendental consciousness. (pp. 30–31)

Maharishi further explains that when the awareness is permanently identified with the unified field, the use of any process of knowing—senses, mind, intellect, intuition—enlivens the unified field, bringing bliss and great satisfaction to learning.

The process of knowing is never satisfied unless everything is known... When [pure consciousness] is enlivened in the student, in the process of gaining specific knowledge, what is getting enlivened is infinity, self-sufficiency, unbounded affluence, fulfillment. (Lecture, November 8, 1983)

According to Vedic Science, experience of the unified basis of knowing also develops the full potential of each process of knowing; each gains in efficiency and power. Using the full potential of the senses as an example, Maharishi has said that when a person in unity consciousness hears someone speak, "he will experience the total range of the meaning of the word, experiencing it as a fluctuation from the field of bliss consciousness." The great advantage of this range of perceiving is that it "saves the energy of the listener; he gains life and energy from waves of bliss. When we can hear the full value of the word, it nourishes our heart and soul" (lecture, July 25, 1977).

Maharishi has described a classroom when students and teachers are both processing information at this level of unity:

The impulse of thought of the professor and the impulse of thought of the student are no longer strangers. Whatever meaning is contained in what the professor says is received without distortion by the student, because the basis of the professor's thought, that abstract value of pure intelligence [transcendental consciousness], is lively in the student's awareness. Knowledge becomes a delightful exchange of friendly waves of life. (lecture, February 12, 1971)

Maharishi's Vedic Science describes extremely refined processes of knowing that are not fully available until the individual experiences the total range of the mind. *Ritam bhara pragya* is defined by Maharishi as a level of infallible intuition, a level of knowing that realizes only truth (lecture, May 1, 1975).

This quality of knowing occurs spontaneously when awareness is able to operate at the junction point between transcendental consciousness and its expression into thoughts. (See Figure 1.) Because transcendental consciousness is the seat of all the laws of nature—in Maharishi's words, the "main switchboard" of natural law—the faintest desire to know something sets in motion the specific laws of nature to bring fulfillment to that desire. Maharishi (1972) explains the practical advantage of this subtle process of knowing for effective action:

[Transcendental consciousness] supports a thought with all the necessities that will enable the thought from its sprouting to accomplish its purpose... [It provides] the computing that makes any particular thought most life-supporting for the thinker and for the environment... The sprouting of the thought will include the values which are necessary for its greatest productivity and maximum usefulness. (pp. 24–17, 24–18)

According to Maharishi, when this process of knowing is a permanent feature of life, the individual becomes a fountainhead of creativity. Every thought is useful. New solutions and insights, creative responses to changing circumstances, and efficient conversion of thought to action are the reality of daily life. No longer does one wait and hope for flashes of clarity; the field of inner awareness is permanently lit.

In Maharishi's exposition of Vedic Science, a process of knowing even more powerful than *ritam bhara pragya* is available when individual awareness is permanently established in transcendental consciousness—when the unified field of natural law permeates every perception. Then the unified field is its own "process of knowing"; knower, known, and process of knowing are unified in one holistic structure within transcendental consciousness. Maharishi (1986) describes this phenomenon, when transcendental consciousness is fully awake within itself:

The functioning of transcendental pure consciousness is the functioning of natural law in its most settled state. The conscious human mind, identifying itself with this level of nature's functioning, gains the ability to perform in the style with which nature performs its activity at its most fundamental level. Completely identified in transcendental consciousness with the full potential of natural law, the human mind is a field of all possibilities. (p. 31)

In this state, on the background of transcendental consciousness, the most subtle workings of nature are spontaneously cognized. In Maharishi's analogy, one is aware of the sap of the flower together with the transformations of the sap into red petal and green leaf. This is the culmination of the knowing process: awakening to the totality of natural law and its organizing power within the wholeness of one's own awareness:

The knowing process finds its fulfillment when the object of knowing is known to the subject so thoroughly that the object becomes the subject, the subject becomes the object. This is the climax of knowing—to know the object as intimately as one knows one's self.

(Maharishi Mahesh Yogi, lecture, February 2, 1982)

The preceding analysis of the three-fold nature of the educational process suggests that more effective education requires more profound development of human potential. Maharishi's Vedic Science offers the knowledge and technology to develop this vast potential, and thereby significantly raise the quality of knowledge, action, achievement, and fulfillment in education and in society as a whole. Central to this development is a systematic method for students and teachers to experience the most silent and dynamic level of their own existence, pure consciousness.

Practical experience and theoretical knowledge of pure consciousness will eliminate the great lack in education. Then both sides of knowing, the knower and the object, will be in the light of knowledge. When both are open to one's awareness education will be complete and life will be complete. (Maharishi Mahesh Yogi, 1973)

3. Realizing the Full Potential of Education through *Consciousness-Based Education*

The Maharishi Transcendental Meditation and TM-Sidhi programs are used in Consciousness-Based education to enliven and stabilize transcendental consciousness in the awareness of students and teachers. Extensive research and educational experience have established the value of this program for human development. (See Section 4.) These techniques are simple, universally applicable procedures for improving the functioning of the human nervous system. As a result of continued practice, individuals think and behave with increasing competence, success, and benefit to others.

This section describes Maharishi's Consciousness-Based education as it is used in higher education and secondary and elementary levels. Consciousness-Based education has three features: the standard academic curriculum, the Transcendental Meditation and TM-Sidhi programs, and the Science of Creative Intelligence, which integrates the different fields of study and includes specific teaching methods and materials to help the students relate the objective knowledge they are gaining to the expansion of their own creative intelligence and inner happiness.

Maharishi has said that the discovery of the unified field and the subjective technology for experiencing it provide education with a profound new approach that enables students to make use of the most unified and powerful levels of natural law. He states:

Education is always progressive. When any new discovery about nature's functioning is gained through modern science it is immediately incorporated in education. This has been the basis of progress in every generation. Now that the self-interaction of the unified field has been discovered as the most fundamental activity in nature, it is time for a new basis to education... It is time for science-based education to become unified field based education. (American Association for Ideal Education, 1985, p. 6)

THE TRANSCENDENTAL MEDITATION and TM-SIDHI PROGRAMS AS THE FOUNDATION OF CONSCIOUSNESS-BASED EDUCATION—Students learn the Transcendental Meditation program from the age of 10; until then they learn a technique suited to younger children. TM is practiced for a few minutes at the beginning and end of the academic day, ideally in the classroom. Experience in over one hundred countries with people from all cultural backgrounds has shown that the TM technique is practical for any educational system. It does not require changing the school's established curriculum. It is easily learned in a few hours and is simple and effortless to practice. The positive effects of the technique, as demonstrated by research, begin immediately and are cumulative (Maharishi International University, 1984). TM is taught in a systematic, standardized way by professional

Transcendental Meditation teachers of which there are more than 20,000 worldwide.

The practice of Transcendental Meditation requires no change in belief or lifestyle and is effective irrespective of educational background, level of intelligence, or belief in its reported benefits. It is not a religion; it is not a form of prayer; it involves no contemplation of particular ideas, or concentration. It is a universal, scientific approach to human development whose effects result from the body becoming deeply rested and the mind experiencing more of its creative potential.

The TM program has been introduced into public and private schools in many countries, including institutions with religious affiliations. The St. Paul's School in Covington, Louisiana, is an example. Its principal and headmaster, Brother Jeffrey L. Calligan, F.S.C., writes:

In my life and the lives of the students and teachers who practice Transcendental Meditation in our school, we've noticed greater composure and peacefulness and more ability to handle times of stress and difficulty. The students are more in touch with themselves, their world, and one another. TM is a marvelous aid to balanced growth, and fits into any cultural or religious tradition. (American Association for Ideal Education, 1986, p. 7)

The TM-Sidhi program enhances the effects of Transcendental Meditation by developing the individual's ability to perceive, think, feel, and act while maintaining transcendental consciousness. Maharishi describes the TM-Sidhi program:

Through Transcendental Meditation we experience transcendental consciousness, the perfectly balanced state where intelligence is open to itself. Through the TM-Sidhi program, we learn to operate in that state of absolutely balanced intelligence, which in its nature is immortal, eternal bliss, satisfaction, and fulfillment. It is a field of the total potential of natural law from where any desire is completely supported by nature... As the practice advances, that perfectly balanced state of pure awareness becomes more infused in daily life. (Maharishi Ayur-Veda®, in press)

Maharishi comments on how practice of the Transcendental Meditation and TM-Sidhi programs help achieve a fundamental goal of education:

The ideal of education is to give the fruit of all knowledge to every student while he is still growing in specific knowledge of the different disciplines. The fruit of all knowledge is the ability to accomplish anything and to spontaneously live life free from mistakes. This results naturally from the development of full creative potential and full support of nature brought about by the identification of the conscious mind with the unified field. (World Parliament of the Age of Enlightenment, 1984, p. 4)

The practice of the TM and TM-Sidhi programs benefits the society as well. Many studies in the past 15 years have shown that sufficiently large groups practicing this program together in one place produce measurable positive changes in the city, state, nation, and world (Orme-Johnson & Dillbeck, 1987a). The implications for society of a large school or university participating in the group practice of the TM and TM-Sidhi programs are discussed in Section 4 of this paper, together with other education-related research findings.

TEACHING TECHNIQUES IN *CONSCIOUSNESS-BASED* EDUCATION THAT CONNECT THE KNOWER WITH THE WHOLENESS OF KNOWLEDGE—Consciousness-Based education also includes a number of instructional materials and techniques. These have been designed by Maharishi and the faculty of Maharishi International University to help students relate the specific laws of nature they are studying in the different disciplines to the deepest, most universal level of natural law, which they experience as their own Self during the practice of TM. Maharishi (1986, pp. 164–165) has noted

that with these teaching techniques learning becomes more personally satisfying; every point of knowledge is integrated with the wholeness of life. The student's mind does not get absorbed in the limited details of any discipline to the extent of forgetting his own unbounded possibilities.

Unified Field Chart: The Unified Field Chart is the most comprehensive of the classroom charts that connect the parts of knowledge with the wholeness of the Self. (See Figure 2—previous pages.) This wall chart is divided vertically into two main sections. The left side represents the objective approach to knowledge through the modern sciences and other disciplines; the right side represents the subjective approach to knowledge through Vedic Science.

The left side of the chart diagrams the whole discipline being studied, from its most abstract foundational areas (at the bottom) to its most applied areas that serve society (at the top), and depicts how the whole discipline emerges from a unified basis of natural law. Each level gives rise to the next more expressed and diversified level according to an ordering principle. For example, the Unified Field Chart for physiology is organized hierarchically: DNA gives rise to RNA, proteins, cells, tissues, and organs. The chart for physics is organized according to time and distance scales: the force and matter fields at the Planck scale of 10^{-33} cm give rise to elementary particles and physical structures at microscopic and macroscopic scales. All the important principles or areas of the discipline can thus be located in the context of the whole structure of the discipline.

On the right side of the chart is a cone-shaped diagram representing the experience of the Transcendental Meditation and TM-Sidhi programs, during which the mind settles down from its more excited levels to the least excited state of awareness, transcendental consciousness. This subjective approach to knowledge gives the direct experience of the unified field. Both sides of the chart are visually unified by the band across the bottom of the whole chart, illustrating that the unified field of natural law is the common source of both approaches to knowledge.

The teacher uses the Unified Field Chart at the beginning of each course, and briefly during each class to locate the lesson of the day with reference to the whole discipline and the source of the discipline, the unified field, which the students experience twice daily in their practice of the TM and TM-Sidhi programs.

Faculty who work with Unified Field Charts in secondary and university classrooms have found them highly effective. The construction of these charts challenges them to think deeply about their fields; many teachers create a Unified Field Chart for each course they teach. For the students, the chart puts the day's discussion in the larger context of the whole discipline. It connects them to the holistic basis of the subject they are studying and reminds them of their personal, directly experienced connection with the knowledge. Maharishi comments on the value of this chart:

Unless knowledge is learned with reference to the universe and to oneself, it will leave the mind in doubt. "What is the connection of this to everything else? And to me?" Unless this is made clear the thirst for knowledge will never be satisfied. (Lecture, August 1, 1986)

When combined with practice of the TM and TM-Sidhi programs, Unified Field Charts develop in the student a more intimate relationship with the disciplines and a greater interest in understanding them more deeply. This approach helps solve two persistent problems in education: students feeling dissociated from what they are studying and perceiving knowledge as fragmented (American Association for Ideal Education, 1985). These problems have been recognized for at least fifty years:

Knowledge which is mainly second-hand, other men's knowledge, tends to become merely verbal. It is no objection to information that is clothed in words; communication necessarily takes place through words. But to the degree in which what is communicated cannot be organized into the existing experience of the learner, it becomes mere words: that is, pure sense-stimuli, lacking in meaning...[One's] acquisition of knowledge depends

upon his response to what is communicated. (Dewey, 1916/1966, pp. 187–188)

Students bound from course to course, year to year, lecture hall to lecture hall, term paper to term paper, quiz to quiz, participating in an unending series of discrete educational events. They are learning, for sure... Education, in depth, however, is an experience of learning of a different order. (Association of American Colleges, 1985, pp. 23–24)

Unified Field Charts help solve these problems by connecting the knowledge presented to the students with the most profound, intimate, and comprehensive level of their own experience, pure consciousness. By understanding and experiencing the unified basis of all disciplines as nothing other than their own Self, the process of being educated satisfies both mind and heart. The Unified Field Chart is one of Maharishi's great contributions to pedagogy.

OTHER INSTRUCTIONAL TECHNIQUES FOR CONNECTING THE SUBJECT OF STUDY WITH THE SELF—Maharishi's emphasis on connecting the parts of knowledge with the wholeness of knowledge has led to the development of several other instructional techniques for Consciousness-Based education.

Main point chart: This is a wall chart of the three or four main ideas of the lecture from the discipline. To the right of each point is a corresponding point that gives a more universal perspective on that idea (see example below). This broader perspective, which relates the lecture topic more directly to the student's growth of consciousness, is provided by Maharishi's Science of Creative Intelligence (SCI). SCI is the science of consciousness. It links objective and subjective approaches to knowledge—modern science with Vedic Science, through the use of principles that promote orderly change both in nature and in human consciousness. These principles are found common to all areas of study and to human life.

By identifying the main concepts of the lecture, main point charts help students connect specific bits of information to the comprehensive ideas within the field; and then, through the SCI perspectives, students connect these ideas with the dynamics of their own consciousness. See below for an example of a complementary pair of main points from a lecture on the Central Limit Theorem in an introductory course on statistics at Maharishi International University:

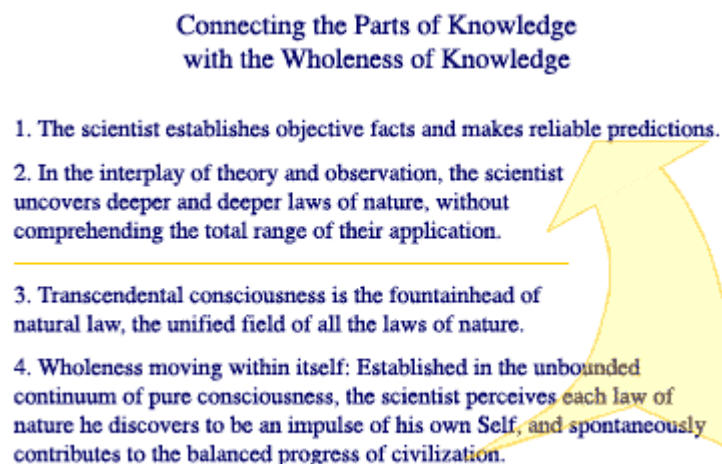
Statistics	SCI
<p>The Central Limit Theorem is the basis of the practical success of many areas of statistical inference. It states that when many equal-sized random samples are drawn from an infinite population, the distribution of the sum or mean of each sample will always form a normal distribution. This theorem may be taken as an explanation of why many phenomena in nature are normally distributed: they are the result of the sum of many independent factors.</p>	<p>The orderliness of nature is the basis of statistical inference. This orderliness allows us to infer nature's behavior. At a deeper level, the ability to infer from the orderliness of nature is based on the common functioning of orderliness, or intelligence, in nature and man. At the deepest level, the common basis of intelligence in man and nature is the unified field of natural law, identified by SCI as the field of pure consciousness.</p>

Unity chart: This chart, which is used at the conclusion of each lecture, is designed to summarize the main idea of the lesson from four different perspectives, each reflecting greater subtlety and power.

The first two points present the perspective of the discipline; the second two, the perspective of the Science of Creative Intelligence (see example following). The first of the four perspectives offers the common "textbook" understanding of the main theme of the lesson; the second represents a more subtle and profound perspective available in the discipline. The third level relates the theme to the experience of transcendental consciousness. The final level views the theme from the perspective of

the highest state of human consciousness, unity consciousness, when all activity is perceived as the dynamics of one's own consciousness—"wholeness moving within itself." The arrow drawn up from the fourth level to the first level reminds the student that when unity consciousness is a living reality every part of life, including the discipline, is experienced as an expression of one's Self.

Here is an example of a concluding unity chart from an opening lecture entitled "Scientific Knowledge and the Scientific Enterprise," part of an MIU course on Philosophy of Science:



These charts have been used at MIU for almost 10 years. Students appreciate leaving the classroom with the impact of wholeness, rather than the impact of parts. Like the other charts described, the unity chart helps make the lesson "self-referral": students relate the most important principles of the discipline to the unfoldment of their own creative potential.

THE SCIENCE OF CREATIVE INTELLIGENCE CURRICULUM FOR ELEMENTARY AND SECONDARY EDUCATION—Elementary and secondary students participating in Consciousness-Based education take a Science of Creative Intelligence (SCI) course designed by Maharishi and other educators for grades 1 through 12. In addition to their usual academic classes students have classes in SCI three to five times per week for about 20 minutes. The "laboratory" component of this course is the twice- daily practice of Transcendental Meditation.

The stated goal of the SCI curriculum is "to provide understanding and experience of creative intelligence and thereby develop the physiology and psychology of every student for full expression of creative intelligence in practical life...[The curriculum] unfolds in a sequence of themes that expand the student's awareness to encompass the entire range of life" (Maharishi International University, 1974, p. 10). This deepened understanding of oneself and nature is accomplished in the SCI class by focusing the students on principles and qualities of creative intelligence (explained in the "main points" description above) stated in simple language, appropriate to the students' grade level.

In the course of the whole SCI curriculum the students locate these universal principles and qualities in their own lives, in the community, in nature, in myths, in the lives of great men and women, in the different subjects of study, and in their practice of the TM and TM-Sidhi programs. The materials, language, and learning activities of the SCI curriculum are suited to each age group. The SCI principles for younger elementary students, for example, are conveyed through stories, songs, and plays.

A lesson for tenth graders on the "stable and adaptable" qualities of creative intelligence, for example, might ask students to analyze these two complementary qualities as found in the country's political system: in the United States the Constitution provides the stable principles on the basis of which the three major branches of government adapt to the changing needs and values of the American people.

The coexistence of stability and adaptability could also be found in the students' relationships with

others: on the ground of stable friendships, they more easily accommodate to each other's needs and differences. These complementary qualities can be found in great tennis players, whose stable repertoire of skills allows them to adapt to any unpredictable shot; or in the way that plants adapt to changing environmental conditions on the basis of stable biological structures. Finally, the class would typically discuss how these qualities are more fully expressed in the students' own lives as they rise to higher states of consciousness through their practice of TM and the TM-Sidhi programs: as they become stabilized in the nonchanging field of pure consciousness, they more easily adapt to the changing and unexpected circumstances of everyday life.

Here are some further examples of SCI principles and qualities taught at different grade levels:

Grades 1–3: The nature of life is to grow; Order is present everywhere; Life is found in layers.

Grades 7–9: Outer depends on inner; Thought leads to action, action leads to achievement, achievement leads to fulfillment; Harmony exists in diversity; Rest and activity are the steps of progress.

Grade 12: Introduction to 24 academic disciplines interconnected and made relevant to the students' experience through the application of SCI.

The Science of Creative Intelligence curriculum thus provides a framework of natural laws that help students interrelate the subjects they study and connect them to their own lives. Teachers in schools where SCI is taught comment on the students' enthusiasm for these concepts and facility in using them both in and out of the classroom.

The Consciousness-Based methods and curriculum outlined above are quite simple; yet experience has shown that their effect on both student and teacher is profound. Maharishi summarizes how this approach to education, which connects the part to the whole and the whole to the student's Self, has several advantages that contribute to academic success and personal satisfaction:

1. The students get the total picture of knowledge. Spontaneously they maintain broad awareness when they are focusing sharply in one area. This growth of the ability to maintain the whole while attending to the part cultures ideal citizenship, the ability to fulfill individual interests without losing sight of the interest of the whole society.
2. When every wave of knowledge gained is connected with the Self, that knowledge becomes a living reality of daily life. It develops one's feeling of being familiar and intimate with everything and everyone, so that no sphere of life remains strange to the students. This growth of self-confidence and self-sufficiency creates a balanced and integrated personality.
3. Every discipline becomes a means to develop the creative potential of the conscious mind, to enliven the Self. Whatever the students study, in the process of gaining specific knowledge of different subjects, they grow in the awareness that the center of all knowledge is present within themselves. This means that if they study 30 different disciplines, then 30 times the Self is connected with the discipline, and with this, all the knowledge remains intimately connected with the knower.
4. Since the Self is the unified field of all the laws of nature, the intellect becomes more and more surcharged with the totality of knowledge. The conscious mind becomes fully alert and lively in creative intelligence, more familiar with the total potential of natural law. The result is that the students become capable of meeting successfully with any situation. Their thoughts will always be evolutionary and positive and they will not make mistakes. They will not pollute the environment. Their behavior will be ideal. (Personal communication, July 26, 1983)

THE ENDPOINT OF EDUCATIONAL DEVELOPMENT: UNITY CONSCIOUSNESS—The ultimate goal of Maharishi's integrated approach to education is to develop students and teachers to the highest level of consciousness, to full enlightenment, and through this process of development to create an ideal society. Maharishi (1977) describes enlightenment as the total awakening of human consciousness, a psychophysiological state of perfect mind-body integration and balance. The depth and power of knowledge conferred by this state of consciousness raise the individual to heights of mastery and bliss that have rarely been known in modern times. In the state of enlightenment the knower, known, and process of knowing are experienced as one unified wholeness—as pure knowledge. In the state of pure knowledge the knower perceives the transcendental reality of the known and experiences it as his own consciousness. One sees the rose; but at that level of awakening what dominates perception is not the difference between the rose and the viewer, but the sameness at the basis of the rose and the viewer (Maharishi Ayur-Veda®, in press). Established in that fully awakened state of unity, one cognizes all the diverse laws of nature—those giving rise to the rose, to the knower, to the whole universe—as the dynamics of one's own consciousness. Maharishi comments on the value of such holistic awareness:

Here, in this state of transcendental consciousness, intelligence finds the source of all divergence... If we want to control at will all the laws of nature engaged in the creative process, we had better sit at that level where the total potential of natural law is available. From there, within ourselves, we command all the diverging values of natural law. Once we have command over the laws of nature, everything will go well in the direction of evolution. (Maharishi Ayur Veda®, in press)

How can we know that such a level of mastery and immense organizing power will always be directed towards good, towards progress? Maharishi explains that within the unified field all the laws of nature are unfolding in perfect sequence, forming the basis for the orderly display of natural law in the infinite variety of the universe. When the individual's awareness is identified with these dynamics of the unified field one's thought and action will always support life, spontaneously expressing the creativity and orderliness of natural law (Maharishi Mahesh Yogi, 1986, p. 32).

Maharishi (1977) also describes the characteristics of a society in which the people are rising to higher states of consciousness. He emphasizes that this description is not merely a projection of hope or good will, but is based on ancient Vedic knowledge, observed results, and scientific validation:

Society... will be characterized by the development of self-sufficiency leading to invincibility in a natural state of balance and orderliness. In this state, all activity will be supported by the laws of nature. Trends of life in society will spontaneously remain positive, progressive, and fulfilling. Negative tendencies of sickness, crime, and other weakening habits will naturally fall off, saving national energy and resources to structure the steps of fulfilling progress. Accidents, conflicts, and rivalries will disappear; morals and virtues will grow freely; and pure consciousness will guide the destiny of society for all good to everyone. In this environment of harmony and progress, community leaders will spontaneously make right decisions and steer the course of society in a right direction. Society will grow in its ability to give maximum to, and take maximum from, neighboring societies. Every community will become a joy to every other community. Harmony and happiness will naturally prevail everywhere. (p. 59)

Maharishi founded Consciousness-Based education as the most practical and effective way to advance toward this highest state of individual and social development.

4. Validation of the Success of *Consciousness-Based* Education: Results of

Scientific Research

A wide range of research has documented the effectiveness of Consciousness-Based education. This research gives compelling evidence that TM and the TM-Sidhi programs, when added to the academic day of any school or university, can create academic excellence and a high quality of life for the students and teachers and can promote positive trends in the whole society.

The research studies on Consciousness-Based education fall into three groups. The first group of studies evaluates the effect of practice of the Transcendental Meditation technique among elementary, high school, and college students who began the practice as individuals independent of a formal academic program. A second group of studies investigates the effect of a class of students beginning the TM program as an additional part of their curriculum, including the study of the Science of Creative Intelligence (SCI) (Maharishi Mahesh Yogi, 1972).

Finally, a number of studies have been performed on a model educational system that implements Consciousness-Based education throughout the institution at the elementary, secondary, and post-secondary levels—Maharishi International University (MIU) and Maharishi School of the Age of Enlightenment (MSAE) in Fairfield, Iowa, offering education for kindergarten through grade 12 on the MIU campus. These institutions were founded by Maharishi to fulfill the highest goals of education. They add to the traditional study of the academic disciplines the twice-daily practice of the TM and TM-Sidhi programs by everyone on campus—students, faculty, and administrators. The academic and professional attainments of the students and graduates, their own enthusiasm for their education, and the comments of visiting evaluators and educators attest to the extraordinary effectiveness of these institutions.

EFFECTS OF THE TRANSCENDENTAL MEDITATION PROGRAM ON INDIVIDUAL STUDENTS—Many studies of the effects of the Transcendental Meditation program have used secondary and college students as subjects. These studies verify that the cognitive, affective, and physiological characteristics of the student that contribute to effective learning are enriched as the result of practice of the TM technique.

Educational research has shown that alertness, memory, intelligence, field independence, and abstract reasoning ability are associated with improved academic performance (Anderson, Spiro, & Montague, 1977; Good-enough, 1976; Saltz, 1971). Similarly, the affective characteristics of high self-esteem and emotional stability contribute significantly to classroom performance (e.g., Eriksen, 1974). These cognitive and affective qualities also have physiological correlates, such as flexibility and stability (resistance to stress), which are crucial to effective learning. Educational researchers have found that students' cognitive and affective entry characteristics noted above account for 75 percent of their outcomes on academic achievement measures, while the quality of instruction accounts for only 25 percent (B. Bloom, 1976).

The ability of the Transcendental Meditation program to foster systematic improvement in these characteristics of the student is highly significant for improving the success of schools and universities. All of these major characteristics that contribute to successful learning have been found to increase among students who learn the TM program. This includes improvements in alertness, intelligence, memory, field independence, self-concept, emotional stability, greater physiological resistance to stress, as well as improved academic achievement. [Table 1](#) lists the major findings and research references in each of these areas, demonstrating the beneficial influence of students' regular practice of the TM technique.

The results of the Transcendental Meditation program when used by students with special educational problems have also been promising. Among children with learning problems who begin the TM technique, improved self-regard and decreased general anxiety, test anxiety, and school dislike have been found in contrast to control students (Jackson, 1977; Overbeck & Tönnies, 1975). Mentally

retarded children who are taught the TM technique also show reduced behavior problems (Eyerman, 1981; Wood, 1981).

Reductions in drug and alcohol use are also found among high school and college students who begin the TM program, as indicated by both retrospective surveys (Shafii, Lavelly, & Jaffe, 1974, 1975) and prospective longitudinal studies (Katz, 1976; Lazar, Farwell, & Farrow, 1976; S. Nidich, 1980). Similar benefits have been found in longitudinal studies of students and other young people who volunteer to learn the TM program in drug abuse treatment centers, in contrast to their previous history and the results of other treatments (Brautigam, 1976; Schenkluhn & Geisler, 1976).

EFFECTS OF IMPLEMENTING *CONSCIOUSNESS-BASED* EDUCATION IN THE CLASSROOM—Several studies have been performed on the implementation of the Transcendental Meditation program as part of a class in the Science of Creative Intelligence. The findings of these studies are consistent with those in studies of students who begin the TM program outside the school. Levin (1976) found nine-month longitudinal increases in self-concept and improved relations with family members among those learning the TM program as part of an SCI class, in contrast to controls in a psychology self-development class. Kory and Hufnagel (1976) evaluated the effects of students learning the TM technique as part of a one-semester SCI course in three high schools, in comparison to control groups taking psychology courses. Although sample sizes were small, meditating SCI students in two of the three schools displayed significant decreases in state and trait anxiety and increases in grade point average during the period of the course.

In two studies, the relative effects of the intellectual and experiential components of the SCI course were evaluated. In the first of these, Shecter (1978) randomly assigned high school students in Ontario to groups involved only in the classroom component of the SCI course, only the laboratory component (TM technique), or both; another group served as a no-treatment control. Both groups learning the TM technique, when compared to the other two groups, showed an increase over the 14-week course in fluid intelligence, creativity, energy level, innovation, self-esteem, and tolerance, and decreased anxiety and conformity. In a similar study by S. Nidich (1980, 1982), college students taking a course in the Science of Creative Intelligence who also began the practice of the TM program displayed decreased anxiety and decreased drug and alcohol use, in contrast to control students within the class who did not learn the practice and to students in other classes.

These studies indicate that it is the experience provided by the Transcendental Meditation technique that is responsible for the improvements in physiological, psychological, and behavioral functioning among the students. One of the values of the class in the Science of Creative Intelligence is that it helps the students to understand the principles by which these improvements in their lives take place, thereby helping to ensure their regular practice of the TM technique and long-term development of higher states of consciousness.

Two studies applied Transcendental Meditation without the SCI component in a class setting. The first of these involved teaching the TM program to a class of high school students in a village in India; experimental subjects showed an improvement in reading comprehension, memory, and concentration in contrast to control classes (Nataraj & Radhamani, 1975). In another study, in England, 20 students in an M.Sc. program were randomly assigned to learn the TM program or not to learn immediately. The group learning the technique showed improved grade point average the following semester in contrast to control subjects (Kember, 1985).

EFFECTS OF SCHOOL-WIDE IMPLEMENTATION OF *CONSCIOUSNESS-BASED* EDUCATION—Maharishi International University and Maharishi School of the Age of Enlightenment were founded as a model university and school making use of Consciousness-Based education throughout the institutions. A number of research studies and evaluations have monitored the results of the MIU educational system. At the college level, cross-sectional studies indicate that MIU students score higher than controls or norms on scales of self-actualization (Orme-Johnson & Duck, 1976), and show higher levels of moral reasoning on Kohlberg's scale (S. Nidich, 1976) and

greater psychological stability (Brown, 1976/1977). One interesting feature of the last study was that MIU students displayed a unique combination of traits not found at either large universities or private colleges: a higher intellectual and scientific orientation along with a greater respect for traditional religious values. In comparison with students in other distinctive private colleges in Iowa, MIU students reported a stronger academic atmosphere outside of the classroom, and greater personal development since matriculation (Baer, S. Nidich, & Abrams, in press).

Longitudinal studies of MIU undergraduates over four years have demonstrated fluid intelligence increases, in contrast to no change in normative trends (Aron, Orme-Johnson, & Brubaker, 1981; Dillbeck, Assimakis, Raimondi, Orme-Johnson, & Rowe, 1986), increased field independence (Dillbeck et al., 1986), and increased social maturity and psychological health as indicated by personality tests (Aron et al., 1981).

Longitudinal studies over shorter periods of the MIU curriculum indicate that students who learn the TM-Sidhi program, compared with matched MIU students who have not yet learned this advanced practice, show significantly increased abstract learning ability (concept learning), increased flexibility of the central nervous system (faster recovery of the paired Hoffman reflex), and increased orderliness of brain functioning as indicated by EEG coherence in frontal brain areas (Dillbeck, Orme-Johnson, & Wallace, 1981; Orme-Johnson, Wallace, Dillbeck, Alexander, & Ball, in press; Wallace, Mills, Orme-Johnson, Dillbeck, & Jacobe, 1983). These cognitive and neurophysiological developments occur together as an integrated whole (Dillbeck et al., 1981), and higher levels of these traits predict higher academic performance (Wallace, Orme-Johnson, Mills, & Dillbeck, 1984).

Maharishi School of the Age of Enlightenment was founded in 1974 and currently enrolls almost 500 students from kindergarten through grade 12. At Maharishi School the beneficial effects of students learning TM at an early age are evident in all areas of their lives, cognitive, affective, and behavioral.

Studies using Piagetian cognitive tasks to assess the pattern of cognitive development among Maharishi School students, in comparison with nonmeditating students at other schools, have found consistently positive results. The concept of "conservation" in Piaget's theory of cognitive development is a defining characteristic of a major transition in childhood to a higher stage of cognitive development. Conservation refers to the ability to identify properties that are invariant under transformation, and success on measures of conservation indicates that the thinking process is less bound by sensory perceptions (Piaget & Inhelder, 1969). For example, before a certain age, when a child watches the water from a wide beaker being poured into a tall, narrow beaker and thus rising to a higher level, he does not "conserve" the quantity of liquid and thinks that there is more water in the taller glass. The conservation of various qualities is established sequentially over a long period of time; conservation of number is found at ages 5–6, conservation of liquid quantity at ages 7–8, conservation of weight at ages 9–10, and not until ages 11–12 is conservation of volume found (Piaget & Inhelder, 1969).

In the first study of conservation among children participating in the TM program, students at Maharishi School and meditating children from the Cambridge, Massachusetts, area were compared with nonmeditating children from a Cambridge school (Alexander, Kurth, Travis, Warner, & Alexander, in press). The mean conservation score of the meditating and Maharishi School children was significantly higher than that of the control children, statistically controlling for differences in age, gender, grade, and parental socioeconomic status (SES). This finding was replicated in a second study (Warner, 1986). In the later study, one-third of the students in grades K–5 at Maharishi School were randomly selected, and matched with children from other schools. Children were sequentially given tasks of conservation of volume, weight, substance, and number, each of which involved three different transformations. The Maharishi School children again displayed a significantly higher conservation score than control subjects, covarying for age, education, gender, and parental SES. These studies indicate that children who practice the Transcendental Meditation technique show more rapid cognitive development.

On a test of creativity, the high school students from Maharishi School displayed significantly higher performance than control subjects taken at random from the normative data bank of the test (Zanath, 1985). This finding is also consistent with the conclusion that students practicing the Transcendental Meditation technique show a more advanced pattern of cognitive development than their peers.

As a result of the rapid cognitive development of students at Maharishi School, the level of academic achievement has been extremely high despite the fact that the school maintains a liberal admissions policy. Studies have compared each grade at Maharishi School against national norms for entire grades on the Iowa Tests of Basic Skills (ITBS) (administered to grades K–8) and the Iowa Tests of Educational Development (ITED) (grades 9–12). The comparisons repeatedly show a large majority of Maharishi School classes to be in the top five percent nationally, with many classes, particularly in the upper grades, in the top one percent. Longitudinal research also indicates that students at Maharishi School significantly increase in percentile level on the ITBS and ITED tests over the course of one school year (S. Nidich & R. Nidich, 1986; S. Nidich, R. Nidich, & Rainforth, 1986).

The quality of Maharishi School appears exceptionally high in the affective and behavioral as well as the cognitive domain. Using Harvard's interview assessment form, high school classes at Maharishi School were found to have a moral atmosphere that was significantly better on several subscales than two "participatory democracy" schools designed specifically to improve moral atmosphere (R. Nidich & S. Nidich, 1985). Maharishi School students showed statistically significant differences on the categories of pro-social behavior by self and pro-social behavior by others than either of the two comparison schools. This means that although the perceived social norms for right and wrong behavior were comparable at Maharishi School and the participatory democratic schools, a higher proportion of high school students at Maharishi School reported that their own and others' behavior was actually consistent with these norms. Maharishi School students also reported a significantly higher moral atmosphere than they experienced at their previous schools, whether the prior school was private or public. Finally, the moral atmosphere responses of the students regarding themselves were significantly correlated with teachers' ratings of actual pro-social behavior, indicating that student responses were accurate.

INTERVIEWS WITH TEACHERS AT MAHARISHI SCHOOL OF THE AGE OF ENLIGHTENMENT—In this section we report previously unpublished results of recent interviews with seven teachers of Maharishi School of the Age of Enlightenment, each of whom had extensive previous teaching experience. This information was gathered in order to give a more detailed and concrete picture of the process of teaching at Maharishi School and also to stimulate further educational research. Although each teacher reported details that were unique, a number of common features emerged as distinctive of Maharishi School students that were consistently reported by almost all teachers. These can be organized under the categories of affective, cognitive, and physiological characteristics.

The teachers most strongly emphasized the affective qualities of Maharishi School students. The most common characteristic reported by all teachers was that the students are more kind—gentle, sensitive to others, and happy—than students they have previously taught who do not practice the Transcendental Meditation program. As a result, teachers reported, mean or cruel behavior and comments were almost entirely absent. Similarly, although Maharishi School students have groups of favorite friends, they tend not to form cliques that exclude other students.

The most experienced of the teachers (27 years teaching) noted that the students are unique in their ability to integrate knowledge with their lives. They also are flexible enough to quickly change behaviors and patterns of interaction that are pointed out as not appropriate, and continually progress to perform beyond their previous limitations. Also commonly reported was the fact that students at Maharishi School have a quality of inner strength and self-confidence that makes them bold in expressing their thoughts and questions. Teachers reported that these affective qualities were the foundation for the high level of curiosity and vitality expressed in the classroom. Several teachers

noted that despite a wide diversity of abilities, interests, and personalities in the classroom, there was a feeling of harmony or "coherence" that allowed each student to more fully contribute to the classroom activity as well as to gain from it. Teachers also stated that classroom harmony allowed the students to work together in groups remarkably effectively.

In the cognitive domain, most teachers reported that the students at Maharishi School are very active learners; they were pictured as perceptive, alert, creative, and receptive to knowledge. They were described as asking many more questions than other students; given the opportunity, Maharishi School students greatly enjoy exploring a topic under the guidance of the teacher. Students were said to participate much more fully in the learning process; for example, in a mathematics class, students enjoy developing alternative ways to solve a problem, with many volunteering more direct solutions in addition to that offered by the teacher. It was noted that even those who were not the best students were never dull but always very alert. Students were described as being less egocentric than is normal for children of their age; this is consistent with the studies of cognitive development previously mentioned, since reduced egocentricity is one characteristic of higher development.

Several teachers also noted that their Maharishi School students were very intuitive as well as intellectually capable. Teachers mentioned that the children, even at a very young age, seem to have "an inner wisdom about life" that helps them locate the essence of an intellectual problem and relate the knowledge to their lives. Teachers stated also that students enjoy connecting the items of learning with the wholeness of the discipline through the Science of Creative Intelligence. Finally, on the physiological level, teachers consistently reported that the Maharishi School children were very energetic, also contributing to a more active level of classroom interaction.

Teachers at Maharishi School of the Age of Enlightenment also reported that since they have begun the TM program many qualities in their own lives that contribute to effective teaching have improved. Health-related improvements include experiencing more restfulness and greater energy. Teachers also noted the affective changes of greater patience, calmness, and flexibility, the ability to establish deeper relationships with the students, and increased inner happiness. The consequence of these changes was to provide the students with a more positive and comfortable learning environment. Among the cognitive developments reported personally by the teachers were increased awareness, greater ability to focus, increased creativity, and a broader perspective. They reported that the development of these qualities enabled them to more easily respond to the individual needs of the students, to better appreciate students' points of view, and to talk to them on their level. The teachers also report that they are more confident and successful in following their intuition about the directions to take in the classroom. One outstanding teacher with over 25 years of experience said that after learning the TM technique her extensive knowledge of teaching skills became more integrated with her classroom experience, so that she could more successfully apply the right knowledge at the right time.

When everyone in a school practices TM, an environment is produced that is uniquely effective in fostering personal growth and academic achievement. In regard to their own careers, the school faculty members expressed great excitement and satisfaction in teaching at Maharishi School; one teacher reported that in the process of teaching at Maharishi School, "I feel as though I'm getting the education I always wanted."

The categories of cognitive, affective, and physiological development reported by Maharishi School teachers for themselves, their students, and the classroom are charted in [Table 2](#). This table provides a model to explain how Consciousness-Based education stimulates the holistic development of student and teacher, and in so doing contributes directly to a more ideal classroom environment.

COMMENTS ON *CONSCIOUSNESS-BASED* EDUCATIONAL INSTITUTIONS BY STUDENTS, TEACHERS, ADMINISTRATORS, AND VISITORS—This section reports impressions of students, teachers, and educational administrators on the results of implementing Consciousness-Based education at MIU, Maharishi School, and elsewhere.

Kristel Bach-McQueen, a psychology major at MIU, notes:

Before I came to MIU I was interested only in literature. I considered every science beyond me. After the first year I was inspired to choose psychology as my major. Now I find that even statistics is fascinating. MIU has truly expanded my vision of what a college education should be—and of what I can be.

Samuel Boothby, an MIU alumnus and Ed.D. Candidate at the Harvard University Graduate School of Education, writes:

My education at MIU was an excellent preparation for graduate studies. The knowledge that was presented was the most fundamental and significant for my field. Most importantly, because the knowledge was presented in terms of my own experience, I don't have to go back to my notes when I need the knowledge—it's a part of me.

June Aherne, science teacher at Maharishi School in Fairfield, interviewed shortly after 25 students in the School received top awards in the state science fairs in 1987, stated:

I find that these children have an extraordinary feeling for how nature works. I barely had to help them at all in their projects for the fair. They had a clear vision of where they were going and what they were looking for. I've never had students with this kind of a feeling for science.

Dr. Norman Brust, former Superintendent of Schools in a St. Louis school district and Principal of Garfield School in St. Louis, remarks:

At Maharishi School what is most extraordinary is the creative attitude of parents, teachers, and students towards every aspect of activity. This, and the harmonious relationships among everyone, all come together to make the kind of environment where learning can really take place. I encourage all public school administrators to explore the implications of this approach for public education.

Dr. Louis Albert, Director of Special Projects for the American Association for Higher Education, commented:

As a visitor to MIU, I have been impressed with the growth of the students. They go through a remarkable transformation. One is forced to ask, "How do students get to be this way?" MIU provides a rich traditional academic program like other schools, but what makes the difference at MIU is the Consciousness-Based approach.

Based on the success of Maharishi International University and Maharishi School of the Age of Enlightenment in Fairfield, the TM and TM-Sidhi programs have been introduced on elementary, secondary, and post-secondary levels of education to many thousands of students in over 20 countries, including Australia, Brazil, Denmark, the Dominican Republic, Great Britain, India, Kenya, Korea, the Netherlands, Norway, the Philippines, Puerto Rico, Taiwan, and Thailand.

Mrs. Y.G. Parthasarathy, the Director of Padma Seshadri Bala Bhavan Senior Secondary School in Madras, India, where all 5,000 students and teachers have been practicing the TM and TM-Sidhi programs since 1980, reports:

When I heard that the TM technique improved alertness, memory, and concentration in students, and that it would improve their performance in classes, I decided that all my students and teachers should learn. Right away I noticed that discipline improved tremendously in all classes, and the students seemed brighter and happier. Then the results on their public exams showed they scored in the top 10 percent of the nation. More

students in the upper grades of our school have achieved national academic honors than any other non-governmental school in India... Also the problems we used to have with our staff have just cleared up naturally. Negative influences are just neutralized by the positivity in the whole school atmosphere.

SOCIOLOGICAL EFFECTS OF SCHOOL-WIDE IMPLEMENTATION OF CONSCIOUSNESS-BASED EDUCATION—One of the primary goals of every educational system is to create a positive influence on the society that it serves. As noted in the beginning of this article, because educational systems do not fully develop the knower, their positive influence on the environment is at best limited, as reflected in the troubled state of societies in all parts of the world.

With the implementation of Consciousness-Based education, however, a school or university can generate an immediate and measurable positive impact upon the quality of life of the entire society. Moreover, the range of influence of the educational institution is limited only by its size; a school or university with more than 7,000 students could improve the quality of life of the entire world, laying the foundation for world peace.

The basis of this bold assertion is a principle that has repeatedly been demonstrated by scientific research: a group equal in size to the square root of one percent of a society's population practicing the Transcendental Meditation and TM-Sidhi programs together in one place generates an influence of coherence in the collective consciousness, immediately neutralizing stress and negative tendencies in the whole society (Dillbeck, Cavanaugh, Glenn, Orme-Johnson, & Mittlefehldt, 1987). Coherence in collective consciousness can be operationally defined in terms of improved quality of life indicators, such as reduced crime, accidents, and violence, and improved economic and health trends. This holistic improvement in the quality of life is known as the Maharishi Effect in honor of the founder of the Transcendental Meditation and TM-Sidhi programs (Borland & Landrith, 1976).

Many studies have documented the Maharishi Effect on the city, state or provincial, national, and global scales in the past 12 years. These studies include time-series analyses of the effect of over 1600 participants in the TM-Sidhi program at Maharishi International University (the square root of one percent of the U.S. population) on the quality of life of the United States as a whole, and similar results in other countries (Burgmans, Burgt, Langenkamp, & Verstegen, in press; Dillbeck et al., 1987; Dillbeck, Larimore, & Wallace, in press; Lanford, Dixon, & Reeks, 1984; Orme-Johnson, Alexander, Davies, Chandler, & Larimore, in press). During three periods when the number of participants in the TM-Sidhi program at MIU and at other locations exceeded or approached 7,000—the square root of one percent of the world's population—time series analysis showed reduced international conflicts and improved economic indices worldwide (Orme-Johnson & Dillbeck, 1987b). A detailed review of these studies and the principles underlying this effect can be found in Orme-Johnson and Dillbeck (1987a).

The mechanism proposed by Maharishi to explain this effect is that when large groups of participants in the TM and TM-Sidhi programs experience the unified field of all the laws of nature, a field effect is generated that spreads coherence through the entire society. As a result of this effect, the thoughts and actions of everyone in the society begin to be more in accordance with the full range of the laws of nature available in the unified field. As a result, the behavior of citizens begins to promote progress and harmony in society rather than stress and conflict (Maharishi Mahesh Yogi, 1986, pp. 94–101).

Through the Maharishi Effect, it is possible for any educational institution to immediately have a profoundly holistic and positive influence on the entire society and nation through the group practice of the Transcendental Meditation and TM-Sidhi programs. Maharishi Mahesh Yogi is now establishing in India an educational institution of over 7,000 students and faculty collectively practicing the TM and TM-Sidhi programs to create a permanent influence of coherence in world consciousness and thereby establish a lasting state of world peace. Any school or college of comparable size has the potential to magnify this same effect by creating a similar large group of students collectively practicing the TM and TM-Sidhi programs at the beginning and end of the school day.

Consciousness-Based education has thus raised the dignity of educational institutions so that students and teachers, even as they are unfolding their own inner potential and creating a dynamic and positive school environment, are also immediately improving the quality of life of the entire society and contributing to world peace.

5. Meeting Current Educational Challenges

The purpose of this section is to suggest how adding practice of the TM and TM-Sidhi programs solves widely recognized problems in education today. When students and teachers are more comprehensive in their thinking, more engaged in learning, and more fulfilled in their achievements, many of the current concerns in education are naturally resolved. In this section educational problems identified in the areas of curriculum, students, and teachers are expressed in quotations from contemporary educators. The solutions presented here are based on the research, educational outcomes, and experience with Maharishi's Consciousness-Based education.

Universities and schools are not providing a coherent curriculum:

The absence of a rationale for the major [field of study] becomes transparent in college catalogues where the essential message embedded in the fancy prose is: pick eight of the following. And "the following" might literally be over a hundred courses, all served up as equals. The chairman of the Committee on Economic Education for the American Economic Association, in a letter to AAC, recently admitted that...it is unlikely, whatever the major or institution, that the average graduating senior "has any integrated sense of his major discipline and its links to other fields of inquiry." (Association of American Colleges, 1985, p. 2)

The fundamental element that provides meaning and coherence to a curriculum is the consciousness of the student. Even though courses may be offered to the students in a planned sequence and main themes brought out to integrate different disciplines, the potent and enriching ideas of these courses remain in the books or in the minds of the professors when the students' thinking is not clear, profound, and integrative. The more expanded their awareness, the more easily they can comprehend fundamental principles, make profound connections, and bring a clear sense of values to whatever they study. Breadth of vision, depth of insight, a fruitful imagination—these directly contribute to the student's ability to experience knowledge as an integrated whole.

With the experience of deeper levels of consciousness students and faculty feel more "at home" with the laws of nature; their understanding of their subjects becomes more subtle and expanded. Eventually they become aware of the unity of all knowledge within their own consciousness. Consciousness-Based education thus gives a new basis for curriculum integrity: the common ground of student and subject matter, experienced as the simplest form of the students' awareness. With fully awakened and unbounded comprehension, students fully appreciate and integrate the different fields of knowledge.

Specialization and professional training result in fragmentation of knowledge:

Majors have deflected attention from the serious business of creating an intellectual environment that makes a central concern the quest for the powers of informed judgment and for the dual capacities of appreciation and criticism...[Majors have] been proliferating, especially in the vocational and technical fields, where the appeal of jobs has blinded institutions and students to the ephemeral nature of much that is contained in the new majors. In the meantime, students are being short-changed, denied the intellectual experiences that will enable them to comprehend their world and to live in it freely,

courageously, happily, and responsibly. (Association of American Colleges, 1985, p. 27)

To become an expert in a highly complex society one has to specialize. Unfortunately, specialization has required sacrificing knowledge of the breadth of human experience to gain depth and command of one limited area. Until now there has been no practical way to expand one's knowledge of the whole of life while one is specializing in a part of life.

Transcendental consciousness is the experience of the unified basis of all the laws of nature. When one is stationed at this level of unbounded awareness, success in life is not restricted to isolated areas of knowledge and activity; all thoughts and actions are spontaneously upheld by the totality of natural law. Students participating in Consciousness-Based education continue their training as expert professionals in a focused area while they are growing in wisdom and enjoyment of the wholeness of life. They respond to the changing demands of the environment more creatively, growing in the ability to make right decisions in the entire sphere of their activity, not just in the area of their expertise.

Institutions lack a common purpose to unify their programs and give direction to their decisions:

Is it possible for administrators, faculty, and students with their separate interests to agree on a vital mission for undergraduate education? Can the curriculum serve individual interests while providing a coherent view of the human conditions?...Above all, can the liberal and useful arts be blended during college, as they must inevitably be blended during life? (Boyer, 1987, p. 19)

A high school, to be effective, must have a clear and vital mission. Students, teachers, administrators, and parents at the institution should have a shared vision of what, together, they are trying to accomplish. But is it possible to serve all students and also find a coherent purpose for our schools? (Boyer, 1983, p. 58)

The knowledge of the full potential of life and the technology to achieve this potential give a new purpose to education: to raise every student and teacher to enlightenment, the fully developed state of human life, and thereby establish a creative and peaceful society. This purpose embraces and fulfills all other educational aims. With the growth of higher states of consciousness through practice of the TM and TM-Sidhi programs, students and teachers grow toward the full expression of their creative intelligence and happiness. The experience of the unity that underlies and connects everyone and everything naturally gives rise to loving behavior, harmonious relationships, and exemplary citizenship.

Education that truly serves all its students and the needs of society awakens students and teachers to the infinite possibilities inherent in their own consciousness. Such an education frees the individual from error and wrongdoing. It expands the range of perception and thought, and develops the capacity to live a life that is blissful, happy, and most useful to others. Consciousness-Based education offers the practical means to fulfill this sublime purpose.

Education does not develop high principles and deep values in students:

The kinds of questions children ask: Is there a God? Is there freedom? Is there punishment for evil deeds? Is there certain knowledge? What is a good society? were once also the questions addressed by science and philosophy. But now the grownups are too busy at work, and the children are left in a day-care center called the humanities, in which the discussions have no echo in the adult world. Moreover, students whose nature draws them to such questions and to the books that appear to investigate them are very quickly rebuffed by the fact that their humanities teachers do not want or are unable to use the books to respond to their needs. (A. Bloom, 1987, p. 372–373)

The principle, "knowledge is structured in consciousness," from the Science of Creative Intelligence

implies that the degree of wakefulness of the knower determines the significance of the knowledge he can give or gain.

Teaching, appreciating, and realizing the most profound wisdom of the culture require a level of awakening that has not previously been fostered through education. Exposing students to the highest cultural, scientific, artistic, and humanistic values does not reliably enliven these values. If the thinking of the students is shallow, they will not be able to appreciate the richness of ideas that underlie our traditions and have shaped our way of life. The students themselves must acquire the level of understanding and sensitivity to discover these ideas as true.

Until recently the quality of awareness of the student has not been subject to systematic development. The result has been that liberal education, which aspires to actualize the good life through knowledge, has fallen short of its goals.

With practice of the TM and TM-Sidhi programs, students and teachers gain greater depth of thought and feeling. This technology expands their awareness of the fundamental level of existence that unifies the infinite diversity of life. Increasingly students experience the connection between themselves and the world around them. This growing unity is reflected in their speech and behavior. They feel a greater affinity with those ideas from past and present that support life and progress. As they become familiar with the deepest and most universal levels of their own existence, the enduring values of the civilization take on more meaning and are more naturally lived.

Education does not sufficiently involve students in learning and is not found to be relevant or fulfilling:

The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement in learning. (National Institute of Education, 1984, p. 19)

Students are involved in learning when they can see the content of their classes as potentially useful for progress in their lives. For students to be as absorbed in their subjects as their teachers are, they should feel a similar familiarity and enjoyment of the area of study, and an appreciation of its value for their growth. Only then can they adopt the teachers' standards as their own.

Years of experience with Consciousness-Based education suggest that this close relationship between the student and the object of study can be attained in two mutually enriching ways: through direct experience of the unified basis of self and subject matter, and intellectually through the use of the specific teaching methods described earlier, such as Unified Field Charts.

With these additions to the curriculum, students more easily integrate the knowledge they are studying. In Maharishi's words, students come to perceive all branches of knowledge as different modes of their own intelligence. This intimacy between student and content produces a classroom atmosphere of intellectual excitement, and the desire to probe more deeply into the discipline. (See Section 4.) Students become more active learners, creators as well as receivers of knowledge. Maharishi (1973) describes this growth:

When the practice of Transcendental Meditation is introduced along with the study of any discipline, the knower becomes more and more wide awake within himself as he is amassing knowledge... Then any knowledge that comes from outside is experienced as a wave of one's own consciousness... This is how to build up the student's personality in knowledge. When knowledge becomes part of one's breath, of one's awareness, then every wave of knowledge is a wave of happiness, a wave of fulfillment.

The effectiveness of schooling is diminished by anti-social behavior and student drop-outs:

The main reason students want to leave school is that they are discouraged and doing poorly. "Not interested in school" was mentioned most frequently by young white men as the reason for dropping out... (Boyer, 1983, p. 244)

The threat of physical violence in the schools has received considerable attention. The problem is, in fact, very real. (Boyer, 1983, p. 159)

Maharishi has said that the youth in schools everywhere have a thirst that is not being satisfied. This thirst is for knowledge—knowledge that will bring happiness and fulfillment to their lives. When their education fails to provide this knowledge, students become uninterested, destructive, or seek temporary relief through activities that damage their physical and mental health.

Irrespective of the background of its students, any school can begin to build the receptivity, self-esteem, creativity, and emotional stability students need to benefit most from their education. These traits are nurtured by the experience of the deepest, most stable and blissful level of their own existence, transcendental consciousness. Research has shown that practice of the TM and TM-Sidhi programs develops in students a greater sense of well-being, more life-supporting thoughts and behavior, and more effective and fulfilling activity, which raises the quality of their lives both in and out of school. (See Section 4.)

Teachers are unable to promote excellence and equality of educational opportunity simultaneously:

The charge to provide quality and equality simultaneously is formidable under the best of circumstances. Given present circumstances, we must address seriously the question of whether our system of schooling is up to it. (Goodlad, 1984, p. 45)

No modern society can hope to become a just society without a high level of universal literacy. Putting aside for the moment the practical arguments about the economic uses of literacy, we can contemplate the even more basic principle that underlies our national system of education in the first place—that people in a democracy can be entrusted to decide all important matters for themselves because they can deliberate and communicate with one another. Universal literacy is inseparable from democracy... (Hirsch, 1987, p. 12)

Practice of the TM and TM-Sidhi programs directly develops the creative intelligence of every student without requiring attention from the teacher. The universal effectiveness and ease of practice of this technology recommend it as the most practical and cost-effective means available for students of any background to become self-sufficient and motivated learners.

When students and teachers begin practicing this technology, the atmosphere of the whole class is more conducive to learning. Teachers find it easier to meet a wide range of individual needs, attending to the slower students while maintaining high standards and stimulating the most gifted minds. Research has shown that students practicing the TM and TM-Sidhi programs improve in intelligence, creativity, learning ability, and academic performance. (See Section 4.)

Teachers find it difficult to maintain a classroom that is both orderly and creative:

Most [students] graduate without being stretched to their potential. At Ridgefield and elsewhere, there is a kind of unwritten, unspoken contract between the teachers and the students: Keep off my back, and I'll keep off yours. (Boyer, 1983, p. 16)

It is stress in the lives of students and teachers and in the environment that blocks the flow of their creativity and leads to hostility and disorder. When teachers respond to the threat of disorder in the classroom in a way that engenders fear or mistrust, they inhibit both their own and students' natural

creativity and spontaneity.

As demonstrated by extensive research, practice of the TM and TM-Sidhi programs eliminates stress, stimulates creativity, and develops a neurophysiological state of restful alertness. (See Section 4.) The individual becomes wide awake and calm. As stress is eliminated from individual and collective life, the whole classroom spontaneously becomes more orderly, purposeful, and lively; self-discipline and enthusiasm harmoniously coexist. This has been the experience in many countries with schools and colleges using Consciousness-Based education.

Teaching is often mentally and physically exhausting:

In sum, the teacher's world is often frustrating, frequently demeaning, and sometimes dangerous. The result for many teachers is a sense of alienation, apathy, and what is now...called "teacher burnout." (Boyer, 1983, p. 159)

The natural desire of teachers to share what they know for the good of society is thwarted when students are not receptive. Unruly and inattentive behavior, which is the expression of stress in the students and in the atmosphere of the school, is a drain on teachers and diminishes their ability to give.

Similarly, teachers who are stressed and fatigued cannot be as sensitive to the needs of their students or as creative in designing the most stimulating ways to bring about learning. Stress inhibits the spontaneous expression of creativity, flexibility, clarity, and compassion that characterize teaching at its best.

When practice of the TM and TM-Sidhi programs is added to the daily routine of students and teachers, teaching becomes a more joyful occupation. The students are increasingly alert, enthusiastic, and kind; the teachers become more energetic, healthy, and resourceful. The students are able to meet higher standards, while the teacher can better assess their progress and guide them to deeper understanding, subtler values, more refined skills, and greater success. This is the common experience of teachers who practice TM. A mathematics teacher with 31 years of teaching experience comments:

TM has helped me become aware that there is far more to teaching than just conveying knowledge of mathematics. It has helped me guide students towards a greater appreciation of wisdom, of beauty, of the people around them, and of themselves; to understand the possibilities that exist, and the amount of control they can have over their own lives. By experiencing the deeper levels of my own being, I am able to respond to the students more as total human beings, and as a result they are very positive and cooperative in the classroom. (American Association for Ideal Education, 1986)

Teachers do not easily apply in their classrooms the accumulated knowledge and research findings on effective teaching:

Much is known about the conditions under which student learning and growth can be maximized...But our colleges, community colleges, and universities rarely seek and apply this knowledge in shaping their educational policies and practices. We contend that the quality of undergraduate education could be significantly improved if America's colleges and universities would apply existing knowledge [about teaching]...(National Institute of Education, 1984, p. 17)

It appears that even teachers who have been exposed to new practices [which] presumably related very positively to student achievement do not necessarily use them effectively in their classrooms...too few of the kinds of engagements we want young people to have with knowledge occur in the classroom setting. (Goodlad, 1984, p. 192)

Teachers who readily apply new knowledge and research findings in their classrooms seem to possess

certain qualities: inner stability, which gives them the confidence and boldness to try something different; adaptability, which makes them open to new possibilities; integration, which enables them to introduce a new idea or approach into their established patterns of teaching, bringing new and old ideas together; purification, the ability to discontinue types of behavior or activities that are not producing the results they want; and growth, continuous mental, physical, and spiritual development.

Maharishi has identified these five qualities as the "Fundamentals of Progress." Scientific research and experience with teachers who practice TM have shown that it fosters the physiological and psychological growth of these fundamentals. (See Section 4.) When students also practice this technology, a classroom environment is created that inspires teachers to give their best.

6. New Principles of Education Based on Knowledge and Experience of Consciousness

Students and teachers respond to education in new ways as their awareness expands and they command more of their inner potential, just as someone who is wide awake evaluates his surroundings differently than when he is drowsy. The knowledge, technology, research, and experience with Consciousness-Based education have given rise to new conceptions about education—all based ultimately on the experience of transcendental consciousness.

Principles that have been guiding education in the past are being replaced or expanded with new principles based on a more complete understanding of the nature, range, and development of human consciousness. These new principles, which derive from Maharishi's Vedic Science, currently guide teachers and administrators who are applying Consciousness-Based education. The contrasts between old and new principles are summarized below, and also serve to recapitulate basic concepts of Maharishi's theory of education.

CONCLUSION

Knowledge of the full development of human consciousness provided by Maharishi's Vedic Science, together with modern scientific principles, research on the TM and TM-Sidhi programs, and teaching experience worldwide, provide convincing evidence that any school or university can achieve its highest goals.

Maharishi's *consciousness-based* educational directly develops the knower and the processes of knowing in both student and teacher. It gives students a practical method to develop their own creative potential from within themselves, by themselves. It enables them to improve those characteristics that are essential for success in education and in life, yet are beyond the ability of teachers to influence permanently: intelligence, coherent thinking, motivation, self-confidence, focus, self-discipline, creativity, and happiness.

With the development of these qualities, students make best use of their knowledge. They grow in organizing power. They more fully appreciate their teachers, their institution, and the opportunities in their environment. They are able to integrate their experiences inside and outside of class into a meaningful whole, on the ground of their own comprehensive awareness. With such students any school or university can become a vital center for intellectual, emotional, artistic, and spiritual growth. Maharishi comments:

When all students, from their first day in school, practice TM as part of their daily academic routine, they will never accumulate stress in their lives. They will be set on the unflinching path to enlightenment, unfolding their creative genius day by day. (World Parliament of the Age of Enlightenment, 1984, p. 5)

The conception of a limited and fixed capacity of the student to assimilate knowledge has become obsolete with the introduction of Maharishi's technology. Day by day, year by year, the students grow in intelligence and maturity. They become increasingly attuned to the subtler levels of natural law that govern their own progress and the orderly progress of the universe. In practical terms this means that as the students continue to participate in Consciousness-Based education they make fewer mistakes and are better able to achieve their desires. With this approach to education schools and universities can truly fulfill their goal to produce ideal citizens.

If the institution is large enough, the effects of the group practice of the TM and TM-Sidhi programs will extend beyond the individual students and academic environment. Research shows that by practicing this technology as a group, students and teachers of one large university can neutralize negativity in the community, nation, and whole world consciousness, influence the trends and tendencies in society in a positive, life-nourishing direction, and thereby create a permanent foundation for lasting world peace.

Educators everywhere are invited to examine this approach. They are invited to visit Maharishi International University and Maharishi Schools of the Age of Enlightenment to see for themselves the extraordinary results of Consciousness-Based education. They are invited to add to their own institutions the practical and powerful technology to raise students and teachers out of problems to a level of achievement and fulfillment that has not until now even been conceivable.

Maharishi summarizes the value of Consciousness-Based education:

Throughout the world for the last few years there has been a demand for some change in education. We are happy today to present to the world an ideal system of education where not only will the intellect be fed and satisfied, but the basis of intellect, the field of pure intelligence, the source and basis of life, will be fully realized by everyone. The result will be a life that is not baseless but that has a profound basis on the lively field of all possibilities. This is consciousness-based life and for that we have Consciousness-Based education. (Maharishi Mahesh Yogi, 1985, pp. 61–62)

References

- ALEXANDER, C.N., BOYER, R.W., & ALEXANDER, V.K. (1987). Higher states of consciousness in the Vedic Psychology of Maharishi Mahesh Yogi: A theoretical introduction and research review. *Modern Science and Vedic Science*, 1, 88–126.
- ALEXANDER, C.N., KURTH, S.C., TRAVIS, F., WARNER, T., & ALEXANDER, V.K. (in press). Cognitive stage development in children practicing the Transcendental Meditation program: Acquisition and consolidation of conservation. In R.A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific research on the Transcendental Meditation and TM-Sidhi programme: Collected papers (Vol. 4)*. Vlodrop, The Netherlands: Maharishi Vedic University Press.
- AMERICAN ASSOCIATION FOR IDEAL EDUCATION. (1985). *The Maharishi Unified Field Based Integrated System of Education*. Washington, DC: Age of Enlightenment Press.
- AMERICAN ASSOCIATION FOR IDEAL EDUCATION. (1986). *The Transcendental Meditation program and its application in education*. Fairfield, IA: Maharishi International University Press.
- ANDERSON, R.C., SPIRO, R.J., & MONTAGUE, W.E., (Eds.). (1977). *Schooling and the acquisition of knowledge*. Hillsdale, NJ: Lawrence Earlbaum.

- APPELLE, S., & OSWALD, L.E. (1974). Simple reaction time as a function of alertness and prior mental activity. *Perceptual and Motor Skills*, 38, 1263–1268.
- ARON, A.P., ORME-JOHNSON, D.W., & BRUBAKER, P. (1981). The Transcendental Meditation program in the college curriculum: A four-year longitudinal study of effects on cognitive and affective functioning. *College Student Journal*, 15, 140–146.
- ASSOCIATION OF AMERICAN COLLEGES. (1985). *Integrity in the college curriculum: A report to the academic community*. Washington, DC: Association of American Colleges.
- ASTIN, A.W. (1977). *Four critical years*. San Francisco: Jossey-Bass.
- BAER, N., NIDICH, S., & ABRAMS, A. (in press). A comparative study of Maharishi International University and two small private colleges on perceived personal growth, perceived academic atmosphere, and general quality of life. In R.A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific research on the Transcendental Meditation and TM-Sidhi programme: Collected papers (Vol. 4)*. Vlodrop, The Netherlands: Maharishi Vedic University Press.
- BERG, W.P. VAN DEN, & MULDER, B. (1976). Psychological research on the effects of the Transcendental Meditation technique on a number of personality variables. *Gedrag: Tijdschrift voor Psychologie [Behavior: Journal of Psychology]*, 4, 206–218.
- BLACKWELL, B., HANENSON, I.B., BLOOMFIELD, S.S., MAGENHEIM, H.G., NIDICH, S.I., & GARTSIDE, P. (1975). Effects of Transcendental Meditation on blood pressure: A controlled pilot experiment. *Psychosomatic Medicine*, 37, 86.
- BLOOM, A. (1987). *The closing of the American mind*. New York: Simon and Schuster.
- BLOOM, B. (1976). *Human characteristics and school learning*. New York: McGraw-Hill.
- BORLAND, C., & LANDRITH, G., III. (1976). Improved quality of life through the Transcendental Meditation program: Decreased crime rate. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers (Vol.1, pp. 639–648)*. Rheinweiler, W. Germany: Maharishi European Research University Press.
- BOYER, E.L. (1983). *High school: A report on secondary education in America*. (Sponsored by the Carnegie Foundation for the Advancement of Teaching.) New York: Harper & Row.
- BOYER, E.L. (1987). *College: The undergraduate experience in America*. (Sponsored by the Carnegie Foundation for the Advancement of Teaching.) New York: Harper & Row.
- BRAUTIGAM, E. (1976). Effects of the Transcendental Meditation program on drug abusers: A prospective study. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers (Vol. 1, pp. 506–514)*. Rheinweiler, W. Germany: Maharishi European Research University Press.
- BROWN, M. (1977). *Higher education for higher consciousness: A study of students at Maharishi International University (Doctoral dissertation, University of California, Berkeley, 1976)*. *Dissertation Abstracts International*, 38, 649A.
- BURGMANS, W.H.P.M., BURGT, A.T. VAN DER, LANGENKAMP, F.P.TH., & VERSTEGEN, J.H. (in press). Sociological effects of the group dynamics of consciousness: Decrease of crime and traffic accidents in Holland. In R.A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific research on the Transcendental Meditation and TM-Sidhi programme: Collected papers (Vol. 4)*. Vlodrop, The Netherlands: Maharishi Vedic University Press.

- COOPER, M.J., & AYGEN, M.M. (1979). A relaxation technique in the management of hypercholesterolemia. *Journal of Human Stress*, 5, 24–27.
- DEWEY, J. (1966). *Democracy and education*. New York: The Free Press. (Original work published 1916)
- DILLBECK, M.C. (1977). The effect of the Transcendental Meditation technique on anxiety level. *Journal of Clinical Psychology*, 33, 1076–1078.
- DILLBECK, M.C., ASSIMAKIS, P.D., RAIMONDI, D., ORME-JOHNSON, D.W., & ROWE, R. (1986). Longitudinal effects of the Transcendental Meditation and TM-Sidhi program on cognitive ability and cognitive style. *Perceptual and Motor Skills*, 62, 731–738.
- DILLBECK, M.C., & BRONSON, E.C. (1981). Short-term longitudinal effects of the Transcendental Meditation technique on EEG power and coherence. *International Journal of Neuroscience*, 14, 147–151.
- DILLBECK, M.C., CAVANAUGH, K.L., GLENN, T., ORME-JOHNSON, D.W., & MITTFELDEHLDT, V. (1987). Consciousness as a field: The Transcendental Meditation and TM-Sidhi program and changes in social indicators. *The Journal of Mind and Behavior*, 8, 67–104.
- DILLBECK, M.C., LARIMORE, W.E., & WALLACE, R.K. (in press). A time series analysis of the effect of the Maharishi Technology of the Unified Field: Reduction of traffic fatalities in the United States. In R.A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific research on the Transcendental Meditation and TM-Sidhi programme: Collected papers (Vol. 4)*. Vlodrop, The Netherlands: Maharishi Vedic University Press.
- DILLBECK, M.C., & ORME-JOHNSON, D.W. (1987). Physiological differences between Transcendental Meditation and rest. *American Psychologist*, 42, 879–881.
- DILLBECK, M.C., ORME-JOHNSON, D.W., & WALLACE, R.K. (1981). Frontal EEG coherence, H-reflex recovery, concept learning and the TM-Sidhi program. *International Journal of Neuroscience*, 15, 151–157.
- EPPLEY, K., ABRAMS, A., & SHEAR, J. (1984, August). The effects of meditation and relaxation techniques on trait anxiety: A meta-analysis. Paper presented at the annual meeting of the American Psychological Association, Toronto, Ontario.
- EPSTEIN, H.T. (1974). Phenoblysis: Special brain and mind growth periods: II. Human mental development. *Developmental Psychobiology*, 7, 217–224.
- EPSTEIN, H.T. (1980). EEG developmental stages. *Developmental Psychobiology*, 13, 629–631.
- ERIKSEN, S.C. (1974). *Motivation for learning*. Ann Arbor, MI: University of Michigan Press.
- EYERMAN, J. (1981). Transcendental Meditation and mental retardation. *Journal of Clinical Psychiatry*, 42, 35–36.
- FEHR, T., NERSTHEIMER, U., & TÖRBER, S. (1976). Study of personality changes resulting from the Transcendental Meditation program: Freiburger Personality Inventory. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers (Vol. 1, pp. 420–424)*. Rheinweiler, W. Germany: Maharishi European Research University Press.
- FERGUSON, P.C., & GOWAN, J.C. (1976). TM: Some preliminary findings. *Journal of*

Humanistic Psychology, 16, 51–60.

GHISELIN, B. (1952). *The creative process*. New York: New American Library.

GOODENOUGH, D.R. (1976). The role of individual differences in field dependence as a factor in learning and memory. *Psychological Bulletin*, 83, 675–694.

GOODLAD, J.I. (1984). *A place called school*. New York: McGraw-Hill.

HAGELIN, J.S. (1987). Is consciousness the unified field? A field theorist's perspective. *Modern Science and Vedic Science*, 1, 28–87.

HANLEY, C.P., & SPATES, J.L. (1978). Transcendental Meditation and social psychological attitudes. *The Journal of Psychology*, 99, 121–127.

HIRSCH, E.D., JR. (1987). *Cultural literacy*. Boston: Houghton Mifflin.

HIRST, P.H. (1974). *Knowledge and the curriculum*. London: Routledge & Kegan Paul.

HOLT, W.R., CARUSO, J.L., & RILEY, J.B. (1978). Transcendental Meditation vs. pseudo-meditation on visual choice reaction time. *Perceptual and Motor Skills*, 46, 726.

JACKSON, Y. (1977). *Learning disorders and the Transcendental Meditation program: Retrospects and prospects. A preliminary study with economically deprived adolescents*. Unpublished doctoral dissertation, University of Massachusetts, Amherst.

JEVNING, R., WILSON, A.F., & DAVIDSON, J.M. (1978). Adrenocortical activity during meditation. *Hormones and Behavior*, 10, 54–60.

JEVNING, R., WILSON, A.F., & SMITH, W.R. (1978). The Transcendental Meditation technique, adrenocortical activity, and implications for stress. *Experientia*, 34, 618–619.

KATZ, D. (1976). Decreased drug use and prevention of drug use through the Transcendental Meditation program. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers (Vol. 1, pp. 536–543)*. Rheinweiler, W. Germany: Maharishi European Research University Press.

KEMBER, P. (1985). The Transcendental Meditation technique and postgraduate academic performance. *British Journal of Educational Psychology*, 55, 164–166.

KORY, R., & HUFNAGEL, P. (1976). The effect of the Science of Creative Intelligence course on high school students: A preliminary report. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers (Vol. 1, pp. 400–402)*. Rheinweiler, W. Germany: Maharishi European Research University Press.

LANFORD, A.G., DIXON, C.A., & REEKS, D.A. (1984). A reduction in homicide in the United States through the Maharishi Technology of the Unified Field: A time series analysis. Prepublication manuscript, Maharishi International University, Fairfield, IA.

LAZAR, Z., FARWELL, L., & FARROW, J.T. (1976). The effects of the Transcendental Meditation program on anxiety, drug abuse, cigarette smoking, and alcohol consumption. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers (Vol. 1, pp. 524–535)*. Rheinweiler, W. Germany: Maharishi European Research University Press.

LEVIN, S. (1976). *The Transcendental Meditation technique in secondary education*. Dissertation

Abstracts International, 38, 706A.

LEVINE, P.H. (1976). The coherence spectral array (COSPAR) and its application to the studying of spatial ordering in the EEG. *Proceedings of the San Diego Biomedical Symposium*, 15, 237–247.

Maharishi Ayur-Veda®. (in press). Washington, DC: Age of Enlightenment Press.

MAHARISHI INTERNATIONAL UNIVERSITY. (1974). *Science of Creative Intelligence for secondary education: Three year curriculum*. Livingston Manor, NY: Maharishi International University Press.

MAHARISHI INTERNATIONAL UNIVERSITY. (1984a). *Maharishi Technology of the Unified Field: Results of scientific research on the Transcendental Meditation and TM-Sidhi programme*. Fairfield, IA: Maharishi International University Press.

MAHARISHI INTERNATIONAL UNIVERSITY. (1984b). *Maharishi Technology of the Unified Field: Integration of modern science and ancient Vedic Science*. Fairfield, IA: Maharishi International University Press.

MAHARISHI INTERNATIONAL UNIVERSITY. (in press). *Maharishi Technology of the Unified Field: Scientific research on the Transcendental Meditation and TM-Sidhi program*. Fairfield, IA: Maharishi International University Press.

MAHARISHI MAHESH YOGI. (1972). *The Science of Creative Intelligence: Knowledge and experience (Lessons 1–33) [Course syllabus]*. Los Angeles, CA: Maharishi International University Press.

MAHARISHI MAHESH YOGI. (1973, March). Keynote address. Lecture presented at the annual meeting of the American Association for Higher Education, Chicago, IL.

MAHARISHI MAHESH YOGI. (1977). *Creating an ideal society*. Rheinweiler, W. Germany: Maharishi European Research University Press.

MAHARISHI MAHESH YOGI. (1985). Inaugural address of His Holiness Maharishi Mahesh Yogi. In *Maharishi Vedic University inauguration*. Washington, DC: Age of Enlightenment Press.

MAHARISHI MAHESH YOGI. (1986). *Life supported by natural law*. Washington, DC: Age of Enlightenment Press.

MAHARISHI VEDIC UNIVERSITY. (1985). *Maharishi Vedic University inauguration*. Washington, DC: Age of Enlightenment Press.

MAHARISHI VEDIC UNIVERSITY. (1986). *His Holiness Maharishi Mahesh Yogi: Thirty years around the world—Dawn of the Age of Enlightenment; Vol. 1, 1957–1964*. Vlodrop, The Netherlands: Maharishi Vedic University Press.

MASLOW, A.H. (1968). Creativity in self-actualizing people. In *Toward a psychology of being*, pp. 135–145. Princeton, NJ: Van Nostrand.

MISKIMAN, D.E. (1976). The effect of the Transcendental Meditation program on the organization of thinking and recall (secondary organization). In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers (Vol. 1)*, pp. 385–392. Rheinweiler, W. Germany: Maharishi European Research University Press.

NATARAJ, P., & RADHAMANI, M.G. (1975, June). The Transcendental Meditation program and its effects on psychological functions in secondary school students of a rural Indian high school.

Paper presented at the International Conference on Veda and Science, Bangalore, Karnataka, India.

NATIONAL COMMISSION ON EXCELLENCE IN EDUCATION. (1983). *A nation at risk: The imperative for educational reform*. Washington, DC: U.S. Department of Education.

NATIONAL INSTITUTE OF EDUCATION. (1984). *Involvement in learning: Realizing the potential of American higher education*. Washington, DC: U.S. Department of Education.

NIDICH, R., & NIDICH, S. (1985, April). An empirical study of the moral atmosphere of Maharishi International University/University High School. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

NIDICH, S. (1976). A study of the relationship of the Transcendental Meditation program to Kohlberg's stages of moral reasoning. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers* (Vol. 1, pp. 585–593). Rheinweiler, W. Germany: Maharishi European Research University Press.

NIDICH, S. (1980, May). The Science of Creative Intelligence and the Transcendental Meditation program: Reduction of drug and alcohol consumption. Paper presented at the Annual Meeting of the New England Educational Research Association, Lenox, MA.

NIDICH, S. (1982). Effects of the Transcendental Meditation program on state-trait anxiety. Unpublished manuscript, Maharishi International University, Department of Education, Fairfield, IA.

NIDICH, S., & NIDICH, R. (1986, October). Student academic development at Maharishi School of the Age of Enlightenment. Paper presented at the Annual Meeting of the Midwest Educational Research Association, Chicago, IL.

NIDICH, S., NIDICH, R., & RAINFORTH, M. (1986). School effectiveness: Achievement gains at the Maharishi School of the Age of Enlightenment. *Education*, 107, 49–54.

NIDICH, S., SEEMAN, W., & DRESKIN, T. (1973). Transcendental Meditation: A replication. *Journal of Counseling Psychology*, 20, 565–566.

NYSTUL, M.S., & GARDE, M. (1977). Comparison of self-concepts of Transcendental Meditators and nonmeditators. *Psychological Reports*, 41, 303–306.

ORME-JOHNSON, D.W. (1973). Autonomic stability and Transcendental Meditation. *Psychosomatic Medicine*, 35, 341–349.

ORME-JOHNSON, D.W., ALEXANDER, C.N., DAVIES, J.L., CHANDLER, H.M., & LARIMORE, W.E. (in press). International peace project in the Middle East: The effect of the Maharishi Technology of the Unified Field. In R.A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific research on the Transcendental Meditation and TM-Sidhi programme: Collected papers* (Vol. 4). Vlodrop, The Netherlands: Maharishi Vedic University Press.

ORME-JOHNSON, D.W., & DILLBECK, M.C. (1987a). Maharishi's Program to Create World Peace: Theory and research. *Modern Science and Vedic Science*, 1, 206–259.

ORME-JOHNSON, D.W., & DILLBECK, M.C. (1987b). The effects of large assemblies practicing the Maharishi Technology of the Unified Field on international conflicts, the world economy, traffic fatalities, and notifiable diseases. Maharishi International University, Department of Psychology, Fairfield, IA. Manuscript in preparation.

ORME-JOHNSON, D.W., & DUCK, B. (1976). Psychological testing of MIU students: First report.

In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers* (Vol. 1, pp. 470–475). Rheinweiler, W. Germany: Maharishi European Research University Press.

ORME-JOHNSON, D.W., WALLACE, R.K., DILLBECK, M.C., ALEXANDER, C.N., & BALL, O.E. (in press). Improved functional organization of the brain through the Maharishi Technology of the Unified Field as indicated by changes in EEG coherence and its cognitive correlates: A proposed model of higher states of consciousness. In R.A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific research on the Transcendental Meditation and TM-Sidhi programme: Collected papers* (Vol. 4). Vlodrop, The Netherlands: Maharishi Vedic University Press.

OVERBECK, K.-D., & TÖNNIES, S.E. (1975). Einige Effekte der Transzendentalen Meditation bei lernbehinderten Sonder-schülern [Some effects of Transcendental Meditation among special education students with learning deficiencies]. Unpublished Diplomarbeit of first author, University of Hamburg, Psychologisches Institut III, Hamburg, W. Germany.

PELLETIER, K.R. (1974). Influence of Transcendental Meditation upon autokinetic perception. *Perceptual and Motor Skills*, 39, 1031–1034.

PIAGET, J., & INHELDER, B. (1969). *The psychology of the child*. New York: Basic Books.

SALTZ, E. (1971). *The cognitive basis of human learning*. Homewood, IL: Dorsey Press.

SCHENKLUHN, H., & GEISLER, M. (1976). A longitudinal study of the influence of the Transcendental Meditation program on drug abuse. In D.W. Orme-Johnson & J.T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers* (Vol. 1, pp. 544–555). Rheinweiler, W. Germany: Maharishi European Research University Press.

SEEMAN, W., NIDICH, S., & BANTA, T. (1972). Influence of Transcendental Meditation on a measure of self-actualization. *Journal of Counseling Psychology*, 19, 184–187.

SHAFII, M., LAVELY, R.A., & JAFFE, R.D. (1974). Meditation and marijuana. *American Journal of Psychiatry*, 131, 60–63.

SHAFII, M., LAVELY, R.A., & JAFFE, R.D. (1975). Meditation and the prevention of alcohol abuse. *American Journal of Psychiatry*, 132, 942–945.

SHAPIRO, J. (1975). The relationship of selected characteristics of Transcendental Meditation to measures of self-actualization, negative personality characteristics, and anxiety. *Dissertation Abstracts International*, 36, 137A.

SHECTER, H.W. (1978). A psychological investigation into the source of the effect of the Transcendental Meditation technique. *Dissertation Abstracts International*, 38, 3372B–3373B.

SUBRAHMANYAM, S., & PORKODI, K. (1980). Neuro-humoral correlates of Transcendental Meditation. *Journal of Biomedicine*, 1, 73–88.

TJOA, A. (1975). Increased intelligence and reduced neuroticism through the Transcendental Meditation program. *Gedrag: Tijdschrift voor Psychologie [Behavior: Journal of Psychology]*, 3, 167–182.

TRAVIS, F. (1979). The Transcendental Meditation technique and creativity: A longitudinal study of Cornell University undergraduates. *Journal of Creative Behavior*, 13, 169–180.

TURNBULL, M.J., & NORRIS, H. (1982). Effects of Transcendental Meditation on self-identity indices and personality. *British Journal of Psychology*, 73, 57–68.

WALLACE, R.K. (1986). *The neurophysiology of enlightenment*. Fairfield, IA: Maharishi International University Press.

WALLACE, R.K., BENSON, H., & WILSON, A.F. (1971). A wakeful hypometabolic physiologic state. *American Journal of Physiology*, 221, 795–799.

WALLACE, R.K., MILLS, P.J., ORME-JOHNSON, D.W., DILLBECK, M.C., & JACOB, E. (1983). Modification of the paired H reflex through the Transcendental Meditation and TM-Sidhi program. *Experimental Neurology*, 79, 77–83.

WALLACE, R.K., ORME-JOHNSON, D.W., MILLS, P., & DILLBECK, M.C. (1984). Academic achievement and the paired Hoffman reflex in students practicing meditation. *International Journal of Neuroscience*, 24, 261–266.

WARNER, T.K. (1986). *Transcendental Meditation and developmental advancement: Mediating abilities and conservation performance*. Unpublished doctoral dissertation, York University, Toronto.

WARSHAL, D. (1980). Effects of the Transcendental Meditation technique on normal and Jendrassik reflex time. *Perceptual and Motor Skills*, 50, 1103–1106.

WORLD PARLIAMENT OF THE AGE OF ENLIGHTENMENT. (1984). *A draft resolution to serve as a model for bringing the full support of nature to the whole population of every country through its educational system*. The Hague, The Netherlands: World Government of the Age of Enlightenment.

WOOD, M.F. (1981, July). The effectiveness of Transcendental Meditation as a means of improving the echolalic behavior of an autistic student. Paper presented at the International Symposium on Autism Research, Boston.

ZANATH, J. (1985). *The Maharishi School of the Age of Enlightenment and creative thinking*. Unpublished master's thesis, Maharishi International University, Fairfield, IA.

TABLE 1

Improvements in Cognitive, Affective, and Physiological Student Entry Characteristics through the Maharishi Technology of the Unified Field

Cognitive	Affective	Physiological
Increased alertness (1, 2)	Improved self-concept(14–16)	Increased restful alertness
Improved memory (3)	Increased self-actualization (17–19)	–reduced breath rate (25, 26)
Increased fluid intelligence (4–7)	Reduced depression, neuroticism, and anxiety (20–23)	–increased EEG coherence (27–29)
Increased field independence (5, 8)	Reduced aggression and dominance (24)	Reduced stress hormone (30–32)
Increased creativity (6, 9)	Increased tolerance (6, 24)	More adaptive response to stress (33, 34)
Improved reasoning ability (10, 11)		Reduced hypertension and
Increased academic achievement (12, 13)		

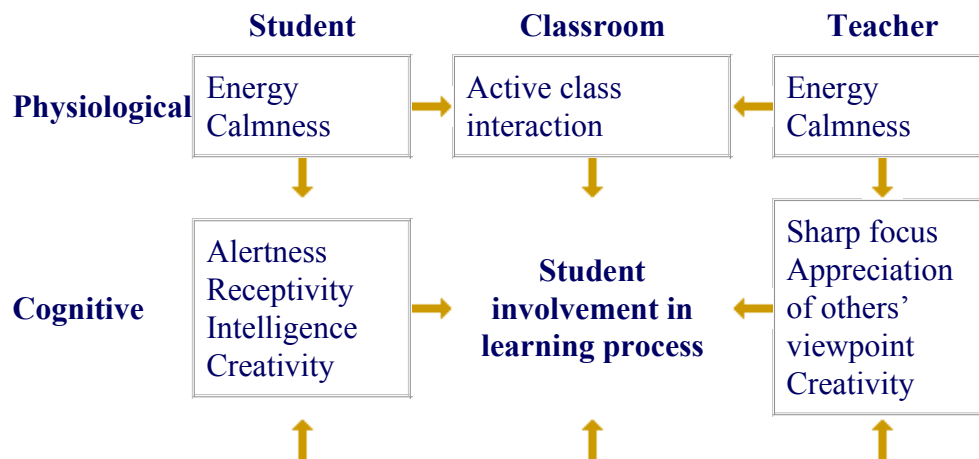
hyper-cholesterolemia
(35, 36)

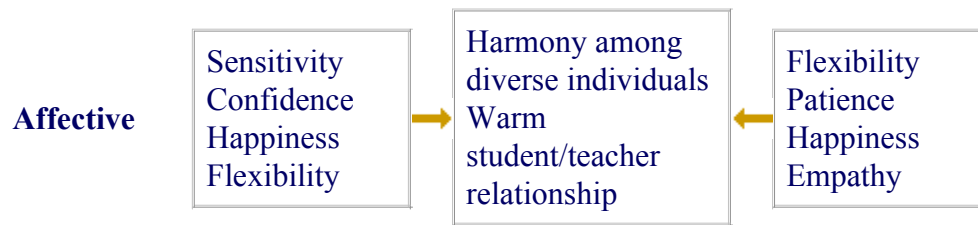
References for Table 1

1. Appelle & Oswald, 1974	20. Dillbeck, 1977
2. Holt, Caruso, & Riley, 1978	21. Eppley, Abrams, & Shear, 1984
3. Miskiman, 1976	22. Ferguson & Gowan, 1976
4. Aron, Orme-Johnson, & Brubaker, 1981	23. Shapiro, 1975
5. Dillbeck, Assimakis, Raimondi, Orme-Johnson, & Rowe, 1986	24. Fehr, Nerstheimer, & Törber, 1976
6. Shecter, 1978	25. Wallace, Benson, & Wilson, 1971
7. Tjoa, 1975	26. Dillbeck & Orme-Johnson, 1987
8. Pelletier, 1974	27. Dillbeck & Bronson, 1981
9. Travis, 1979	28. Levine, 1976
10. Dillbeck, Orme-Johnson, & Wallace, 1981	29. Orme-Johnson, Wallace, Dillbeck, Alexander, & Ball, in press
11. S. Nidich, 1976	30. Jevning, Wilson, & Davidson, 1978
12. Kember, 1985	31. Jevning, Wilson, & Smith, 1978
13. Kory & Hufnagel, 1976	32. Subrahmanyam & Porkodi, 1980
14. Hanley & Spates, 1978	33. Orme-Johnson, 1973
15. Nystul & Garde, 1977	34. Warshal, 1980
16. Turnbull & Norris, 1982	35. Blackwell, Hanenson, Bloomfield, Magenheim, S. Nidich, & Gartside, 1975
17. Berg & Mulder, 1976	36. Cooper & Aygen, 1979
18. S. Nidich, Seeman, & Dreskin, 1973	
19. Seeman, S. Nidich, & Banta, 1972	

[Return to reference above](#)

TABLE 2
Factors of Student and Teacher Development through Unified Field Based Education contributing to Successful Learning





[Return to reference above](#)

For more information, please contact the Department of Education at one of the following addresses:

Department of Education, Maharishi University of Management, Fairfield, IA 52557
Phone: (641) 472-7000 ext. 5021 • E-Mail: eddept@mum.edu • Fax: (641) 472-1189

[Education Research Home Page](#)
[Education Department Home Page](#)
