

## Unfolding Total Human Potential through Consciousness-Based Education<sup>SM</sup> A Review of Principles, Practice and Research

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### Abstract

To provide equal opportunities for total human development is part of the vision of ASEAN. Traditionally, the field of education has had responsibility for achieving this goal. Few educational institutions around the world would claim success. This article reviews the principles, practice and research of an innovative educational approach—Consciousness-Based<sup>SM</sup> education—that gives central importance to developing the consciousness of the student as a means to foster total human development. Consciousness-Based education includes the Transcendental Meditation® technique, which has increasingly been used by educational institutions over the past five decades as a method that serves to unfold the innate creative intelligence in the student through the unique experience of pure consciousness. Research on this approach is reviewed from the perspective of brain functioning and developmental psychology. This perspective indicates that coherent brain functioning, advanced self-actualization, ego development, and improved academic performance are associated with the practice of the Transcendental Meditation technique. It is suggested that Consciousness-Based education offers an evidence-based approach to providing opportunities for total human development through education in ASEAN countries and around the world.

**Keywords:** ASEAN, Consciousness-Based education, coherent brain functioning, pure consciousness, developmental psychology, total human development

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### 1. Introduction

The vision of ASEAN 2020, pledged by ASEAN heads of state in 1997 includes a vibrant society with equal opportunity for total human development and focus on the welfare and dignity of the human person and community:

‘We see vibrant and open ASEAN societies consistent with their respective national identities, where all people enjoy equitable access to opportunities for total human development regardless of gender, race, religion, language, or social and cultural background . . . We envision our nations being governed with the consent and greater participation of the people with its focus on the welfare and dignity of the human person and the good of the community.’

(ASEAN, 1997)

In most eras and cultures, it has been considered the responsibility of education to culture total human development for the good of the individual and society. Grant and Jones (2011) noted, however, that there is widespread dissatisfaction with education in most countries, in terms of disengagement of students and failure of educational outcomes. Of most concern is the waste of the greatest resource of the nation, the human capital, as evidenced by the comparatively low levels recorded by the majority of adults on many scales of cognitive, moral, and ego development. They posed the question, “What can society accomplish if its human resources remain languishing in the schools?” (p.91). The challenge of education is to equip the next generation to flourish in today’s interconnected and fast-changing world. It has been recognized that the best way to do this is “to give them full command over their own powers” (Grant & Jones, 2011, p.124). While educators are always focused on how to increase students’ capabilities and performance, what has been missing is a systematic means to wake up the creative intelligence of the student from within, to allow them access to their full powers, through unfolding the full range of consciousness.

This article seeks to answer the question of how education can be optimized to unlock total human development in the student and realize the goal of ASEAN and all people. With attention on the Transcendental Meditation technique as one successful tool in the holistic educational approaches, the study

explores the principles, practice, and research of Consciousness-Based education in accelerating progress towards total human development. Two research perspectives are of particular interest in this regard—from the fields of neuroscience and developmental psychology. The first focuses on improvement in brain functioning. The second focuses on growth towards self-actualization and ego development.

The article begins with some background into the role and shortcomings of education in fostering total human development. The current contribution of the field of neuroscience is examined, which reveals how experience changes the brain and the importance of holistic brain functioning. Models from developmental psychology suggest the existence of higher stages of human development, which raises the question of why so few people achieve full development. An explanation is given of the Transcendental Meditation technique and the research on its holistic benefits through the unique experience of pure consciousness. This is followed by a discussion exploring the effects of the Transcendental Meditation technique on brain functioning and stages of human development and suggesting how Consciousness-Based education can contribute to fulfilling the goal of accelerating total human development. In conclusion, avenues for future research are suggested.

## **2. The Role of Education in Total Human Development**

In their comprehensive review of educational theory and practice, Grant, and Jones (2011) maintained that all educational theories are based on certain fundamental concepts, which, in turn, lead to applicable educational practices. The completeness and adequacy of the concepts determine the adequacy of the educational outcomes. They contended that “all educational systems derive from an understanding of these three basic conceptions: (1) the nature of the individual (knower); (2) the nature of learning and development (process of knowing); and (3) the nature of knowledge (the known)” (p.100). Pearson (2011) has noted that over the past few decades, education has been evolving from an instructional perspective (focus on a teacher imparting information, or the known) to a learning perspective (focus on a student learning or the process of knowing). One emerging approach—Consciousness-Based education—encompasses both the instructional and learning perspectives, while adding a focus on the enlivenment of the knower from within, by enabling development of the student’s full range of consciousness (Maharishi, 1994).

The quality of students’ consciousness is central to their educational experience. Research has indicated that 75% of academic achievement is determined by cognitive and affective factors, and only 25% by the quality of instruction (Bloom, 1976). The skills of memory, alertness, intelligence, field independence and abstract reasoning (Anderson, Spiro & Montague, 1977), self-esteem and emotional stability (Eriksen, 1974) correlated positively with school performance. Consciousness-Based education theory recognizes the significance of these cognitive and affective skills to enhance receptivity and performance (Dillbeck, 2011) and extends the focus of education to include the experience of the full range of consciousness, which includes the most settled and holistic state of consciousness, pure consciousness (Maharishi, 1994).

Like many educators, Dewey (1916/1966) defined an educational experience as one that promotes growth or development. Consciousness-Based education theory considers the experience of pure consciousness as a mechanism for holistic growth and total development. Pure consciousness is understood to be a field of intelligence and creativity, and therefore experiencing it enlivens intelligence and creativity and at the same time, the experience stabilizes growth to higher states of consciousness. Consciousness-Based education thus sheds new light on educational goals—the full growth of the individual is defined as attainment of higher states of consciousness (Maharishi, 1994, p.113).

The question can then be raised: how does the experience of pure consciousness promote holistic human development and what have been the results of incorporating this experience into schools through Consciousness-Based education? This article examines two broad approaches to the question from the fields of neuroscience and developmental psychology—the effect of different experiences on the brain and the stages and endpoints of human development. Research on the Transcendental Meditation technique and the effects of the experience of pure consciousness on the brain, on full human development, and on educational outcomes through Consciousness-Based education are reviewed.

## 2.1 Experience Changes the Brain

All experience is filtered through the brain. Travis and Brown (2010) explained that both the structure and functioning of the brain change (cortical plasticity) due to natural maturation and the effects of experience. The experience becomes primary after childhood and throughout adult life. Therefore the nature and quality of one's experience during school and college years matters because the resulting changes in the brain's structure and function influence cognitive, affective, academic, ego and self-development.

Travis et al. (2009) review of research indicated that the prefrontal area of the brain is of special importance for a student because it mediates higher order activities of problem-solving, planning and decision-making. When one is overtired or under intense physical or mental stress the brain overrides the prefrontal cortex, which can lead to shortsighted, impulsive decisions, anger and fear. By contrast, when the prefrontal cortex is activated, wiser, calmer, more ethical and balanced thought and behavior ensue. Maximal integration of the prefrontal area of the brain with other areas of the brain is, therefore, advisable as the student matures.

Dillbeck and Dillbeck (2015) noted, however, the failure of education to promote the experience of integrated brain functioning and therefore attain full human development in students. Research shows that specific mental activities traditionally emphasized in education (for example, reading and studying), activate specific areas in the brain, leading to specialized skills but not to the integration of the whole brain. As evidence that education has failed to foster higher brain functioning, which is associated with higher cognitive development, they note that development of the important cognitive skills of fluid intelligence and field independence generally stalls at around the age of 17. They contend that restricted brain functioning leads to restricted awareness and conclude, "Restricted awareness leads to problems, mistakes, and the inability to evaluate the environment and act in a way that consistently favours progress and happiness" (p.18).

## 2.2 Stages of Human Development

The field of developmental psychology explores the stages and farther reaches of human potential. Alexander, Rainforth, and Gelderloos (1991) noted that, while many theories describe the nature and limits of human development, it is well accepted that few people attain the most mature levels.

### *a) Self-actualization*

Lack of subjects has precluded testing and advancement of many developmental theories, other than Maslow's (1976) theory of self-actualization. Maslow described a high-level need of every human being to live at their fullest potentiality and proposed certain characteristics of the "self-actualizing individual," including creativity, growth orientation, acceptance of self and others, a sense of wonder, and a concern with higher order values of truth and justice. Maslow (1968, 1976) considered that temporary peak experiences, or moments of high elevation and transcendence of self, were, in part, responsible for and a result of growth of self-actualization and that people moved toward more psychological integration and a more perfect identity or sense of real self as a result of these peak experiences. Research has indicated that leaders and high performers report more frequent peak experiences than controls (Thornton, Privette, & Bunderick, 1999; Harung & Travis, 2012).

Alexander et al. (1991) suggested two reasons why adults do not advance to higher self-actualization stages. One was that the current educational system has largely focused on abstract thinking skills rather than finer levels of feeling, intuition, and ego. In other words, the full range of consciousness is not regularly enlivened in standard education. Secondly, that stress creates an agitated nervous system that blocks access to a more subtle and sensitive feeling and intuition levels. It follows then that if education incorporated a program for a student to regularly alleviate stress and experience the full range of consciousness, including peak experiences, advancement to higher self-actualization stages would be possible.

### *b) Ego development*

Another well-established psychological model of human development is Loevinger's stages of ego development. Each stage reflects how one makes sense of one's world and oneself and includes one's impulse control, character development, cognitive complexity, and interpersonal style. Pre-conventional

and conventional stages develop from childhood into adulthood, reflecting growth from impulsive and self-protective to self-aware and conscientious. The stage reached at the age of 17-20 years or by the end of formal education is usually set for life (Loevinger et al., 1985; Redmore & Loevinger, 1979). Research had not found any way to advance ego development beyond the conventional stages (White, 1985; Cohn, 1998).

Nevertheless the lively inner orientation and ability to think and act independently of the surrounding social system, characteristic of the post-conventional stage, predicted a better ability to adapt and learn in a progressive and changing modern world (Kegan, 1994; Torbert, 1991; Heaton & Harung, 2001). Growth to the higher post-conventional stages of ego development has been characterized as changing perspective from narrow to inclusive: from short term to long term; from win-lose to win-win; from reactive to proactive and preventive; and from extrinsic to intrinsic motivation (Harung, Travis, Blank & Heaton, 2009).

Cook-Greuter (1990) noticed that on conceptual and empirical grounds, the highest post-conventional stages of development (autonomous and integrated) had been linked to Maslow's self-actualization. By extensive research of over 3000 protocols with widely varied populations, she found that less than 1% of adults were considered to function at these more mature levels, a finding in keeping with Maslow's. In contrast, 80% function at conventional stages. In summary, while developmental psychology theories postulate higher stages of human development, characterized by a more independent, proactive, and mature orientation to life, very few people reach these stages or even progress beyond adolescence.

### 2.3 A Science of Consciousness

According to the theory of Consciousness-Based education, there is a particular experience that optimizes brain functioning and accelerates self-actualization in the direction of full human development. This is the experience of pure consciousness (Maharishi, 1994). Research indicates that the experience has unique psychological and physiological markers—electroencephalograph (EEG) or brainwave coherence, reduced breath and heart rate and changes in blood chemistry—suggesting a “wakeful hypo-metabolic” state or “restful alertness” proposed as a fourth major state of consciousness, different from waking, sleeping, and dreaming (Wallace, 1970, 1986).

Extending one's range of conscious experience has long been understood as fundamental in rising to full human development. As the sixth century BC Chinese philosopher, Lao Tzu identified, “The key to growth is the introduction of higher dimensions of consciousness into our awareness” (Maharishi University of Management, 2015). Fortunately the Vedic tradition of India has preserved the ancient knowledge and practical techniques to unfold the full capacity of consciousness and, for the last fifty years, Maharishi Mahesh Yogi (1963,1967), widely recognized as the greatest Vedic scholar and teacher of our time, has revived this knowledge throughout the world as technology of consciousness, Maharishi Technology of Consciousness<sup>SM</sup> In Maharishi's hierarchical model, consciousness is a comprehensive term that covers the whole range of subjective experience from the most expressed level, the senses, progressing through the more subtle levels of mind, intellect, feeling, intuition and ego, with the most settled level, beyond the thinking process, being pure consciousness (Maharishi 1963, 1967). Maharishi (1976) here clarifies the power of consciousness,

Consciousness is the light by which man looks out onto the world to experience objects. When that same light is turned in upon itself, the resulting self-knowledge enlightens all thought and action. Consciousness then knows itself as unbounded, free, the source of all creation. The experiencer is no longer overshadowed by what he experiences. Consciousness ceases to be the servant of thoughts and percepts and becomes their governor. (p.123).

#### *a) Pure consciousness*

Pure consciousness is here understood as self-referral, the experience of consciousness knowing itself, as described above, “when that same light is turned in upon itself.” The result is “Consciousness then knows itself as unbounded, free....”

Maharishi has described pure consciousness as pure awareness, the Self, one's innermost being, and a field of unlimited creative intelligence. His science of consciousness holds that by regularly opening one's awareness to its foundation in pure consciousness, one's innate creative intelligence is enlivened and

one ultimately realizes and lives one's full human potential, described by Maharishi as higher states of consciousness or enlightenment. Pearson's (2013) research indicates that while experiences of pure consciousness and higher states of consciousness are natural, universally available, and not culturally specific, such experiences may remain fleeting when not accompanied by technique.

***b) The transcendental meditation technique***

Maharishi formulated the Transcendental Meditation technique to enable anyone to cultivate the regular experience of pure consciousness and systematically unfold higher states of consciousness. Maharishi (1973/2011) explained the physiological mechanics of the Transcendental Meditation technique,

What obstructs this pure awareness from remaining stationary on the level of one's consciousness is stress and strain. The practice of the Transcendental Meditation technique, by lowering the metabolic rate, produces deep rest for the physical system and thereby naturally releases deep-rooted stresses and thereby eliminates the cause which inhibits the full value of consciousness. The mind functions from its full potential. (p.34-35).

The Transcendental Meditation technique is described as effortless, is practiced sitting with eyes closed for twenty minutes twice a day and is different from other forms of meditation, such as focused attention or open monitoring, in aim, process, experience and brain activity (Travis and Shear, 2010). More than six million people, of all ages, cultures and religions have learned the technique, which is taught worldwide through a standard course.

**2.4 Evidence-Based Development of Consciousness**

The Transcendental Meditation technique is considered the most extensively validated program of personal development as the subject of over 600 research studies, conducted in 250 research institutes and universities in 30 countries, and published in more than 150 scientific and scholarly journals (Pearson, 2011). Research has indicated a wide array of holistic benefits—physiological, psychological, and behavioural. Physiological benefits included more adaptive response to stress (Orme-Johnson, 1973), and reduced hypertension, reduced health care costs (Barnes et al., 2005; Schneider et al. 2005; Herron, 2005). Grant and Jones (2011) summarized other benefits relevant to education including increased self-concept, increased self-actualization, increased energy and dynamism, improved mind-body coordination, increased organizational ability, improved health, reduced depression, reduced neuroticism, reduced aggression and dominance and increased tolerance. Eppley, Abrams & Shear's (1989) meta-analysis of 146 studies reported almost twice the effect sizes in the reduction of anxiety for the Transcendental Meditation technique compared to other traditional meditation and clinical relaxation practices. Other studies have shown substance abuse recovery and prevention of crime and antisocial behaviour (Hawkins, 2003; Jones, Clayborne, Grant & Rutherford, 2003).

How can the value of the Transcendental Meditation technique be understood from the perspectives of brain functioning and developmental psychology?

**2.5 Global Brain Coherence**

The finding that experience changes the brain is clearly of great relevance to students' development. Consciousness-Based education theory proposes that along with enlivenment of specific areas of the brain through a focus on specific subjects; student benefits from enlivenment of the whole brain through the experience of pure consciousness (Maharishi, 2004). EEG global coherence, or structural and functional integration across the whole brain, has been found during the practice of the Transcendental Meditation technique (Travis & Wallace, 1999; Travis, Arenander & DuBois, 2004). EEG coherence has been correlated with many of the desired outcomes of education, including increased verbal creativity and IQ, better moral reasoning, efficiency in learning new concepts, decreased neuroticism, increased neurological efficiency and higher academic achievement (Dillbeck, Orme-Johnson & Wallace 1981; Orme-Johnson & Haynes, 1981). Coherent brain functioning has also been associated with improvement of performance and success in one's profession. Research by Harung and Travis (2012) found that Olympic athletes, classical musicians, and top-level managers showed superior brain integration (defined by EEG

coherence and alpha brainwave power) compared to controls. Research also suggested brain integration is predictive of success in management (Robertson & Smith, 2001; Rooke & Torbert, 2005). In summary, the coherence of brain functioning, developed through the Transcendental Meditation technique, is associated with cognitive growth, more effective learning, balanced behaviour, leadership and superior performance.

Other research on changes in brain activity during the Transcendental Meditation technique included increased blood flow to the brain (Jevning, Anand, Beidebach, & Fernando, 1996) and correlation of the experience of pure consciousness with alpha and theta EEG coherence in the frontal and central brain (Farrow & Hebert, 1982; Orme-Johnson & Haynes, 1981; Travis & Wallace, 1999). EEG coherence took place in the first minute of the practice of the Transcendental Meditation technique (Travis & Wallace, 1999) and was consistent for both those who recently started the practice and those practicing for several years. These findings suggested that the transcending process was effortless, natural and easily learned. It was also found that long-term meditators maintained the EEG coherence during a task with eyes open, whereas the short-term meditators did not (Travis, 1991; Travis & Arenander, 2006). This is in keeping with the theory that stabilization of pure consciousness occurs over time, based on new neuro-physiological connections. It follows that the regular and unique experience of global EEG coherence gained during the Transcendental Meditation technique would change the brain's structure and function in a coherent way and be reflected in more mature thinking and behaviour.

## 2.6 Self-Actualization

The holistic benefits of the experience of pure consciousness through the Transcendental Meditation technique have also been seen in the growth of self-actualization. A meta-analysis (Alexander et al., 1991) of 42 independent studies indicated that the Transcendental Meditation technique is increased self-actualization, as measured by the Personal Orientation Inventory (POI), by approximately three times as much as procedures of concentration, contemplation or other techniques. Larger effect sizes were found for those practicing Transcendental Meditation technique for a longer time. The POI test has been well validated with high scorers on self-actualization also scoring better than low self-actualized on a wide range of mental health, cognitive, perceptual and physical variables (Knapp, 1990, p. 144). The factors on which the Transcendental Meditation group scored higher in the self-actualization test suggest the development of a person who is "open to his own feelings, who is capable of engaging in warm interpersonal relationships.... Has a positive view of self and humanity, who is able to integrate dichotomies, ...who appreciates life from a broad and integrated perspective ...maintains a stable internal frame of reference...whose self-responds adaptively to both internal and external challenges" (Alexander et al., 1991, p. 37). These findings are consistent with the theory of the science of consciousness that the regular experience of pure consciousness leads to natural expression of human potential.

## 2.7 Stages of Ego Development

Research has also indicated that the Transcendental Meditation technique can accelerate an individual through Loewinger's more advanced levels of ego development. One ten-year study (Chandler, 1990) found that 38% of Consciousness-Based Education alumni, who practiced the Transcendental Meditation technique, attained the high post-conventional "autonomous" and "integrated" stages of ego development post-test, up from 9% at pretest. The proportion was nearly four times higher than the highest percentage found in any of the other 30 published studies and almost forty times higher than those achieving post-conventional development in the general population. Brown's (2008) research on ego development with an undergraduate population of 140 Consciousness-Based Education students found nearly 30% at post-conventional levels of ego development by their senior year, indicative of an unusually high degree of maturity in a group of young people. Mean ego development also increased in this student group.

A study on maximum-security prison inmates (Alexander, 1982; Alexander, Walton, & Goodman, 2003) found that those practicing the Transcendental Meditation technique showed growth from the concrete "conformist" level to abstract reasoning "self-aware" stage, and the more advanced Transcendental Meditation practitioners increased from "self-aware" to "conscientious" stage. This rate of progress to a new stage, in just one year, is rare past adolescence.

The post-conventional stage of ego development is characterized by personal autonomy and recognition that one's values and ideals are derived from the inside, not outside, oneself. Chandler et al. (2005) suggested that practice of the Transcendental Meditation technique might have accelerated ego development by stabilizing the experience of the intrinsic nature of the self, the "I." They proposed that the familiarity with the inner essence of one's consciousness might shift one's frame of reference to a more inwardly focused one.

In summary, the research in the fields of brain functioning and human development support the theory that Consciousness-Based education is an approach that hastens a student's holistic growth, beyond what was accepted as the normal limits and towards the higher range of expression of human potential.

### **3. Consciousness-Based Education Applied**

How has the Transcendental Meditation technique been incorporated into education in order to promote full human development? Dillbeck and Dillbeck (2011) noted that the Consciousness-Based education approach had been field-tested over the last 40 years, in more than 50 countries, in over 300 educational institutions, with over 200,000 students. It has been applied in educational settings in two main ways. In some schools, the practice of the Transcendental Meditation technique is added to the beginning and end of the school day for students and teachers, with no further alteration to the daily schedule or curriculum. This is the Quiet Time<sup>SM</sup> program. In the second approach, schools and colleges integrate both the theory and practice of development of consciousness into the schedule and curriculum, combining excellence in traditional disciplines with the practice of the Transcendental Meditation technique. The oldest examples of the latter, more comprehensive approach are the Maharishi University of Management (formerly Maharishi International University) and Maharishi School of the Age of Enlightenment (MSAE) in Fairfield, Iowa, United States of America, founded in the early 1970s.

Research on students of Consciousness-Based education suggests improvements occur in many aspects of a student's life, including cognitive, affective, social and academic. Dillbeck and Dillbeck (2011) noted that Maharishi School students scored significantly higher on creativity and cognitive development than controls. Many of the classes rated in the top 5% and top 1% nationally in Iowa Tests of Basic Skills (ITBS) and Iowa Tests of Educational Development (ITED) and students increased significantly over the course of one year on these basic skills tests (Nidich & Nidich, 1986; Nidich, Nidich, & Rainforth, 1986). Students at Consciousness-Based education schools regularly excelled at national and state competitions in many fields, including science, drama, speech, music, and sport (Dillbeck and Dillbeck, 2015).

Research on Maharishi University of Management college students indicated higher scores on self-actualization (Orme-Johnson & Duck, 1976), moral reasoning (Nidich, 1976) and psychological stability (Brown, 1976/1977). Longitudinal studies over four years showed continued improvement in the mental abilities that usually stop growing in late childhood including: increased fluid intelligence and the ability to reason in novel situations (Aron, Orme-Johnson, & Brubaker, 1981; Dillbeck, Assimakis, Raimondi, Orme-Johnson & Rowe, 1986), field independence (Dillbeck et al., 1986), social maturity and psychological health compared to controls (Aron et al., 1981). A study over several years showed a significant increase in IQ in students from Maharishi University of Management compared to those from a nearby university (Cranson et al, 1991) and integrated growth beyond the normal college population on measures of autonomy, integration, spirituality, creativity and well-being (Gelderloos, 1987; Jones, 1989).

Research on the Quiet Time program in the public school system indicated a positive change in school absenteeism, suspensions, and decrease in negative behaviours, such as anger (Barnes, Bauza, & Treiber, 2001, 2003); significantly improved scores in English and mathematics classes (Nidich et al, 2011); a significant increase in students' graduation and college acceptance rates and decrease in dropout rates (Colbert and Nidich, 2013); reduced substance-abuse alcohol, illegal drugs, cigarettes and prescribed drugs—and reduced anti-social behaviour (reviewed by Alexander, Heaton & Chandler, 1994; Jones et al., 2003); and increased resilience in college students when facing the stress of final exam time (Travis et al., 2009, Nidich et al. 2009). A randomized longitudinal study on 362 Taiwanese secondary students found increases in multiple measures of intelligence, especially the traits that require integration of many factors affecting cognitive processing—creativity, field independence and practical intelligence (So & Orme-Johnson, 2001). The authors noted that considering intelligence is not very malleable (Loehlin, Horn, &

Willerman, 1997; Rowe, 1997), the increase in this study after only 6-12 months of Transcendental Meditation practice is notable.

#### **4. Relevance of Consciousness-Based Education in ASEAN**

The Consciousness-Based education model, an evidence-based means to attain the vision of ASEAN to offer opportunities for total human development for all, is not new to the ASEAN region. In 1993 the Consciousness-Based University, Maharishi Vedic University (MVU), with 550 students was established in collaboration with the Ministry of Education, Youth and Sport (MoEYS) and ministers of the government of Cambodia. This initiative was in response to the urgent need to educate the youth and rebuild the country in a self-sufficient and sustainable way and reconnect Cambodian culture with its roots in Vedic knowledge (Fergusson and Bonshek, 2013). Many of the students were orphans, had lived for many years in refugee camps, and suffered post-traumatic stress. Three empirical studies were published on the effect of the MVU approach to education, which showed the significant influence of the Transcendental Meditation technique on increased intelligence, learning ability, attention span, physical health, mental stability, self-esteem, problem-solving abilities and decreased trait anxiety, compared to control groups from other Cambodian institutions of higher education.

At Dhammajarinee Witthaya, a girl's boarding school near Ratchaburi, Thailand, over 600 at-risk girls live and study under the guidance of Buddhist nuns. For the last seven years, the director, Mae Chee Aunampai Passakchai, has offered the Transcendental Meditation technique to all incoming students in grades 4-12. During the academic year of 2015-2016, all 367 students in grades 4-12 and 13 faculties participate in the twice-daily Transcendental Meditation practice together in a group. The principal and faculty reported on the transformation in the students' happiness and emotional stability. Suspension rates dropped from 30% to 5% over the seven-year period, and academic achievements have improved. (Oaas, T., Supaneedis, A. (2015). Also in Thailand, the Department of Science of Creative Intelligence for Management of Rajapark Institute, Bangkok, comprehensively incorporating Consciousness-Based Education in theory and practice, offers both BA and MA international degree programs.

#### **5. Conclusion and Directions for Future Research**

In summary, the hope for education to unfold the total human development of students is supported by research on Consciousness-based education in the fields of neuroscience and developmental psychology. The research indicates that, through the use of the simple, systematic, and unique program to experience pure consciousness, the Transcendental Meditation technique, students can accelerate their own cognitive, affective and academic progress. Students grow into more ethical, intelligent, creative, confident, and forward-thinking human beings in the direction of self-actualization on a foundation of coherent brain functioning.

Wider application and research of the Consciousness-Based approach is suggested through the introduction of pilot programs, particularly at secondary and tertiary levels in ASEAN education. Further research on the effectiveness of the Transcendental Meditation technique in maximizing holistic development in students, as measured by the coherence of brain functioning, stages of ego development, and self-actualization is encouraged. Collaboration is suggested with a new research institute, Maharishi Vedic Research Institute, which has representation from prominent leaders in the ASEAN region. This institute's mission is to facilitate research and implementation of Consciousness-Based solutions in education, business, and government.

In conclusion, Maharishi (1963) described his vision of the value of Consciousness-Based education in the world:

This system of Transcendental Meditation, which is an easy approach to mental development and the unfoldment of all latent potentialities, and a direct way to fathom the spiritual values of inner life and glorify material values by the light of the inner Self, is a simple and a direct technique of education from within. The system is there, it has been evolved, it has been tried, and it has proved its value in every part of the world. Now it is left to the wise men responsible for the field of education to put this in the curriculum of the students in the colleges and universities so that a new humanity may be born—free from shortcomings, free from ignorance about the inner values of life, and more developed in their fuller personalities. (p. 209)

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