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MAHARISHI INTERNATIONAL UNIVERSITY’S EDUCATIONAL INDEX: PSYCHOPHYSIOLOGICAL ASSESSMENT OF HOLISTIC DEVELOPMENT

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This paper discusses a unique method of student assessment being pioneered at Maharishi International University, which includes an evaluation of psychophysiological correlates of the growth of higher states of consciousness. The findings of the student assessment programme indicate that the Transcendental Meditation and TM-Sidhi programme not only makes an important contribution to the realization of traditional academic goals but also promotes a holistic development of the student’s life.—EDITORS

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Maharishi International University integrates a systematic program for the development of consciousness, the Transcendental Meditation (TM) and TM-Sidhi program, with a traditional liberal arts curriculum. To assess the effect of the curriculum on holistic development a battery of psychophysiological tests are administered to every student every year, in addition to the usual examinations. These include EEG coherence, respiration and heart rate, galvanic skin response, field independence, reaction time, personality, creativity, intelligence, and moral reasoning. EEG coherence has been found to correlate positively with academic performance, SAT scores, IQ, creativity, and moral reasoning ability. The findings suggest the value of continued research on psychophysiological correlates of holistic development and the possibility for identifying and developing the style of neurophysiological functioning associated with people labeled “genius.”

INTRODUCTION

Maharishi International University was founded in 1971 by Maharishi Mahesh Yogi as an educational experiment, integrating a systematic program for human development with a rigorous study of traditional liberal arts disciplines. The basis of MIU’s approach to education is a new discipline called the Science of Creative Intelligence (SCI). SCI has two aspects, theoretical and experiential. The experiential aspect is the practice of the Transcendental Meditation (TM) and TM-Sidhi program; the theory investigates transdisciplinary principles of orderly change and development found common to all fields as well as to the students’ lives.

The knowledge of SCI is derived from three sources: the Veda, a comprehensive body of knowledge based on insights into the nature and full range of human consciousness; laws of nature discovered by modern science; and meditating individuals’ personal experience of the growth of consciousness.

In order to evaluate the effectiveness of the MIU curriculum in fostering holistic development, assessment procedures were needed beyond those that measure intellectual mastery of material alone. So in addition to the usual written and oral assignments and final examinations, MIU has developed a battery of psychophysiological tests which, taken as a whole, are intended to indicate the progress of one’s
holistic development year after year, as well as provide the researchers with comparative data among the students.

Everyone on the MIU campus—students, faculty, administration, staff—practices the TM program. In addition, almost all practice the TM-Sidhi program, a more advanced practice. MIU’s unique approach to developing the ideal of a liberal arts education, as well as its assessment procedures for evaluating progress toward this ideal, have attracted growing interest. In the past two years research scientists and professors from several countries have visited the campus to observe the effects of the curriculum on the students directly and familiarize themselves with MIU’s procedures of student evaluation.

THE TRANSCENDENTAL MEDITATION PROGRAM AS AN EDUCATIONAL TECHNOLOGY

More than 700 research studies have been conducted on the TM and TM-Sidhi program, at about 200 institutions. Because the effects found to result from this program gave direction to the formation of MIU’s Educational Index, the research findings pertinent to MIU’s educational outcomes will be briefly summarized.*

The TM technique is described as a simple mental procedure practiced 20 minutes twice daily. It is intended to reduce the individual’s mental and physical activity to a “state of least excitation” or “pure consciousness,” where one experiences the simplest, most unbounded state of one’s awareness.

Subjectively, this state of pure consciousness is described as a fulfilled state of inner wakefulness, expansion, and deep physical relaxation.

Numerous physiological measures have indicated that during the practice of the TM technique unusually deep rest is gained, together with increased orderliness of brain functioning, as indicated by EEG phase coherence. These findings have given rise to a description of the experience of pure consciousness as a unique hypometabolic state of “restful alertness.”

As the TM technique is regularly alternated with daily activity the increased order and integration characteristic of the state of pure consciousness begin to be expressed in the active functioning of the nervous system. Cardiovascular and respiratory efficiency have been found to improve; and stress-related problems such as hypertension, asthma, and insomnia have been found to decrease.

In recent studies, long-term meditators have been found to be biologically younger than their chronological age, as measured by standard physiological tests; the longer they have been meditating, the greater the difference between biological and chronological age.

Cognitive and emotional characteristics associated with successful learning and teaching also appear to be enhanced by regular practice of the TM technique. Findings include increased intelligence growth rate and alertness, improved organization of memory, perceptual and cognitive flexibility, field independence, and creativity. These changes have been reflected in significant improvements in grade point average and scores on standardized achievement tests.

In the area of emotional development, results include increased self-actualization and improved self-concept and tolerance; and reduced anxiety, neuroticism, and depression among TM participants in contrast to controls.

Improvement in physiological and psychological stability seems to lead to more positive social behavior. Survey studies have found TM participants to markedly decrease in the use of alcohol, marijuana, and other drugs. Several recent sociological studies suggest that the percentage of individuals in a city’s population practicing the TM technique is an independent predictor of crime rate decrease in the city.

THE HIGHEST LEVEL OF HUMAN DEVELOPMENT: “ENLIGHTENMENT”

According to the theory of SCI, one’s full creative potential can be realized as the experience of pure consciousness becomes completely stabilized during waking, dreaming, and sleeping. The growth of pure consciousness is associated with a distinct, far more

efficient style of functioning of the nervous system than is usually experienced.

This state of optimum neurophysiological development is termed "enlightenment." It is described as a state of stress-free neurophysiological functioning which is experienced as complete inner fulfillment and outer dynamism, where one's activity is spontaneously beneficial to oneself and the environment.

... from time to time there have existed individuals who were spontaneously at a level of adaptability, stability, integration, purity, and growth-orientation so far above the population average as to warrant the creation of a distinctly higher category of human life. Never before has it occurred to scientists that the neurophysiology of such exalted individuals was subject to either measurement or development. Maharishi has for the first time clearly defined and described the state of "enlightenment," given specific criteria ... in terms of physiological measurement.*

MIU is committed to the scientific assessment of the growth of consciousness in the direction of enlightenment.

PSYCHOPHYSIOLOGICAL ASSESSMENT OF STUDENT PROGRESS

Since development of consciousness is considered to be the expression of increasingly higher levels of neurophysiological integration, evaluation of the MIU students' progress requires a physiological basis. Therefore MIU adds to the traditional measures of student progress the element of psychophysiological assessment to indicate holistic growth. Expansion of consciousness, as evidenced by the changes produced by the TM program, seems to directly affect the functioning of the intellect, emotions, behavior, and physiology. According to the theory of SCI, expansion of consciousness fundamentally depends on progressive degrees of freedom from stress in the individual nervous system. Therefore, the level of efficiency in the functioning of the nervous system is considered a reliable gauge of the degree to which the student's subjectively experienced expansion of awareness has been physiologically established.

At the office of University Examination every MIU student is measured yearly for EEG coherence, respiration and heart rate, galvanic skin response, field independence, reaction time, personality, creativity, intelligence, and moral reasoning. The results of these tests are filed with the students' confidential records to facilitate their self-evaluation.

Students are each given an EEG profile in the form of a "physiological report card" which graphically depicts the development of their brain wave coherence.

The most significant discovery in this area of psychophysiological assessment is considered by the MIU researchers to be the correlation between EEG coherence and a cluster of psychological variables. EEG coherence in MIU students is significantly correlated with academic performance, SAT scores, IQ, moral reasoning ability, creativity, and a greater difference between biological and chronological age.

With these added means of evaluation the students have the opportunity to objectively validate their subjectively experienced improvements in physical health, ability to focus and concentrate, inner calm, alertness, inventiveness, and orderliness.

More standard psychological measures also are used to assess student progress. Longitudinal studies on MIU students show a significant increase in IQ from their first to fourth year; and significant increases in responsibility, sociability, sense of well-being, intellectual efficiency, and other traits generally considered to be positive.

CONCLUSIONS AND FUTURE DIRECTIONS

The results of psychophysiological assessment of MIU students give a promising direction for continued research on psychophysiological correlates of holistic development. The results of the student assessment program also suggest that the practice of the TM and TM-Sidhi program, in improving EEG coherence and performance on related psychological measures, contributes toward the realization of traditional academic goals.

These preliminary findings also suggest the possibility of establishing the degree to which knowledge presented in a course or educational program has contributed to the student's development not only intellectually but at deeper levels of the personality and physiology. Furthermore, it may be

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possible, assuming that "geniuses" have distinct styles of neurophysiological functioning, to establish distinctive objective correlates of higher states of consciousness, just as these correlates exist for dreaming, deep sleep, and waking states of consciousness.