About the Author

Paul Gelderloos received his B.A. in 1973 and M.S. in 1977 in Psychology from the Vrije Universiteit of Amsterdam, and his Doctorate in Social Sciences in 1987 from the Katholieke Universiteit of Nijmegen, The Netherlands. He has worked as a clinical psychologist and has been Director of the Psychological Laboratory of Maharishi European Research University in Switzerland. He is currently Assistant Professor of Psychology and graduate faculty in the doctoral program in Psychology at Maharishi International University. His research endeavors center around the development of psychological health, the identification of the psycho-physiological signature of higher states of consciousness, and the impact of the collective practice of the Maharishi Technology of the Unified Field on quality of life and international relations. Dr. Gelderloos is author of the recently published book Valuation and Transcendental Meditation. He has published in such journals as Perceptual and Motor Skills and International Journal of Neuroscience.
Psychological Health and Development of Students at Maharishi International University: A Controlled Longitudinal Study

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Abstract

A cross-sectional, longitudinal study was conducted comparing 15 students of Maharishi International University (MIU) with 15 students from a nearby college on measures of psychological health and development over a nine-month period. Psychological health was assessed by a comprehensive instrument, Hermans’ self-investigation method, in which subjects depict the aspects of life they value most. This method contains a cognitive and an affective component. The cognitive elements were analyzed on five central characteristics of psychological health: unifying ability, autonomy, intrinsic spirituality, creativity, and directedness. The affective components studied were measures of well-being and integration. The MIU students scored significantly higher on all measures at pretest, and increased significantly more during the experimental period on autonomy, spirituality, creativity, well-being, and integration. Trends (p<.10) in the hypothesized direction were found in unifying ability and directedness. To prevent bias, non-meditating interviewers and raters were employed, and double-blind procedures were used in the evaluation process. Furthermore, subjects and interviewers were not informed about the purpose of the study until after the posttest. Testimonies of several MIU students were considered in an attempt to identify the causal agents of their improved psychological development. The outcomes of the study suggest that Maharishi’s Unified Field Based Integrated System of Education is a practical means to fulfill the need of present-day education.

Introduction

The purpose of education is to help students grow to become wise, happy, successful individuals and ideal citizens of their country. Educators feel it is their task not only to equip pupils with skills and knowledge, but also to nurture them into mature, responsible individuals who will use their new competencies in an integrated way for the benefit of society. The conclusion of a recent study conducted by the Carnegie Foundation for the Advancement of Teaching is that present-day education does not fulfill this goal. The study argues that "[the] nation's colleges...driven by careerism and professional education...are more successful in credentialing than in providing a quality
education" (Bowen, 1986). The students do not develop into thoughtful citizens, but are very narrowly trained toward a specialized career. Some of the basic causes indicated by the study are a "disjointed" curriculum whose "disciplines have fragmented into smaller and smaller pieces, unrelated to an educational whole," and a disagreement and confusion over goals (Boyer, 1986). Bowen (1986) notes that the Carnegie report is far from the only one to sound the alarm. For instance, Secretary of Education William J. Bennett told Harvard faculty and students in a speech on campus in October 1986 that "its undergraduate school, like many others, failed to manifest a clear educational purpose... and did not provide a solid moral education." A widely praised book by University of Chicago professor and philosopher Allan Bloom (1987), analyzing the present state of education, speaks of a "spiritual malaise," which has led to "impoverished souls" in today's students; the students lack the capacity to know themselves. Bloom summarized his thesis in a recent interview: "The university was founded for freedom of mind. Then it forgot what the mind was" (Brock, 1987, p. 10). The implication is that education provides students with skills and competencies but that the students themselves, as individuals, are hardly cultured in the process.

Maharishi Mahesh Yogi, by founding Maharishi International University (MIU), has added a fundamental missing aspect to education. Maharishi observes:

If we look into the process of gaining knowledge we find there are two sides of knowledge: the object of knowledge, that which we seek to know, 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 in his infinite capacity. When the knower is ignorant about himself, the whole structure is as if baseless. (American Association for Ideal Education [AAIE], 1985, p. 5)

Maharishi suggests that for education to be complete, knowledge about some discipline alone is not sufficient: students have to learn about themselves also; they must develop as human beings. What the student needs to know is his or her ultimate basis, which Maharishi identifies as "transcendental consciousness," a state of self-referral consciousness, that is, it has no other object of experience than itself. Because at this level consciousness is fully aware of itself, it is also referred to as the state where knower, known, and the process of knowing that connects the two are fully integrated and unified. In the Vedic literature of ancient India this unified field of consciousness is seen not only as the underlying basis of subjective existence, but as the basis of all objective phenomena as well (Maharishi Mahesh Yogi, 1986).

There is currently some support from theoretical physics for such an understanding of reality. In the last few years physicists have developed unified field theories, most recently in the form of the heterotic superstring theory, which postulates a unified field that contains within its structure all the fundamental forces of nature (Hagelin, 1987). This theory indicates that the unified field of all the laws of nature is a self-referral, self-interacting reality existing at the unmanifest basis of creation. Hagelin (1987) presents evidence that the unified field of matter is indeed the field of transcendent consciousness. The existence of one underlying, transcendent field that structures subjective life as well as objective creation would imply that if one could function from this level, one spontaneously would act in accordance with the laws of nature governing one's own life and that of the environment. This would result in a way of thinking and behaving that is most supportive and evolutionary for oneself as well as the environment, that is, a supreme level of moral
development. Maharishi (1986) explains that transcendental consciousness can easily be tapped through the practice of Transcendental Meditation (TM):

The unified field is the unmanifest basis of the whole creation, the creator and governor of the whole universe. Through Transcendental Meditation it is simple to open our awareness to this state of transcendence. Spontaneously, the conscious mind identifies itself with the self-referral unified field, the fountainhead of all the 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)

The possibility of creating holistically developed individuals inspired Maharishi to design an educational program that, in addition to offering the traditional disciplines, offers the study of "oneself" through the Maharishi Technology of the Unified Field. This technology of consciousness includes the TM technique, a simple procedure practiced twice a day for twenty minutes, which allows one to experience the unified, self-referral field of consciousness. A more advanced component of the technology is the TM-Sidhi program, through which the student becomes familiar with the self-interacting dynamics of consciousness and learns to function from the unified field on a more permanent basis. Having the experience of the unified field, the common basis of knower and known, provides the students with a fundamental understanding of the basic mechanics of nature's functioning.

In addition to experiencing the underlying wholeness of the unified field during the TM and TM-Sidhi programs, the students in Maharishi's Unified Field Based Integrated System of Education are further reminded of the integration of all fields of life in the classroom. The connectedness between the subject under study and the discipline as a whole is presented, and also the relationship of the whole discipline to the unified field of natural law—one's own self—is explained (AAIE, 1985). As a consequence, the students feel more at home with any subject matter; nothing is really foreign to them. This is a practical solution to the problem of the "disjointed" curriculum that the Carnegie study noted. Maharishi (AAIE, 1985) summarizes the outcome of unified field based education as follows:

As a result of this educational approach the student grows in the awareness that all streams of knowledge are but modes of his own intelligence. The knower finds in himself the totality of natural law; because of this the knower is no longer lost in the wilderness of knowledge. He comes to feel at home with everyone and everything. With increasing confidence and self-sufficiency his creative genius blossoms. He ceases to violate natural law and enjoys the fruit of all knowledge—the ability to accomplish anything, and spontaneously to think and act free from mistakes. (p.5)

Maharishi's Unified Field Based Integrated System of Education is exemplified at Maharishi International University, Fairfield, Iowa. MIU, accredited at the Ph.D. level, is devoted to both academic excellence and the full development of the inner potential of the student. At MIU the TM and TM-Sidhi programs are an integral part of the educational program. All students, faculty, and staff collectively practice the Maharishi Technology of the Unified Field. Several studies conducted on the TM technique have found positive effects on cognitive abilities such as intelligence (Shecter, 1978), field-independence (Dillbeck, Assimakis, Raimondi, Orme-Johnson & Rowe, 1986), concept-learning (Dillbeck, Orme-Johnson & Wallace, 1981), and improved academic performance (Kember, 1985). In addition, positive development of the personality has been found: decreased
anxiety (Dillbeck, 1977) and neuroticism (Berg & Mulder, 1976), and enhanced self-regard (Turnbull & Norris, 1982), happiness (Weiss, 1975), self-actualization (Seeman, Nidich & Banta, 1972), and moral development (Nidich, Ryncarz, Abrams, Orme-Johnson & Wallace, 1983). Recently, an orientation toward positive values in several perceptual and cognitive modes has been found in MIU students (Gelderloos, Goddard, Ahlstrom & Jacoby, 1987). Also, several studies have indicated that the collective practice of the Maharishi Technology of the Unified Field has a positive effect on the environment at large, as indicated by decreased crime rate and traffic fatalities (Dillbeck, Cavanaugh, Glenn, Orme-Johnson & Mittlefehldt, 1987). It has been found as well that this collective practice, when performed in sufficiently large groups, neutralizes the stress in world consciousness and thus may contribute directly to the creation of world peace (Orme-Johnson & Dillbeck, 1987).

The aim of the present study is to test the hypothesis that Maharishi’s unified field based educational system truly contributes to the personal development of the students. The study investigates, cross-sectionally and longitudinally within a nine-month interval, the psychological health of MIU students in comparison to students at a nearby college. Since the characterizing elements of psychological health are not easily captured by traditional paper-and-pencil instruments designed for the general population, a comprehensive open-ended approach was chosen, the self-investigation method of Hermans (1981, 1987).

Hermans (1976) sees personality as an organized experiential process emerging from a person’s functioning in a particular place in time and space. The different aspects of spatio-temporal situations, that is, all aspects of a person’s life, are brought together in one structure, in which every aspect is part of a composite, integrated whole. According to Hermans, experiences are fully integrated with, and gain their identity from, the specific interactions of the experiencer and the situation. Gelderloos (1987) proposed to expand this model to include as well the ultimate basis of the experiencer himself, the unified field. The conscious experience of the unified field should also exert a significant influence on the whole personality. Hermans (1976) asserts that the thorough study of the experiences a person values in his life provides a significant and comprehensive assessment of his personality. These experiences, called valuations, have an underlying affective structure and a cognitive orientation component. Valuations can be defined as those aspects of reality to which the person is affectively oriented; they may include, for instance, memories, significant others, precious experiences, goals, ideals, hopes. Valuations have an internally differentiated and externally delimited meaning, each valuation representing a specific integrated quality that can be discriminated from others. The assessment of the valuation systems through the self-investigation method seemed a very adequate approach for the study of an elusive concept such as positive psychological health in a special population. It is a highly phenomenological instrument which leaves optimal freedom for subjects to depict their phenomenal world, and at the same time lends itself to various quantitative analyses.

**Method**

**Subjects**

The experimental group consisted of 15 MIU students, five males and ten females. Twelve were freshmen and three were first-year graduate students. Mean age was 23.9 years
(SD = 7.4), and mean number of months practicing the TM technique was 61.1 (SD = 52.5). All of the subjects at pretest were applying to learn the more advanced TM-Sidhi program. The control group consisted of 15 undergraduate students, 12 freshmen and 3 seniors, from Drake University, Des Moines, Iowa. There were three males and twelve females in this group; the mean age was 23.0 years (SD = 7.8). None of the controls were practicing meditation or other techniques for personal development. At posttest twelve subjects of the experimental group (all but one of whom had been instructed in the TM-Sidhi program), and eleven subjects of the control group were available.

**Instrument**

The instrument employed was the self-investigation method of Hermans (1976, 1987), which aims at the comprehensive assessment of the subject's valuation system. The valuations are elicited from the subject through a standard set of open-ended questions, and formulated in individual statements. Subsequently, the subject is given a standard list of positive and negative affects (such as happiness, energy, anxiety), and rates the degree to which he or she associates each affect with the different valuations. The self-investigations yield a cognitive aspect (the subjects' statements or cognitive orientations) and an affective response. The cognitive aspect can be content-analyzed on features relevant to the study, and for the affective part a set of indices has been developed by Hermans (1976).

**Procedure**

The interviews were conducted by five trained interviewers, two of whom were not practicing the TM or TM-Sidhi program, and only the investigator, who was one of the interviewers, knew the purpose of the experiment. For the present study, five content-analysis dimensions were designed from the perspective of psychological health as described by major authors such as Rogers (1961), Jung (1954), Fromm (1968), Allport (1961), Maslow (1968), and Frankl (1962). For each dimension, seven-point scales were developed from -3 to +3, with detailed descriptions at every level and +3 signifying a total expression of the dimension. The positive poles of the dimensions were as follows:

1. **Unifying ability:** a high potential for integration of self with, for instance, others, work, ideals, or "deeper" levels of self.
2. **Autonomy:** a high level of self-sufficiency, self-reliance, self-referral, self-determinism, freedom and independence, and control or mastery over the situation.
3. **Intrinsic spirituality:** reported experience of a relationship to the "Absolute," transcendence, or God, and a strong orientation towards higher values in life.
4. **Creativity:** a high level of originality, spontaneity, liveliness, dynamism, or increasing growth or development.
5. **Directedness:** an articulated and differentiated purposefulness; a clear conception of where one is going and what one is doing.

Reviewers such as Jahoda (1958), Heath (1977), Coan (1977), and Sawrey and Telford (1971) found similar concepts when they studied these and other authors, including authors from different cultures and time-periods, although each reviewer used slightly different labels and categorizations.

Five double-blind raters, two of whom did not practice the TM or TM-Sidhi program, were given a standardized, one-hour training session in analyzing the statements.
The affective associations were evaluated on well-being and integration of the valuation system with indices developed by Hermans (1976) and the present author.

Results

Cross-sectional Findings
Cognitive component. The intercorrelations of the content-analyses among the five raters were satisfactory given the large number of valuations ($N = 649$; average r's: unifying $=.732$, autonomy $=.580$, spirituality $=.503$, creativity $=.660$, directedness $=.433$), and statistically highly significant in all cases. The relatively low directedness correlations were probably due to the dual nature of this scale, i.e., the raters could use the content as well as the form of the statements in allocating scores. The ratings were analyzed with chi-square tests, whereby in most cases the extreme categories +3, -2, -3 had to be collapsed with the adjacent values due to low numbers in those cells.

On unifying ability the experimental group was rated significantly higher on the top categories ($x^2(4, N = 649) = 22.94, p < .0001$, Figure 1), signifying more "devotion," "communion," "affection," "integration," and "acceptance."

![Unifying Ability](image)

Figure 1. Joint Frequency Distribution of Unifying Ability Ratings, Pretest. The groups scored significantly differently on unifying, with the TM group scoring higher on the "2" category, signifying more devotion, communion, affection, integration, and acceptance.

A critical test was to see if these differences were solely caused by "TM-valuations," that is, references to the TM or TM-Sidhi program or any other related concepts that would have been recognizable by the raters; in order to control for this all TM-valuations were excluded in a second analysis. Again the same distribution was found, with significant differences ($x^2(4, N = 594) = 12.46, p < .014$).

On autonomy a comparable distribution emerged, with the experimental group mainly
scoring higher on the top category, indicating high levels of self-reliance and independence ($\chi^2(3, N = 649) = 30.45, p < .0001$, Figure 2). Excluding the TM-valuations yielded the same outcomes ($\chi^2(3, N = 594) = 18.49, p < .001$).

Figure 2. Joint Frequency Distribution of Autonomy Ratings. Pretest. The groups scored significantly differently on autonomy, with the TM group scoring higher on the "2" category, indicating more self-sufficiency, self-reliance, self-referral, self-determinism, and independence.

Figure 3. Joint Frequency Distribution of Spirituality Ratings. Pretest. The groups scored significantly differently on spirituality, with the TM group scoring higher on the "2" category, indicating explicit references to the Absolute and transcendence, as well as a strong motivation towards higher values in life.
The joint frequency distribution of intrinsic spirituality also showed significant differences ($\chi^2(3, N = 649) = 22.02, p<.0001$, Figure 3). The experimental group scored higher mainly on the "2" category, signifying explicit references to the Absolute or transcendence, or a strong orientation toward higher values in life. Exclusion of the TM-valuations yielded significant differences ($\chi^2(4, N = 594) = 7.93, p<.048$), suggesting that the outcomes on spirituality were also not solely dependent on areas associated with TM.

Creativity was rated significantly differently ($\chi^2(4, N = 649) = 47.22, p<.0001$, Figure 4), with the experimental group scoring higher on the top category (liveliness, spontaneity, originality). Without the TM-valuations the same level of significance was found ($\chi^2(4, N = 594) = 35.06, p<.0001$).

Finally, directedness was also rated significantly differently $\chi^2(4, N = 649) = 50.30, p<.0001$. Figure 5), with the experimental group scoring higher on "discrimination," "precision," and "articulateness." Exclusion of the TM-valuations yielded the same results ($\chi^2(4, N = 594) = 33.42, p<.0001$).

One argument that might be raised regarding the results of the content-analyses is that the outcomes could mainly have been caused by a few very high- or low-scoring individuals in the respective groups (aggregation errors), or that the assumption of independence of observations was violated by considering several valuations per individual, even though valuations are considered to be independent meaning-units (Hermans, 1987). As a way to control for these objections, analyses of variance (ANOVAs) were run, which would adjust for a small set of outliers, and the within-subject variance was taken as the error term, with the average number of valuations per person as the number of levels, which controls for any bias caused by intra-subject correlations (Myers, 1966). Again, significant
Directedness

Figure 5. Joint Frequency Distribution of Directedness Ratings, Pretest. The groups scored significantly differently on directedness, with the TM group scoring higher on the "2" category, indicating a higher level of discrimination, structure, articulateness, and differentiation.

Differences in the same directions were found in all five cases (unifying: $F(1, 22) = 6.99$, $p<.015$; autonomy: $F(1, 22) = 9.38$, $p<.006$; spirituality: $F(1, 22) = 8.19$, $p<.009$; creativity: $F(1, 22) = 7.86$, $p<.010$; directedness: $F(1, 22) = 9.93$, $p<.005$), excluding the possibility that the outcomes were due to statistical artifacts. Hence, we conclude that the TM group appeared to express in their valuations many more elements considered to be characteristic of psychological health than the non-TM group.

Affective Component. The affects were analyzed with ANOVAs because the summarized variables appeared to behave very much as normal distributions along an interval scale. The coefficients alpha of the basic affect scales ($P = \text{sum of all positive affects}, N = \text{sum of all negative affects}$) were both above .90, indicating a satisfactory level of inter-item reliability. When taking into account all valuations, a much higher level of well-being (the relative proportion of positive affects) was found in the experimental group ($F(1. 760) = 65.54$, $p<.0001$, Figure 6, Table 1). The well-being scores were also controlled for aggregation and non-independence errors, but the unbiased $F$, which is a very conservative test due to the substantial loss of degrees of freedom, was again highly significant in the same direction ($F(1,26) = 14.22$, $p<.0008$).

It is possible that these higher levels of well-being were caused by a tendency in the experimental group to deny negative elements in their lives. As a control for this hypothesis, the subjects were presented with a list of proverbs of which they had to choose the one they liked most and the one they liked least. The subjects then rated the degree to which they associated the standard set of affects to the proverbs. Hermans (1981) theorizes that affective denial or "dissociation" could be expressed through a lowered "involvement" and an uncharacteristic positive response on the chosen disliked proverb. Such a distinctive
 TABLE 1

MEANS AND STANDARD ERRORS OF AFFECTIVE MEASURES
AT PRETEST

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Error</th>
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<tr>
<td>Well-Being, Pretest</td>
<td></td>
<td></td>
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<tr>
<td>TM Group</td>
<td>74.37</td>
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</tr>
<tr>
<td>Control Group</td>
<td>57.37</td>
<td>1.54</td>
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<tr>
<td>Integration, Pretest</td>
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<td></td>
</tr>
<tr>
<td>TM Group</td>
<td>.704</td>
<td>.015</td>
</tr>
<tr>
<td>Control Group</td>
<td>.491</td>
<td>.015</td>
</tr>
</tbody>
</table>

Well-Being, Pretest

Figure 6. The experimental group scored significantly higher on well-being than the control group at pretest.

pattern could not be detected in the experimental group. In fact, the control group showed a more positive response to the proverb than the experimental subjects, although not significantly so ($F(1, 27) = 2.30, p<.141$), indicating that possible bias toward affective denial was slightly more evident in the controls. However, the controls scored on a comparable level with the experimental group on involvement ($F(1, 27) = 0.02, p<.891$), refuting the dissociation hypothesis in the control group as well.

Another affective measure regarded integration of the valuation system: how much the valuations of a subject were centered around one fundamental valuation, in terms of a "unifying philosophy of life," proposed by Allport (1961) to be one of the central features of a mature personality. For this purpose a set of questions was added to the standard sets used by Hermans, regarding the most important thing in life, or that which gave meaning to life. The affective structures of the individual valuations were then correlated with the affective structure of the meaning valuation. The absolute values of the
correlations (not taking into account the directionality) were analyzed with ANOVAs. The TM group showed significantly higher correlations with the meaning valuation than the controls \( F(1, 728) = 100.46, p < .0001 \), indicating more integration of diverse aspects of the personality. Controlling for intra-person dependency through use of the within-subject variance as the error term in the ANOVA yielded a highly significant result in the same direction \( F(1, 25) = 9.17, p < .006 \), excluding violation of the independence assumption as a basis of these outcomes.

**Integration, Pretest**

![Integration Measure](image)

Figure 7. The TM group scored significantly higher on correlations with the meaning-to-life valuation, signifying more integration of the personality.

**Longitudinal Findings**

Because of the highly idiosyncratic nature of the self-investigations material, analyses were made of the material only from the subjects who participated in both testings. To make direct comparisons in the changes between the two groups, ANCOVAs were employed, with the average pretest scores per individual as covariates. The average was taken because the number of valuations at posttest usually varied from pretest. On three of the five scales, significantly larger gains were made by the experimental group (autonomy: \( t(567) = 2.533, p < .006 \); spirituality: \( t(567) = 2.662, p < .004 \); creativity \( t(567) = 1.981, p < .024 \), all one-tailed), while in the case of unifying (\( t(567) = 1.356, p < .088 \), one-tailed) and directedness (\( t(567) = 1.401, p < .081 \), one-tailed) trends in the hypothesized direction were found. In Table 2 and Figure 8 the adjusted posttest scores are represented covaried for pretest scores, signifying the relative gains in the groups.

The well-being scores were covaried with the average pretest score per individual. The gain in the experimental group was significantly larger than in the control group (\( t(662) = 1.791, p < .037 \), one-tailed, Table 2, Figure 9).
### Table 2
Means, Adjusted Means, and Standard Errors of All Measures at Posttest

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Mean</th>
<th>Adj. Mean</th>
<th>Std. Error</th>
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</thead>
<tbody>
<tr>
<td>Unifying Ability</td>
<td>TM Group</td>
<td>4.84</td>
<td>4.45</td>
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<td></td>
<td>Control Group</td>
<td>3.52</td>
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<td>Autonomy</td>
<td>TM Group</td>
<td>6.15</td>
<td>5.75</td>
<td>0.21</td>
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<td></td>
<td>Control Group</td>
<td>4.49</td>
<td>4.93</td>
<td>0.22</td>
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<tr>
<td>Intrinsic Spirituality</td>
<td>TM Group</td>
<td>4.94</td>
<td>4.60</td>
<td>0.15</td>
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<tr>
<td></td>
<td>Control Group</td>
<td>3.59</td>
<td>3.98</td>
<td>0.16</td>
</tr>
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<td>Creativity</td>
<td>TM Group</td>
<td>5.91</td>
<td>5.41</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>Control Group</td>
<td>4.06</td>
<td>4.63</td>
<td>0.27</td>
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<tr>
<td>Directedness</td>
<td>TM Group</td>
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<td>5.69</td>
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<td></td>
<td>Control Group</td>
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<td>TM Group</td>
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<td>1.56</td>
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<td>Integration</td>
<td>TM Group</td>
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<td>.700</td>
<td>.014</td>
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<tr>
<td></td>
<td>Control Group</td>
<td>.524</td>
<td>.581</td>
<td>.015</td>
</tr>
</tbody>
</table>

Figure 8. The TM group increased more than the control group on the characteristics of psychological health.
PSYCHOLOGICAL GROWTH AT MIU

Comparing the changes in the absolute correlations with the meaning valuation of the groups with ANCOVA, while controlling for the average pretest score per individual, yielded a highly significantly larger gain of integration in the experimental group ($t(637) = 5.393$, $p<.0001$, one-tailed, Figure 10, Table 2).

Discussion

The subjects at MIU appeared to score higher on psychological health at pretest, cognitively as well as affectively. In this light, the outcomes of the longitudinal part of the study are even more remarkable. The MIU students showed significantly higher gains over the experimental period in ratings for autonomy, intrinsic spirituality and creativity as compared to the control group, while in the case of unifying ability and directedness trends in the hypothesized direction were found. The already higher well-being scores in the experimental group increased significantly more than those of the control group during the nine-month experimental period, and the experimental group showed significantly more development toward integration of the valuation systems. Hence, we conclude that all aspects measured in this longitudinal experiment, generally considered to be the major indicators of psychological health, improved more in the TM group than in the control group.

The central issue to be addressed here is that of causality. What made the experimental group develop so much more in psychological health? First we have to consider whether the groups were comparable at the beginning. Although the groups were comparable in age, level of academic career, and gender distribution, the experimental subjects had
practiced the TM technique for quite a few years, and because of the beneficial results of their practice, may have been more attracted to the educational system offered at MIU. In this sense it was a highly self-selected group oriented toward personal growth and already scoring much higher on psychological health. With these higher scores at pretest, however, a further improvement would in general be more difficult to obtain due to ceiling effect. Thus, if there had been any influence due to the different initial level of psychological health, it should have worked in the direction opposite to the hypothesis.

Secondly, the difference in environment may have played a role. MIU is located in a small town (10,000 population), and Drake University is in Des Moines (200,000 population). Although there are obvious differences between living in rural or metropolitan areas, the influences would not be predicted to be on the order of the magnitudes of outcomes of the present study—primarily because both towns are located in Iowa, in general considered to be a low-stress state.

Thirdly, the MIU students could have been biased toward a positive outcome of the study. Although this is a possibility, it is not likely to have significantly influenced the outcomes. The purpose of the study was not revealed to the subjects (nor the interviewers) until after the posttest. Furthermore, the ratings of the statements were done in accordance with criteria which were unknown to the subjects (and interviewers). Thus the goal of the cognitive part of the test was fully disguised. Also, the affective integration measure was beyond conscious manipulation. The well-being measure was more liable to response tendencies toward social desirability. However, the results on well-being agreed with the results on the disguised cognitive and integration measures, suggesting that the effect of bias toward a particular outcome of the study was negligible. Thus the differences

Figure 10. The integration measures at posttest, adjusted for pretest scores, were significantly higher for the TM group than the control group, indicating a larger relative gain in the TM group.
in growth rate seem to be related to Maharishi’s unified field based educational system.

It is worthwhile to analyze the elements in Maharishi’s Unified Field Based Integrated System of Education that could contribute to this remarkable personal growth. To provide some insight into this issue we would like to present some material from a study in progress (Kenny, in preparation), in which MIU students were asked (in a self-investigation format) what they felt were the significant aspects of their university. Four elements repeatedly arose in the answers of these 35 randomly chosen students. For illustrative purposes we will quote some of the answers.

First, the students mentioned the profound rest induced by the TM and TM-Sidhi programs, and the structure of the daily routine:

[Practice of the TM and TM-Sidhi] programs. It gives me a chance to always come back to settling down and getting rest, and that gives me a broader awareness and ability to maintain perspective.

The [TM and TM-Sidhi] programs, the routine, the balance of rest and activity lets me use my full potential.

Secondly, students mentioned that knowledge was taught in a holistic structure integrating all diverse aspects of life:

The way of gaining knowledge so that knowledge is always related to the basis of our lives. That makes it fulfilling to gain the knowledge.

The fact that everything in class and during the lectures always connects to the whole. It makes studying meaningful.

Thirdly, they referred to the common emphasis on personal growth and development:

People are actively pursuing a better life. There’s a lot more support for me as a person pursuing a better life or wanting more out of life, because everyone is moving in that direction.

That the emphasis here is on change. Having the attention on personal development. At other places you are not expected to change, but here all your instructors and peers are open to see growth in you.

And finally, the interpersonal relationships between the students and between students and faculty were mentioned in many cases:

The quality of the professors—they are human and dedicated; without them I couldn’t develop and change. They connect things nicely, they’re open in their opinions, and strong within. This lets me be myself. They don’t make me feel different from them, and that allows connectedness with them. I think there’s a lot of heart as well as intellect between the teachers and students.

The people—the atmosphere here is different. People are the strongest influence on each other’s psychology; here everyone is truthful, friendly and very supportive and that contributes to my development.

On the basis of these reports of the students, it seems likely that no one individual element is responsible for personal growth. It seems rather to be the outcome of all the various elements together: the practice of the Maharishi Technology of the Unified Field, the presentation of knowledge in a holistic and integrated way relevant to the life of the
student, the atmosphere of mutual support and understanding, and the encouragement of development by fellow students and teachers.

These students' remarks, which were obtained in an open-ended interview format by a fellow student, are in clear contrast with the introductory remarks in this paper about the unfulfilled state of present-day education. This suggests that there is no reason for education today not to achieve its original goal of developing holistic, well-integrated individuals as well as providing professional training. The present study confirms that MIU students do indeed develop into psychologically more mature individuals. Maharishi's Unified Field Based Integrated System of Education seems to fulfill its promise of developing mature, well-integrated individuals. This new educational approach warrants serious consideration by all educators, psychologists, scientists, and all others sincerely interested in improving human life from a fundamental level.

References


Kenny, M. (in preparation). *The MIU experience*. Maharishi International University, Psychology Department, Fairfield, IA.


