

## **5.0 DEVELOPMENT OF A THEORETICAL MODEL OF YOGA IN EDUCATION**

### **5.1 INTRODUCTION**

While literature on ancient knowledge is copious and on scientific research, growing, the two have seldom been brought together. The conjunction of the two was attempted here. The juxtaposition served three purposes:

1. Scientific research is outcome-based and focuses on the benefits of *yoga*. Ancient knowledge is process based and focuses on rational underlying principles, logical sequence of practices and their interconnectedness. The combination of process and outcome makes redundant the need to hypothesize the underlying mechanism that makes *yoga* effective. This is extensively covered in the ancient literature. The juxtaposition, thus, helps create a more comprehensive model showing the principles, sequence, interconnectedness between practices and evidence-based benefits.
2. Depending solely on scientific research sometimes leads to erroneous separation of *yoga's* component practices. For example, contemplative practices like mindfulness and meditation are often seen as separate from *yoga*. Ancient knowledge helps to understand that steadying the body, regulating the emotions and calming the mind prepare the ground for contemplative practices. Thus, meditation is the culmination of *yoga* and not separate from it.
3. The ancient *yoga* concepts themselves help explain the underlying causes of the physical, mental and psychological problems. It then describes the step by step process of addressing such problems at its root.

### **5.2 MAIN IDEAS FROM ANCIENT LITERATURE ON WHICH THE MODEL IS BASED**

The proposed model is based on six ideas contained in ancient literature. These were juxtaposed with scientific evidence of the benefits of school-based *yoga*. From ancient literature, the understanding of the mechanism of the mind, sheaths of human personality, the five mental planes, balancing of left and right brain energies and *Pātanjali's* eight limbed *yoga* protocol were considered important for developing the model. From scientific research, the evidence of the benefits of school-based *yoga* was utilized in constructing the theoretical model.

### **1. *Mind Complete, Cognition and Consciousness:***

In the *yogic* conception the mind complete comprises the sense organs, ego, mind and intellect. The sense organs interact with external stimuli and send signals to the mind. The mind, bereft of discriminatory power, passes the signals to the discriminating intellect. The intellect reacts with a thought wave. Cognition occurs when that thought wave is illuminated by the light of the indwelling consciousness. With cognition, the ego sense arises that 'I am the cognizing agent'. The constant interaction between the sense organs and external stimuli ensures a heavy traffic of thought waves in the mind complete. The constant wave of thoughts creates ripples to obscure the view of the indwelling consciousness. By the practice of *yoga*, the mental operation is stilled and the view of the indwelling consciousness becomes clear. Here, we find a logical explanation of why the mind is disturbed. When senses are not in control, thought activity is rapidly leading to a distracted and disturbed mind. When the senses are controlled, the mind is calmed (Kothandaraman, 2009; Vivekananda, 2012).

### **2. *The Five Sheaths of Human Personality:***

The human personality is composed of five sheaths. They are the physical body sheath, the *prāna* or vital energy sheath, the mind sheath, the intellect sheath and the bliss sheath. While the body is made of gross matter, the vital sheath is made of energy. The mind sheath is the seat of impulses, emotions, desires, likes and dislikes. People, in whom the mind sheath dominates, tend to be impulsive and unable to regulate their emotions. The intellect sheath is governed by the power of discrimination. People in whom the intellect is strong are characterized by thoughtfulness. In the bliss sheath, there is neither awareness of the external world nor the internal world. Thus, there is no mental activity to disturb the peace. All joy experienced is sourced from this sheath. Here, again, *yoga* provides an insight into the problem of the disturbed mind. When the senses and the mind dominate unregulated emotions, impulsive behavior and heavy traffic of thoughts are the consequences. When the locus of control shifts to the discriminating intellect, thoughtful behavior is the result (Chinmayananda, 2005).

### **3. *Human Personality is Made of Three Energies:***

Human personality is composed of a combination of three energies. They are *sattvā* (controlled illuminative energy), *rajas* (uncontrolled active energy) and *tamas* (uncontrolled inert energy). *Sattvā* is characterized by purity, serenity, wisdom, bliss,

moral courage and other sublime qualities. The characteristics of *rajas* are egoism, activity, restlessness, greed for wealth and power. *Tamas* is indicated by inertia, heedlessness, perversion in thought and action. Once more, *yoga* points to the cause of the problem and shows the solution. Predominance of *rajas* and *tamas* may negatively impact psychological well-being while increased *sattvā* promotes psychological well-being (Kothandaraman 2009; Vivekananda, 2012).

#### **4. *The Five Mental Planes:***

The mind operates in one of the five mental planes. Influenced by *rajas*, the mind is in an active disturbed mode. Influenced by *tamas*, it is in a state of inactive dull mode. Influenced by both, the mind oscillates between the first two planes. These three planes are the ordinary states of mind. When *sattvā* prevails, the mind is calmed, leading to one-pointed attention and control over emotions. The fifth plain is the meditative state. Ancient knowledge, again, points to the connection between cognitive and emotional problems and the intrinsic nature of the mind. It provides a solution too. By rebalancing the three energies, the mind can be calmed (Kothandaraman, 2009).

#### **5. *Balancing the Left and Right Brain Energies:***

The mode of perceiving, thinking and behaving are, in part, governed by two aspects. *Pātanjali* refers to them as the sun and the moon aspects. In common parlance, the sun energy corresponds to the left brain and the moon energy to the right brain. The sun energy is aggressive, active, logical, analytical and argumentative. The moon energy is passive, receptive, synthetical, poetic, imaginative and creative. In the ordinary state of mind, one or the other energy dominates. The practice of *yoga* enhances the relatively less active side to balance the sun and moon energies. This results in using more faculties of the brain in perception, thinking and behavior (Kothandaraman, 2009; Vivekananda, 2012).

#### **6. *The Practice of Yoga:***

*Pātanjali* conceived of the eight limbed *yoga* (*Ashtāṅga Yoga*). The first two limbs are *yamā* and *niyamā*, or restraints and observances. The purpose of *yamā* and *niyamā* are to purify the mind and inculcate self-discipline. The third limb is *āsana* or physical postures. It is designed to make the body steady, flexible and healthy. The fourth limb

is *prānāyama* or breathing practices. By manipulating *prāna*, the mind is calmed. Increased *prānic* energy activates the upper energy centers that represent the nobler emotions of love, compassion, acceptance, sensitivity and spirituality. Here, we have a clue on how *yoga* works on character and personality. The fifth limb is *pratyahāra* or training to restrain the senses. The sixth, seventh and eighth limbs are contemplative in nature. They are *dhāraṇa* or one-pointed attention with effort, *dhyāna* or effortless one-pointed attention and *samādhi* or spiritual absorption (Kothandaraman, 2009, Vivekananda, 2012; Muktibodhananda, 2012).

The ancient knowledge is juxtaposed with evidence from scientific research. It suggests that the practice of *yoga* has a positive effect on physical health and fitness, cognitive performance, psychosocial measures and measures of emotional regulation.

### **5.3 THEORETICAL MODEL OF YOGA IN EDUCATION**

The theoretical model of *yoga* in education is based on the eight limbs of *yoga*. The benefits of school-based *yoga* as supported by scientific research has been incorporated in the model. The underlying principles that make *yoga* work, sequence of practices and their interconnectedness is based on ancient knowledge. The model is presented in Figure 10.

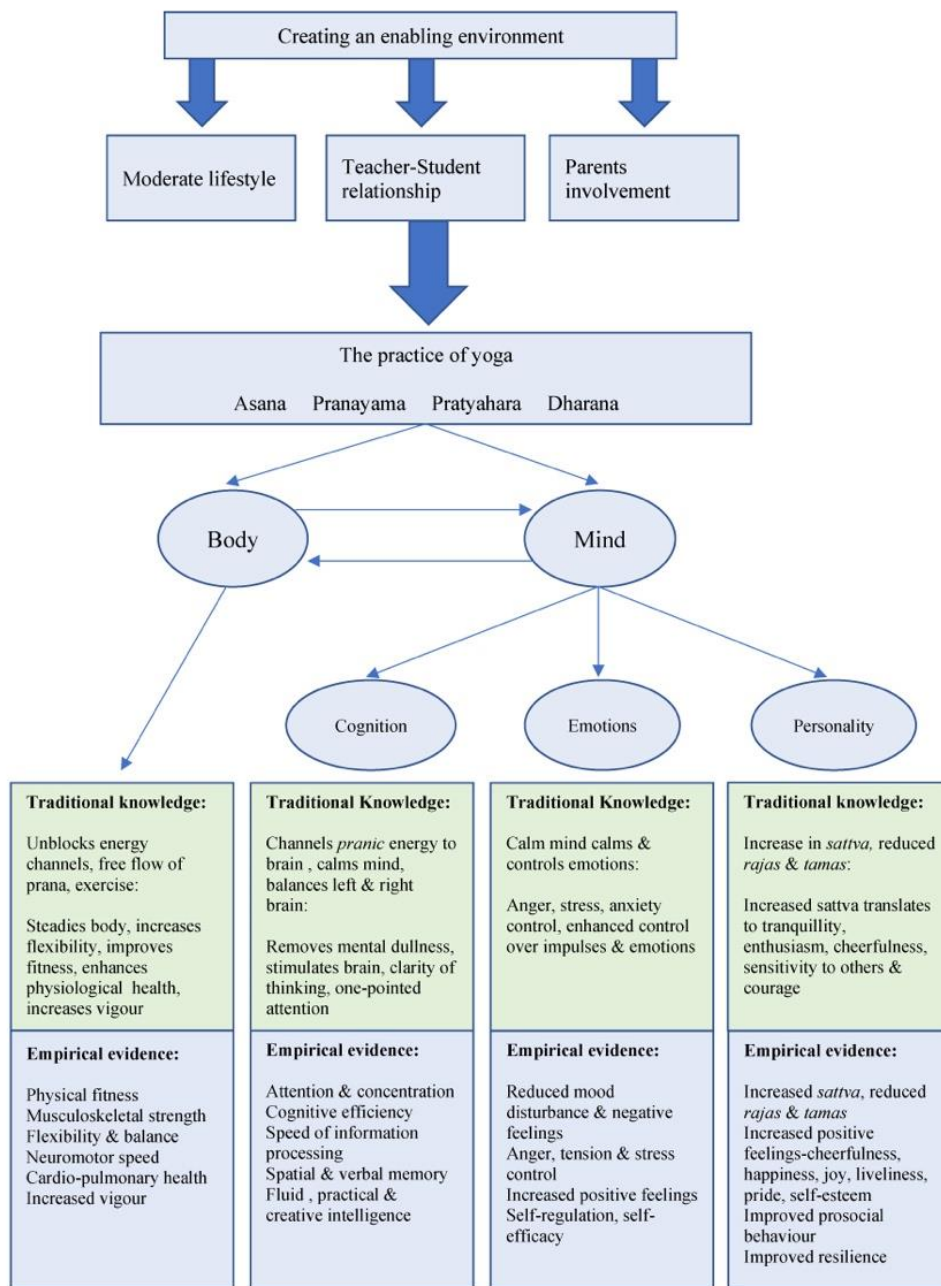


Figure 10 - Theoretical Model of *Yoga* in Education

### 5.3.1 OVERALL FRAMEWORK

*Yoga*, with its physical, breathing and contemplative practices, works on the body and mind. The principle behind the eight limbed *yoga* is to stabilize the body, then the breath, senses and mind in that order. However, the relationship is not so watertight. There is interaction between body, breath and mind and each benefit by improvement in the other. Hence, the model takes into account this interaction. Secondly, calming of the mind impacts both cognitive performance and emotional control. In the model, personality is considered a separate bucket, since *yoga* may help to transform it by infusing qualities like gentleness, cheerfulness and tranquility.

### 5.3.2 CREATING AN ENABLING ENVIRONMENT

*Yogic* vision of education revolves around self-transformation. This may require an enabling environment. To frame the components of such an environment, the model draws inspiration from the first two limbs of *yoga* namely, *yamā* and *niyama*, or restraints and observances. The enabling environment in the model is built on three hypothesized pillars. The first pillar is voluntary moderation in life style. The objective of moderation is to strengthen the mental makeup through self-restraint. It is important to underscore that self-restraint is not self-denial. The latter would be counterproductive to making the mental makeup strong. The moderation in diet, sleep, work, play, entertainment and exposure to media are suggested. The moderation in lifestyle may be strengthened through periodic expert talks on principles, values and advantages of moderation. To be acceptable, the content of such talks must be sensitive to local cultures. The second pillar of the enabling environment is a transformed student-teacher relationship. This is a key strategy to inculcate good character traits. Teachers playing the role of caregivers, role models and mentors inspire the student to acquire good character traits. In return, the students learn to relate to their teachers with deep respect. The third pillar is support from parents. Parents have to buy into the equal weightage given to academic knowledge and character building and be inspired by the values that the school espouses.

### 5.3.3 THE PRACTICE OF YOGA

The practice includes the next four limbs of *yoga* namely, *āsana* (physical postures), *prānāyama* (breathing exercises), *pratyahāra* (control of senses) and *dhāraṇa* (one-pointed attention).

Every traditional school of *yoga* includes meditation. In fact, it is the core of *yoga*. The separation of mindfulness/meditation and *yoga* in some quarters goes against this very core. *Āsanā* steadies the body while *prānāyama* increases *prānic* energy. These two practices calm the mind and, in turn, the senses imitating the state of mind are calmed. This is the state of *pratyahāra*. Relaxation techniques further promote *pratyahāra*. *Dhāraṇa* trains the mind to develop one-pointed attention.

### 5.3.4 THE BENEFITS OF YOGA

*Yoga* has effects on the physical body, vital energy body and the mind in interconnected ways. In the physiological domain fitness, strength, flexibility, balance, vigor and good health develop. The calming of the mind has an effect on both cognitive performance and emotional control. In the cognitive domain, attention and concentration improve, speed of information processing increases, spatial and verbal memory are enhanced and aspects of intelligence improve. In the emotional domain, negative aspects of mood and feelings are attenuated and positive aspects enhanced. Anger, tension and stress are controlled. The impact on personality is rooted in the increase in *sattvā* energy. This makes the personality gentle, cheerful, joyous and resilient. Prosocial behavior improves.

### 5.4 TRANSLATING THE THEORY INTO PRACTICE

The incorporation of *yoga* in education will require a systematic and collaborative approach. Educationists, *yoga* experts, *yoga* researchers and parents will need to support *yoga* and work out the modalities of its inclusion. The five main pieces that need to coalesce for successful implementation are feasibility, *yoga* module development, role of *yoga* instructors and school teachers, *yoga* research and support of parents.

1. **Feasibility:** The incorporation of *yoga* will be successful only if it is feasible, both, in terms of scheduling and perceptible benefits. *Yoga* experts may be required to design interventions that fit into the time-resource educationists deem possible for *yoga*. Educationists may need to evaluate the activity heavy school schedule and make

tradeoffs to accommodate *yoga*. Researchers will need to provide evidence that the *yoga* program is delivering the desired benefits.

2. **Yoga Module Development:** It is critical to have validated *yoga* modules for the success of *yoga* in education program. *Yoga* experts will need to decide how many age groups to break up the school cohort into. Age group specific modules will need to be developed. Increasing the difficulty level over time needs to be factored in. *Yoga* experts will need to consider the right age for children to begin practicing *yoga*.
3. **Teacher or Yoga Instructor:** It is hypothesized that if *yoga* practice is part of the daily schedule then school teachers may be required to lead some *yoga* sessions. Defining the role of *yoga* instructors and school teachers is, thus, critical for successful implementation.
4. **Yoga Research:** A full-scale incorporation of *yoga* in education provides a good opportunity for researchers to design methodologically sound research protocols that can better ascertain whether the *yoga* program is indeed delivering the desired effects. This information will help to improve the program and provide evidence to encourage its continuation.
5. **Parental Support:** Educating parents on *yoga* intervention is another critical piece in the implementation of the program. Parents need to be educated on the program and their concerns addressed. They could be encouraged to witness and even participate in the practice.

## 5.5 DISCUSSION

Schools can potentially play a big role in reversing the growing trend of child and adolescent mental health problems. Given that most mental health issues can be traced to childhood and adolescent onset, intervention in school years can have positive health implications going into adulthood. *Yoga*, with its effect in the psychosocial domain, can equip the child in dealing with stressors to remain mentally healthy. The effect of *yoga* on emotional control and personality characteristics makes it a suitable aid in imparting character education. The enhancement of cognitive efficacy could satisfy thinkers who suggest that the education should lay more weightage on developing the power of concentration than dissemination of knowledge. An



intellectually active, physically and mentally healthy, prosocial child, equipped with good character traits, can potentially help in changing society positively.

Implementation will require a coordinated and systematic effort by all stakeholders namely, educators, *yoga* experts, *yoga* researchers and parents. There is research evidence of benefits of *yoga* across physical, cognitive, emotional and personality domains. It may aid in the development of the whole child, character building, SEL training and developing the power of concentration. There is, thus, a compelling case for its inclusion in the school curricula on a large scale.

## **5.6. STRENGTHS OF THE MODEL**

The uniqueness of the theoretical model presented in this paper is that it is based on ancient knowledge and evidence from modern research. The underlying principles, sequence of practices and their interconnectedness are derived from ancient texts. The benefit outcomes are derived from modern research. This make the need to hypothesize the underlying mechanisms from the outcomes redundant.

## **5.7 LIMITATIONS OF THE MODEL**

The limitation of the model is that the current research on *yoga* is based mostly on short periods of intervention. Further, the methodological rigor is of varying quality. If school-based *yoga* is implemented on a large-scale, researchers will have the opportunity for longitudinal studies and studies with firmer methodologies. This will greatly add to evidence-based knowledge on school-based *yoga*.

*The purpose of education is twofold. To equip the child with excellent technological proficiency so he may function with clarity and efficiency in the modern world. But more important is to develop fully as a complete human being. This means flowering into goodness so that he is rightly related to people, things and ideas. There can be no right relationship without the right feeling for beauty, a response to nature, to music and art, a highly developed aesthetic sense.*

**J Krishnamurti**