

Effects of Yoga in Concentration in Mathematics Subject

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Abstract:

“Yoga” word comes from the Sanskrit “yuj”, which means “concentration”. It is a mental, physical and spiritual practice. The saints of ancient India developed a traditional method for meditation. They practiced yoga as an effective method of controlling their minds and bodily activities. Lack of concentration is the main problem of teaching today. Yoga techniques help to reduce the stress, to focus on the present and to develop the power of concentration. It is a natural therapy to increase the mental presence in the classroom also. The aim of present study is to check the effects of yoga to concentrate in Mathematics subject. The experiment was done with the help of some college going students. They attended yoga classes regularly, one hour daily in the morning. They did some exercises like Surya namaskar, Meditation and Pranayama. After this yoga program, these students improved their concentration power and marks in Mathematics subject. Even they sat in the classroom for long time with interest and curiosity. The objectives of this paper are to improve students’ attention, learning capacity, memory & self esteem, to develop the concentration power & coordination in the classroom, to improve the attitude towards personality, work & create good atmosphere and to become more aware & to connect between mind and body.

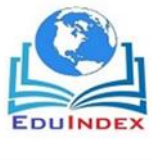

Key words: Yoga, Concentration, Mathematics, Surya namaskar, Meditation, Pranayam.

Introduction:

Yoga has become more popular as a form of physical exercise based upon poses that promote improved control of the mind and body and enhance well-being in the more recent years. In the 1920s and 1930s, an explosion of interest in postural yoga occurred, first in India and later in the West. Yoga is well known for its postures and poses, but they were not a key part of original yoga traditions in India.

Yoga is a method of strict self discipline. The mind can be wild and uncontrollable in the beginning. But, through the yogic process, tune in the mind can be achieved. There exists a scientific law, a mental affinity, a rhythm of mental relationship in the nature. Various styles of yoga combine physical postures, breathing techniques, and meditation or relaxation.

Indian sage, Maharishi Patanjali, known as “The Father of Yoga” gave the “Yoga Sutra”, on yogic philosophy, which is a guidebook to control our emotions, master the mind and grow spiritually. The Yoga Sutra, one of the oldest texts in existence, is the earliest written record of yoga and provides the framework for all modern yoga. Yoga is one of the six systems of Vedic

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philosophy. The eight folds path of Yoga, popularly known as "Ashtanga Yoga" are Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi for all-round development of human beings.

SOME EXERCISES DONE FOR THE STUDY

This study includes the following exercises:

1. SURYA NAMASKAR

“Surya Namaskar” in sanskrit or 'Sun Salutation' is a very ancient technique of paying respect or expressing gratitude to the sun. The sun is the source of all forms of life on the planet, becomes our source of energy. The solar plexus (located behind the navel, which is the central point of the human body), also known as the second brain, is said to be connected to the sun. This is the main reason of recommendations of the practice of Surya Namaskar by ancient rishis, because the regular practice of this technique enhances the solar plexus, which increases one's creativity and intuitive abilities.

2. MEDITATION

A practice is called Meditation in which an individual focuses the mind on a particular object or activity. Meditation increases concentration power. When someone asked Buddha, “What did he gain from meditation?”, he replied nothing and actually lost anger, lust, and become peaceful. So doing meditation can totally improve life whether it is mathematics or anything.

3. PRANAYAM

An integral part of Yoga, Pranayama, means breathing consciously. Pranayama consists of 3 stages of mind fluctuations like drawing the breath in, breath out and holding the breath. Patanjali described the regulation of these 3 stages achieved by 3 factors Space, Time and Number of Pranayama through the following Yoga Sutra Verse:

“Bahya bhyantara stambha vrittih desha kala sankhyabhih paridrishto dirgha sookshmah”.

MATHEMATICS

Mathematics is “Science of all Sciences” and “Art of all Arts”. Mathematical knowledge plays a crucial role in understanding the contents of the subject. This subject doesn't need to memorize the things like parrot. Only mental logic is sufficient for this subject.

Mathematics always remains evergreen subject in demand in the field of education. Life goals cannot be achieved without it. It is the only subject in which anyone can score full marks and overall percentage of marks can be improved.

The aims of teaching and learning mathematics are to develop the long lasting knowledge, skills, attitudes, inductive, deductive and mathematical curiosity and get the solution of problems in school, college or real life situations. Mathematics provides a powerful and universal language. Students have to use mathematical language when they communicate mathematical ideas their findings orally and in writing both. Mathematics is used to measure structure of the body, the height, weight, blood pressure, temperature of the human body and rules of the games etc.

YOGA & MATHEMATICS MAKES FUN FOR CHILDREN

The Nobel Prize winner for brain research in 1981, Dr. Roger Sperry says “90% of the stimulation and nutrition to the brain is generated by the movement of the spine”. Some easy ways to incorporate movement, specifically Yoga, into a math class are :

Sun Salutation: Teach kids to do a Sun Salutation.

Ratio Breath: A great activity to settle energy and focus concentration.

Breathing Counts: Kids notice their breath and count the seconds in one round (in and out).

Shape Shifters: Yoga poses are a goldmine when kids are ready for geometry.

PomPom Poppers: Each child gets a pompom and holds it in outstretched hand.

Feet on the Floor: For younger students, simply counting hands on the floor or toes in the air can be a fun challenge. This works with any pose.

Measure a Mountain: In pairs or teams, children take Mountain Pose and are measured (inches, centimeters, hands, paperclips, whatever you’d like) from head to heel.

Tree Topple: Again in teams or pairs, one child takes Tree Pose and the other times how long he/she can stay balancing in the pose.



Yoga is a perfect addition to classroom, make learning math creative and fun. Kidding Around Yoga has developed a curriculum specifically to incorporate Yoga into the classroom, not just in mathematics subject but throughout the day.

LITERATURE REVIEW

By reviewing the related literature, the problem becomes clear and it directs the researcher to proceed in this subject. The Yogic techniques have become popular not only in India but also in abroad. Maharishi Mahesh Yogi [5] stated a state of alert rest. Sahasi *et al.*[7] has verified the effectiveness of yogic techniques in the management of anxiety and reported increased attention /concentration. Udupa *et al.*[14] revealed that yoga has the potential to influence the stress disorder and it helps the sufferer to achieve physical and metabolic stability.

NEED

Today Yoga is not restricted to saints, sages and hermits only but it is also important for our daily life. In the last few decades, yoga exercises have aroused a worldwide awakening and

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acceptance. The science of Yoga and its techniques have now been reoriented to suit modern sociological needs and lifestyles. Experts of various fields of medicine are realizing the role of these techniques for our health. A way of life, Yoga, is characterized by balance, bliss, harmony and health. An international day for Yoga is celebrated on special date, 21st June, the longest day of the year.

YOGA CLASSES IN LUCKNOW

Himalyan Yogic Anusandhan Sansthan , Wow Wellness Yoga , Bramhavarchaswa International Yoga Academy etc. are some yoga classes situated in Lucknow.

GUIDELINE FOR INSTITUTION:

1. The central government has given instructions to all the state governments that regular practice in Yoga classes will be compulsory for all students of CBSE and ICSE courses.
2. The University Grants Commission has issued the guidelines to promote a campaign for fitness in all Higher Educational Institutions to adopt policies and practices towards fitness activities such as cycling, running, aerobics, walkathon, marathon, yoga, meditation activities etc. on a periodic basis and well being of students and staff.



Conclusion:

When we are physically healthy, stress is under control ,the mind is clear and focused . Yoga is very important for modern life in general. Transcendental meditation reduces stress and improves academic performance in every subject. Chanting “Om” mentally causes increased alertness and the practice of yoga brings improvement in competitive performance.

With the earlier studies, the results are in tune, which found that practicing yoga for long period produces definite changes in attention, concentration and cognition. Yoga techniques are helpful in management ourselves and improvement in concentration. In this paper we have seen that Yogic techniques are important to improve one’s performance in Mathematics subject.

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