

# **Towards Mindful Education : Developing Integrated Personality**

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ISBN : 978 - 93 - 5346 - 491 -2

DATE : 03.04.2019



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Cover design and print by : Infant Jesus Printers, 2/678 B K.S.A  
Rajadurai Nagar, Vilampatty Road,  
Sivakasi - 626 124.  
E.mail : [infantjesusprinters2008@gmail.com](mailto:infantjesusprinters2008@gmail.com)

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## EMPOWERING MINDFULNESS IN SCIENCE CLASSROOM

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### Introduction

The concept of mindfulness is not new to the field of education. Mindfulness practices are rooted in the ancient Buddhist philosophy of practicing gratitude and self-awareness through meditation. Although it took almost 2000 years for science to catch up to the claims of mindfulness, science has proven that mindfulness practices can have tremendous effects on health and well-being. Doctor Jon Kabbat Zinn, founder of Mindful Based Stress Reduction practices (1994), defines mindfulness as *the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment.*

### Why Mindfulness?

Protagonists of mindfulness practices in education said that it's the latest approach which can help the students to focus on work, increase learning, decrease stress and enhance the overall community of the school. Skeptics claimed that the idea of mindfulness is too simple but it can't possibly work. These two ideas create a controversy but still it is to be advocated because of its unlimited educational benefits.

Mindfulness is a secular practice that can be done by everybody, regardless of their gender, race, religion or socio-economic demographic. Any activity that teaches or trains the brain and intellect to focus on one object or process or event while



remaining void of any other judgment in the present moment is known as mindfulness. Generally meditation, intentional breath work, thoughtful physical movement and even mantras are some ways through which one can learn to focus the mind and specifically these techniques can't be practice or executed in the educational context. Then, why we can to talk about mindfulness in education? It's because of the numerous benefits. Research over the past few decades has found that mindfulness helps to:

- Increase attention, memory power, impulse control, emotional regulation, self-calming, social skills and social compliance, care for others, relaxation, self-acceptance, self-esteem and quality of sleep.
- Decrease Attention Deficit Hyperactive Disorder (ADHD) behaviours, hyperactivity and impulsivity, anger management problems, negative affect, anxiety in general and text anxiety in particular and depression.

Being such a beneficial practice, mindfulness must be considered as the foundation for education; mindfulness provides the optimal conditions for learning and teaching and also supports all pedagogical approaches. Through this paper an effort is made to suggest a few techniques for the empowerment of mindfulness specifically in science classroom.

### ***Teach through Activities***

This is not a new thing to talk about activities in science teaching. The major principles of science teaching are 'Learning by Doing' and 'Learning by Living'. These principles exclusively support the activity approach in teaching science. According to D.S. Kothari (1965), "To learn science is to do science, there is no



other way of learning science''. This statement clearly indicated the role of activities in a science classroom. We are clearly recognized the importance of activities in the classroom but still it can't be executed in a proper manner because of time constraints as the major limitations. We have to complete the syllabus within stipulated time which is too small to allow the activities in a classroom. During teaching-learning process attention towards individual is also a matter of concern and it is also another reason for the inadequate execution of activities. So, while talking about activities we can list down number of restrictions but rather than finding reasons for why it's not executed, find the possibilities of being executed in the classroom with in the time limit by formal or informal manner, because it acts as an exceptional way to empower mindfulness.

### ***Utilization of Micro Teaching Skills***

Micro teaching skills are the outstanding tools to invite the attention of the students and withstand their concentration towards the teaching process. There are plenty of skills such as skill of introduction, skill of explaining, skill of probing questions, skill of reinforcement, skill of stimulus variation, skill of blackboard usage, skill of skill of questioning, skill of illustration with examples and many more serve this purpose in an excel manner. Science being a dynamic and active subject provides much room for the utilization of micro teaching skills and the effective utilization of skills definitely improves the mindfulness among the students to a greater extend.

### ***Promote Healthy Discussions and Discuss Everyday Use of Words***

The best way to get good idea is to get lots of ideas, Linus Pauling, Nobel Prize Winning Chemist and Peace Activist (1954).



Science classrooms must act as catalysts for innovative ideas and stir up the creativity of students and so the young learners are given adequate opportunities to speak their mind out and engage with each other's world views in a conducive and nonthreatening environment. Whether it is right or wrong, sufficient opportunities and enough space must be provided for the students to express their views, ideas or thought freely without any hesitation and fear. This condition can be established only when the teacher possess a favourable, friendly and encouraging approach towards their students.

Only classroom discussion can help in clarifying the scientific meaning associated with colloquially generated words, otherwise they are bound to interface in the scientific meaning making process. Here it's the duty of the teacher to provide ample opportunities for the students to reflect their own language words and relate it with the scientific or original meaning with in the correct language. This habit makes the students feel comfort in their subject and as well as they can develop the ownership feel about their subject and thus enhance mindfulness.

### ***Go for Alternative Methods***

The key feature of any science lesson is the way in which the teacher coordinates the talk of the lesson, in interacting with students, to develop the scientific story being taught - Mortimer and Scott (2003). Still our classrooms are occupied with the traditional or the olden lecturer method as a most suitable and convenient method for all level students. Even though it's a teacher centered method, majority of the teachers adopt this method because of its flexibility or adaptability. But in the present day educational scenario demands child centered methods and the teachers whose



who know the importance of child centered methods also adopt lecturer method is the pathetic situation today, which means we are theoretically sound and also agreeing the concepts but practically not ready to apply it. Is it ignorance? or lack of training? or lack of awareness? or lack of confidence? or lack of competence? or lack of time? or lack of willingness? or what else may be the reason, throw it away and use verities of method especially the child centered methods for providing mindful science education or to create a mindful science classroom.

### ***Wise Usage of Instructional Materials***

Teaching at the present modern era is becoming more complex and technical, so it can't be effectively actualized with traditional tools alone. The technological development has made available a wide range of instructional materials as supplement to teachers' efforts in teaching-learning process. Instructional materials are human and non-human materials that are used in the process of instruction and facilitate or encourage, improve and promote teaching and learning activities. Instructional aids both print and audio and visual types are very much significance to the accomplishment of instructional objectives. Research findings of Ololube (2006, 2008) revealed that teachers are almost ignorant of the availability and the relevance of instructional materials in the schools. Teachers find it difficult to use the instructional aids effectively in imparting knowledge to the students. The immediate effect of this is that it leads to poor performance of students in both internal and external examinations. This result clearly indicated the role and importance of instructional materials in the teaching-learning process.



Edgar Dale (1946) proposed that learning is stimulated progressively from concrete (i.e. hands-on) experiences to abstract (i.e. verbal and visual) symbols. The foundations for instruction reside in direct sensory experiences accompanied with purposeful interaction with stimuli sources. At the most basic and effective level of instruction, students are introduced to new material through actual “hands-on experience or doing the real thing”, which is very much possible for science subject.

### ***Developing Questioning Attitude among Students***

Science is a subject which developed to the present status because of two questions; Why? and How? Much of science is investigating 'why' and also much of the inventions and discoveries are based on the two questions. So, like scientists, students can also sharpen their observation skills and learn to make and test hypotheses to discover the answers with the help of this questioning attitude. Science classroom is a place where we can give ample opportunities and encourage the students to ask questions. Here the teachers must have and show a positive approach as well as maintain a healthy rapport with the students, then only the students will take the initiations to ask questions and also it must be strengthened by appreciations. The habit of questioning attitude among the students open the doors for divergent thinking and thus promote the concentration in whatever they are seeing or learning and so helps to enhance the mindfulness.

### ***Have Some Fun***

Make science fun and exciting for the students by encouraging their natural curiosity about the world and teaching them how to find answers for themselves. By doing some exciting chemistry demonstrations with colorful and fizzy reactions,



mindfulness can be promoted among the students. Whether the students want to be engineers or not, most of them are fascinated by how things work and it can be presented to them in planned manner will add more fun to the class. While planning for science teaching, make sure that the instructions are loaded with information and jokes or contents and comedy or knowledge and naughty or wisdom and wits or message and masalas. Here the sense of humour of the teacher is emphasized. It is far better if the fun elements are connected with the daily life as well as the science topics that are to be taught, and so it can act as an excellent mean to enhance the mindfulness among the students.

### ***Usage of TCI***

Theme Centered Interaction (TCI) is a concept and a method for working in groups and teams, teaching in schools, the university or in continuing, adult education developed in the United States by the psychoanalyst and psychologist Ruth Cohn. Its aim is social learning and development of the person. TCI aims to assist people to present and structure their interests in a responsible and self-determined way and to use resources creatively. The goal of TCI is to facilitate the interaction between tasks and individuals in order to encourage the development of factual, social and self-competence. Facilitating and leading groups according to the TCI concept permits a style of leadership that combines competence, motivation, mutual esteem and goal orientation. In TCI, the concept is given in a personalized manner so that the learner can experience more personalized feel and so it creates a comfort zone and makes the learner feel good and it is the basic need in enhancing the mindfulness.



## To Conclude...

Mindfulness is not only allows the teachers to recognize an increasing need for mindful education, but also offers comprehensive and attainable methods as to how to go about introducing mindful education to their students. Science teachers should adopt the above mentioned tactics and techniques in their classroom instructions in order to enhance mindfulness among their students'. It is the prime responsibility of the teacher to show full support for the mindfulness program to encourage their students the teachers have to take more efforts or sometimes the risks in order to encourage mindfulness, since their students are the beneficiaries.

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