For the past twenty years we have been involved in the teaching of mathematics at university and school level. We also established a NGO, called Namibian Mathematics Institute, in an attempt to empower mathematics teachers at various school levels.

From research and personal experience we have come to realize that there are four key interconnected components needed at school level for teaching success.

1. Competent and motivated teachers
2. Competent and supportive school management
3. Relevant school curricula
4. Involved parents

We are actively involved in the first three components. We conduct regular workshops for in-service mathematics teachers as well as Grade 12 students. We organize and support management training courses for school management and also serve on curricula panels for the Ministry of Education. In the process we also develop hands-on mathematics learning materials in an attempt to remove the fear of mathematics and to make it “fun to learn”. This article will focus on the first component i.e. to empower mathematics school teachers.

Over the past ten years we have developed our own triple – H model (based on Bloom’s Taxonomy) for teacher in-service training. See the diagram above.

“Head” stands for knowledge, which includes subject knowledge, self-knowledge and knowledge about learners. In mathematics subject knowledge is crucial and our simple motto is “you can’t give what you don’t have”. On the other hand you need to know yourself to understand your behaviour and to adapt it where needed. Self knowledge includes aspects like values, beliefs, temperament, culture, etc. Last but not least you have to know your learners – their perceptions, fears, motivation, etc. We like to use the quote from Bruce Wilkinson (1992): “you can love students without teaching them, but you can’t teach students without loving them”. “Hand” stands for skills, which in our case refers to teaching skills. As mentioned above this goes hand in hand with subject knowledge, because without subject knowledge you simply can’t teach mathematics.

Over the past years we have witnessed the negative effect of teachers poor subject knowledge on student results. Various formal teacher training programs in the past, especially for primary teachers (In Namibia Grades 1 – 7), have concentrated on didactical skills. The assumption was that teachers with a Grade 12 back ground should have sufficient subject knowledge for primary schools. This approach proved to be disastrous in Namibia with many mathematics teachers currently lacking a solid foundation in subject matter.

But it is the last component, “heart”, which is grossly neglected in most teacher upgrading programs. In our model this refers to inspiration (motivation), but we mostly refer to this as “passion”. According
to Maxwell (2012) the most common characteristic of most successful people is their passion for what they are doing. We always tell teachers that passion is the petrol in your emotional tank. You could have good subject knowledge and the best didactical skills, but without passion you are going nowhere.

Through personal interaction with mathematics teachers at different education levels, and from various regions in Namibia, we have come to realize how empty their wellness “tanks” are. Most teachers teach under difficult circumstances, with very little recognition and support. Typically they have over crowded class rooms and learners from poor socio-economic backgrounds. On top of this many of their students have a fear for mathematics and are not motivated to learn it.

The term “wellness” was coined by Dr. Halbert Dunn in 1961. Many authors refer to him as the father of the wellness movement. He defined wellness as self knowledge, creative expression and good health. Over the years the emphasis was shifted to the health component - to eat and sleep well and to get in good physical shape. Lately the general view has shifted back to a more holistic approach to see wellness in terms of all three human dimensions – body, mind and spirit.

It is interesting to note that Socrates in the fourth century B.C. already warned about only treating the physical body “for the part can never be well unless the whole is well.” Wellness is not only a human state but also a way of approaching life in general. Jesse McKinley (2012) sees wellness “as a proactive and holistic approach to address the root causes of our personal and societal ills.”

In an attempt to identify their overall wellness (or lack thereof) we are using a wellness model developed by Prof. DPJ Dawie Smith (2009) from University of Johannesburg. See the diagram below.

The model identifies personal wellness in terms of eight dimensions.

1. The internal dimensions are physical; mental; emotional and spiritual.
   - **Mental wellness** – ability to perform intellectually; a positive, constructive mindset about yourself and life in general
   - **Emotional wellness** – ability to handle emotions appropriately towards people and situations; sensitivity towards emotions of others
   - **Physical wellness** – personal health, energy and vitality; physical fitness
   - **Spiritual wellness** – ability to love and be loved; not materialistic centred and not egocentric; at peace with self and others; being inspired to contribute to life through a meaningful career.

2. The external dimensions are financial, career, social and ecological.
   - **Social wellness** – quality relationships with key people in one’s life, add value to lives of others.
   - **Career wellness** – work/life balance; find meaning in daily work; adding value in work
place.

**Financial wellness** – self sufficient financially; good quality of life; live within means.

**Ecological wellness** – making a constructive contribution to your environment; and your environment makes a positive contribution to your life.

These dimensions are interrelated. Most dimensions has an effect, and is effected by others. That is why it is illustrated in terms of a building. The very basis of the building is physical wellness, because bad health affects all the other dimensions. If you are sick it has a negative effect on you emotions, your spirit, and your ability to think clearly and even your social life.

Similarly a lack of financial (material) wellness will have a negative impact on many other dimensions. You will not find meaning in your work (career wellness); it will also negatively effect your emotions (emotional wellness) and eventually even your health (physical wellness).

During our workshops we concentrate on the internal wellness dimensions; as well as the social wellness dimension. We are constantly developing materials to improve to these personal wellness components of teachers during our interventions. But our very first step is to assist teachers to become aware of wellness deficiencies. Most of them are able to identify the factors causing these deficiencies and to develop strategies for improvement.

It is also interesting to mention that the most important psychological needs identified by Stephen Covey are in line with these internal wellness dimensions:

The need to live (physical); the need to love and to be loved (social); the need to learn and develop (mental) and the need to leave a legacy (spiritual).

“You cannot change what you don’t acknowledge.” - Phil McGraw

“You cannot acknowledge what you are not aware of.” – Dawie Smith

We have made wellness assessment and improvement an integral part of our teaching to both teachers and university students. What is also encouraging to see is how this personal self awareness of teachers has an impact on the way they approach teaching in school. Traditionally the only measurement of student performance is academic i.e. based on the marks they achieve in academic subjects. With this new found knowledge teachers are more sensitive to the wellness level of their students and are shifting the emphasis from only academic to “whole-person” empowerment.

**References**