

# Schools as Sites for Social Change: Applying the TEARS Principle

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*Abstract: In order to truly be innovative in education, it is sometimes necessary to break away from conventional practices while, at the same time, keeping the students' best interests in mind. We support the notion that innovation in teaching and learning plays a vital role in the success of an institution and as such have launched innovative initiatives amongst various institutions. These initiatives present various benefits, such as empowering children and supporting well-being through innovative educational wellness indicators and health promoting intervention. Based on the results obtained in this study, and the needs and knowledge based on the teachers and learners, an intervention plan was developed to support positive change within the schools and the community. This intervention plan includes the development of learning content that can be included in the curriculum without adding any additional burden to the teachers as well as the training of teachers to better implement this curriculum. The intervention further aims to assist with social change by guiding the schools in improving their learner feeding scheme and physical activity programme. The TEARS principle is an innovative 5-step enterprise that has been developed and implemented in order to pioneer the necessary changes in education.*

*Keywords: TEARS, Wellness, Intervention, Social Change*

## Background

In South Africa, high levels of poverty prevail in informal settlements as well as in rural areas and resource-constrained communities, where poor healthcare coverage and maintaining healthy lifestyles are often additional challenges. In addition to the problem of under-nutrition commonly seen in these communities, diseases of lifestyle are a matter of concern and are reaching epidemic proportions in developing countries (Mayosi et al. 2009). More often than not, small scale farmers, for example, lack the necessary resources, knowledge and skills to maintain a lifestyle and produce products that can provide in their daily nutritional needs and provide for food security. This, in turn, may further increase the levels of malnutrition and poverty.

On the one hand changes in lifestyle, including nutrition, physical activity, and other lifestyle factors are primarily responsible for the increasing prevalence of diseases (Vorster et al. 2005). Such nutrition transition involves a change from the traditional high fibre low fat diet to a typically Western diet, with an increasing proportion of people consuming the type of diets associated with a number of chronic diseases, i.e. obesity, cardiovascular disease, hypertension and type 2 diabetes mellitus (Popkin 1994). A cluster of obesity-related abnormalities, now called the metabolic syndrome, are most likely to cause these diseases (Eckel, Grundy, and Zimmet 2005). In South Africa, the prevalence of obesity has risen tremendously over the last century, with black women being most affected (Micklesfield et al. 2013) and paediatric obesity becoming a growing public health concern (Kimani-Murage et al. 2010).

On the other hand, South Africa is a developing country with limited resources and a large proportion of people living with poverty, HIV and AIDS, and under-nutrition (Mayosi et al.

2009). It is of the utmost importance to limit the challenge of diseases of lifestyle in this population and to address the problem of food insecurity and under-nutrition, including hidden hunger. In order to compile strategies for prevention of illness and promotion of health, it is essential to understand the role of personal internal and external factors and processes, and their association with obesity, the metabolic syndrome and cardiovascular disease, as well as with hidden hunger. Internal factors include knowledge, attitudes, perceptions and values of the individual. External factors include lifestyle (among other activity, nutrition behaviors and other lifestyle factors) and novel risk factors.

An essential component in addressing hidden hunger and diseases of lifestyle lies not only in the management of conditions after they have occurred, but in disease prevention and health promotion (Breslow 1999). To this end, appropriate and culturally accepted interventions can be developed, addressing the underlying causes of malnutrition and its co-morbidities on the one hand, and under-nutrition on the other. By decreasing the burden of disease in developing communities, it is possible to encourage sustainable livelihoods and play a role in the eradication of poverty (and hunger) in South Africa and beyond.

One of the current focus areas in the country is the provision of quality education to children in all areas of the country (Lomofsky and Lazarus 2001). This implies a group of people (children) who is supposedly open to training and change, and therefore holds the potential to become informed in terms of subject knowledge, yet also in terms of skills that can be applied in their personal lives. The question arises as to how children may be sensitized to transfer newly gained knowledge and skills to other members of family and communities, in order to address some of the challenges that resource-constrained communities often face, such as issues related to nutrition, the nutritional value of indigenous foods and healthy farming habits. It follows that schools may then be considered as potential sites for social change, where children and by implication parents and other family members can be sensitized to incorporate positive changed patterns of behaviors in their lives. In this manner, schools may be used as vehicles to facilitate adjusted behavior in resource-constrained communities, an attempt to increase food security and nutrition. Indicators of changed behavior can take on a variety of forms, such as adjusted and healthier farming practices, food consumption and lifestyle patterns. It is against this background that the current research aims investigating how teachers may implement a health promoting intervention with children that could facilitate change on ground level.

Any intervention in communities should reflect consideration of the special characteristics, needs, values and preferences of the target group(s). A thorough needs assessment therefore ought to be done, including the assessment of knowledge, attitudes, perceptions, values and nutrition behaviors with the aim of facilitating behavioral change. Such a needs assessment will guide our development of a health promoting intervention, to be implemented by teachers with children in selected schools in resource-constrained communities. Following the intervention, the necessary assessment should be completed in order to determine (i) knowledge and skills obtained by children, and (ii) any changes in terms of knowledge, attitudes, perceptions and behavior, by both children and parents.

Research in this area could add to the existing knowledge base on healthy lifestyles, food security, healthy farming practices, consumer behavior and the outcome of health promoting interventions (Arbeit et al. 1992, Harrell et al. 1996, Reading 2002). In addition, a study of this nature can directly impact on the manner in which individuals function in their daily lives and how they perceive their own physical, mental and social well-being. Enhanced well-being in turn implies higher levels of positive psychological functioning in terms of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, personal growth and subjective well-being (people's evaluation of their lives).

An underlying assumption of the proposed research is that if children were knowledgeable in terms of the importance of nutrition and positive lifestyle behavior, they could potentially share this knowledge within their family, environments and subsequently facilitate change. Therefore,

we assume that acquired knowledge will result in behavioral change. However, against the background of African tradition and the hierarchy typical to indigenous cultures, another question inevitable comes to the fore, namely whether or not parents in resource-constrained communities (often indigenous cultures) will be open to suggestions by their children. Whatever the answer to this question may be, the possibility of children sharing their knowledge at home and indirectly serving as catalysts for change merits value in terms of a research project, based on the potential positive impact it may hold. To be more specific, if children could promote adjusted farming and lifestyle habits, under-nutrition, food security and subsequently poverty may be addressed in resource-constrained communities, which align with the Millennium Development Goals (Travis et al. 2004).

Against this line of reasoning, the research project was guided by the following primary research question: How can schools serve as sites for behavioral change in resource-constrained communities? In addressing this question, the following secondary research questions were put forward to guide research:

- Which knowledge, attitudes and practices are demonstrated by children in resource-constrained communities prior to a health promoting intervention?
- Which knowledge, attitudes and practices are demonstrated by parents in resource-constrained communities prior to a health promoting intervention?
- What are the needs of resource-constrained communities in terms of healthy lifestyles, farming practices and consumer behavior?
- Where do consumers get knowledge in terms of food production and food consumption?
- What should be included in a health promoting intervention aimed at facilitating behavioral change in resource-constrained communities?
- How can such an intervention be facilitated with children in schools in resource-constrained communities?
- Which knowledge, attitudes and practices are demonstrated by children in resource-constrained communities following a health promoting intervention?
- Which knowledge, attitudes and practices are demonstrated by parents in resource-constrained communities following a health promoting intervention?
- What are the outcomes (if any) of empowering children on behavioral change in the broader context of resource-constrained communities?
- To what extent can a health promoting intervention influence (or not) the life style, socialization, rituals and well-being (emotional functioning and adaptation) of families living in resource-constrained communities?
- How may expressive Sandwork therapy be used in enhancing psychological well-being in vulnerable communities?

In addition to the above-described focus of the study, a second parallel focus of the project specifically concerned the fact that modern lifestyle has resulted in promoting sedentary behavior and myriad chronic diseases (Biddle, Gorely, and Stensel 2004). This has resulted in a recent explosion in the market of wellness centres, making the exploration of the physiological components of overall wellness especially prevalent in the corporate industry and in schools (Kickbusch and Payne 2003). These programmes have received strong commercial support of late and are promoted with vigour and enthusiasm. Although there have been promising studies, these are often controversial and lack evidence to show how these factors collectively result in an improvement in physical wellness. An indicator of overall wellness was yet to be established. Thus, this second leg of the project was to empirically seek to devise a score to provide an indicator of overall wellness, such that individuals are provided with an assessment of their current state of wellbeing. The following research question was investigated: How does a physically active lifestyle of moderate intensity differ from that of a sedentary lifestyle in terms

of physical wellbeing and how would the derivation of an overall wellness index aid in promoting healthy behavior and wellness education?

### **Devising an Innovative Educational Wellness Indicator**

There are many approaches to leading a healthy lifestyle, but following certain guidelines and principles makes it safer and more effective. People are now starting to realise that a healthy lifestyle is the key component to health and that regular, consistent exercise is critical. It is also critical that individuals balance all aspects of their wellness such as emotional, psychological, intellectual and physical wellness. Individuals should nurture their relationships, spend time socialising and ensure that they have a purpose in life. Therefore, by enhancing the wellness characteristics of individuals, there will be an increase in their productivity, effectiveness, quality of work life and work-home life balance.

Several previous models were devised to assess an individual's measure of wellness. It was found that the different models did not support the separate wellness dimensions, and also neglected physiological factors such as the influence of physical activity and nutrition on all dimensions of wellness.

Current research about wellness is fragmented and there needs to be a holistic, integrated and systemic understanding of wellness in order for health and wellness care to be effectively managed. Wellness as the dependent variable is conceptualised within the life domains of family and social interaction, work, spirituality, intellectuality and physicality. The objective of the innovation is to develop and test a holistic wellness indicator and to facilitate adjusted behavior in resource-constrained communities by empowering children. It includes facilitating change that could improve health and well-being by enhancing strategies that could address hunger and hidden hunger, and improve food and nutrition security, health, consumer well-being, emotional and psychological functioning and adaptation, and environmental sustainability.

The envisaged wellness model was more towards the positive side of the illness-health-wellness continuum and was used as a frame of reference to implement health and wellness care interventions (such as food gardens at schools and changing the school curriculum to include proper physical exercise procedures, emotional support and nutritional guidelines).

In believing that community members (children) themselves hold the potential to facilitate change in their own behaviors and patterns of farming, food consumption and lifestyle, a strength-based positive psychology approach to behavior change was followed. The approach assumed that children were a potential resource in resource-constrained communities that could be relied on when aiming to facilitate behavior change. In the same manner, teachers and schools were viewed as resources to vulnerable communities, which provided a vehicle for health promoting interventions to reach communities in all areas of the country, cutting across so-called boundaries and restrictions. Furthermore, the institute believes that knowledge acquisition will subsequently result in behavior change. Even though we foresee that the intervention may focus on aspects such as the nutritional value of food (thereby addressing hunger, hidden hunger, food and nutrition security and obesity), physical and health-related fitness, psycho-social functioning, the specific focus and detailed content of the intervention will be determined in collaboration with the children, following the baseline assessment of their levels of obesity, food-related practices, levels of physical activity and psycho-social and scholastic performance, including the motivation to perform. Regardless of the specific content of the intervention that will be implemented, the overarching underlying driver will be to facilitate holistic well-being and health-related behavior change. This implies social change where poor communities (children) will take ownership in looking after their own health. Such ownership may in turn result in sustained adjusted consumer and lifestyle patterns, which could for example be demonstrated in the consumption of healthful diets that are affordable and culturally acceptable. Subsequently, improved levels of nutrition, food security and well-being may thus be detected.

## **Intervention Plan to Support Positive Change**

These initiatives present various benefits, such as empowering children and supporting well-being through innovative educational wellness indicators and health promoting intervention. Based on the results obtained in the study, and the needs and knowledge base of the teachers and learners, an intervention plan was developed in to order to support positive change within the schools and the community. This intervention plan includes the development of learning content that can be included in the curriculum without adding any additional burden onto the teachers, the training of teachers, to better implement this curriculum and to help assist social change, guiding the schools in improving their learner feeding and physical activity programme. Schools were also assisted with cultivating a vegetable garden. The project also hopes to extend positively into the community, mainly through the work done in the schools through the learners, teachers and parents, but also by engaging directly with other members of the community.

As part of the intervention a Wellness Toolkit was assembled that will be given to the teachers during their training in order for them to conduct health and fitness assessments on the learners and other teachers of the school. The Wellness Toolkit allows assessment of both health-related and skill-related physical wellness components. The health-related components of physical wellness are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition. Assessments conducted in order to determine the state of these health-related components include: the 3 minute step test, sit ups, push ups, back-saver sit and reach, Body Mass Index (BMI), sum of skin folds (SSF), blood pressure and maturity offset. Skill-related components comprise speed, power, agility, balance and coordination. Assessments done in order to evaluate skill-related components include: hand-wall toss, egg-carton catch, stork balance test, standing long jump and the 50 meter shuttle run.

Over time, the impact of the developed health promoting intervention will be monitored and evaluated, with the aim of adapting the intervention and further employing it in other schools and contexts. As such, the project will aim to address Millennium Development Goals 1, 2, 4, 5 and 7. In addition to knowledge contribution in the specified areas of focus, the project could result in positive social change, by facilitating social responsibility that can in turn translate into increased levels of well-being (including emotional functioning and adaptation) in a sustainable environment.

### **The TEARS Principle: Theory, Education, Application, Research, Satisfactory Outputs**

In order to truly be innovative in education, it is at times necessary to break away from the conventional practices - while at the same time keeping the best interest of students in mind. We support the notion that innovation in teaching and learning plays a vital role in the success of an institution; therefore we have launched innovative initiatives inside our own practice.

Questions to be addressed included the following: How can we engage students more in large classes and create interactive learning experiences? How can we redesign our courses to scaffold student learning to create more career directed teaching and learning experiences? How can we use technology more proficiently in the classroom and outside to enable learning?

The TEARS principle is the innovative 5-step enterprise that has been developed and implemented in order to pioneer the necessary changes in education.

#### ***Step 1: Theory***

The higher education structure is required to constantly evolve in order to keep pace with the shifting economy. Dobbins (2009) highlights the fact that the economy has advanced to a point where it is largely based on knowledge and its transfer thereof. This has called for an increased

output of young adults with high level skills who are able to positively contribute to economic growth. However, it is important to consider that in order to achieve an increased yield of knowledgeable students, the amount and range of individuals accepted at universities has to be altered accordingly. This has presented a challenge of its own - as an increased student capacity and diversity calls for innovative educational approaches to be implemented in order to meet the increased demand and diversity.

### ***Step 2: Education and Pedagogy***

The necessity behind the educational innovation was to accommodate the widened participation agenda, as well as create a sense of career direction or career path for those countless ambiguous students. We have noticed numerous instances where students, even at a third year level, portray uncertainty and doubt regarding their future. The initiative has been implemented to expose students to integrated modules and courses which make way for practical application of skills and knowledge whilst simultaneously increasing prospective career opportunities. The TEARS approach aims to put a career and research focus on education. Education (lectures, practicums and assignments) are presented in an interactive manner to encourage student participation and enhance learning. Integration of teaching and learning approaches, such as face-to-face and online education convey 'flexible learning' which delivers learning options that are better aligned with the learning needs of students. Over and above these benefits students are also involved in community enrichment projects. The pilot phase of the innovation has led to the increased participation in terms of student learning. The blended and more flexible teaching mode has enabled wider participation. In terms of student achievement, success is clearly portrayed by the number of certificates obtained by the students. These certificates are acquired at undergraduate level as well as postgraduate level. This greatly influences the student learning experience as it enhances student motivation and achievement, whilst creating reinforcement for future career opportunities by adding to the curriculum vitae of the students.

### ***Step 3: Application***

A logical next step from the career focused adaptations made to the study modules, was to create platforms for the students to gain experience in the practical application and implementation of their knowledge. This was done by involving students in wellness evaluation and testing days. The aim was to have students participate in a multi-dimensional capacity. Thus, the students were an integral part of the planning, management, and execution of these events. On a practical application level this involved administration of the event, setup of equipment, performing the tests and evaluations, and also data analysing and reporting.

### ***Step 4: Research***

The question addressed in this step was: How could the TEARS principle be employed to increase research and research outputs?

The various wellness and testing days that the students are introduced to in the application phase (step 3) not only offers valuable practical exposure but also delivers vast amounts of data which subsequently creates ample opportunities for research outputs. With the implementation of this innovative education method, the students are liberated from the restricting confines of one dimensional theoretical research to experiencing and executing the full process of social science and research from idea conception through to practical application and publication.

The research outputs and data from studies such as these also offer students the opportunities to present their research at various conferences and faculty days. Thus the students gain exposure in the processes involved in reporting on research by means of oral and poster presentations.

## **Step 5: Satisfactory Outputs**

The results of the education innovations implemented are measured in terms of satisfactory outputs. In this instance, student and teacher success and satisfaction would be measured in terms of the impact made on student learning and teaching practice. Ultimately the impact on teaching practice, community development and the significant influence on the career future of the students, suggests that this initiative sets a benchmark for future educational programs.

### **Applying the TEARS Principle in Research and Community Enrichment**

Whilst the TEARS approach holds countless advantages for students, the specific advantage of student participation in research is highlighted in the following sections. Application of the TEARS approach has led to the involvement of undergraduate and postgraduate students in the multidisciplinary research project entitled 'schools as sites for social change'. This project aims at facilitating adjusted behavior in resource-constrained communities by empowering children and supporting primary school children's holistic well-being by means of an innovative educational wellness indicator and health promoting intervention. With the students being equipped with the set of knowledge and practical skills provided by the TEARS principle, they were able to become an integral part of the large-scale, community-based research project.

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