



# Economic and Social Council

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## Commission for Social Development

### Fifty-sixth session

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**Follow-up to the World Summit for Social  
Development and the twenty-fourth special session  
of the General Assembly: priority theme: strategies  
for the eradication of poverty to achieve sustainable  
development for all**

### **Statement submitted by the Tripura Foundation, Inc., a non-governmental organization in consultative status with the Economic and Social Council\***

The Secretary-General has received the following statement, which is being circulated in accordance with paragraphs 36 and 37 of Economic and Social Council resolution [1996/31](#).

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\* The present statement is issued without formal editing.



## **Statement**

“One of the most critical and sustainable paths out of poverty is education, but education is only as good as the brain’s ability to learn.”

### **THE PROBLEM**

Inadequate or lack of education perpetuates the cycle of poverty. It is well known that children in impoverished circumstances have reduced chances of completing their education. Without an education, it becomes overwhelmingly impossible for them to escape poverty. Hopeless, they often follow in the footsteps of family members who lead lives of hard labour, begging or fall victim to an early death. Thus, the circumstance of poverty is passed from one generation to the next.

Additionally, many students face increased stress in school and at home. This manifests as difficulty with self-regulation of emotions, attention, planning, decision making, initiation of goal-directed behaviours, and inhibition of negative behaviours, as well as an overall lack of emotional resiliency. These students then have difficulty with other higher-order cognitive processes which can also lead to educational failure.

### **OVERVIEW OF THE ISSUE AS IT RELATES TO THE WORK OF TRIPURA FOUNDATION**

School programs that exercise and strengthen the brain can widen the path out of poverty. The founder of Tripura Foundation, Dr. Baskaran Pillai, PhD states, “When students can’t understand math or science or any other subject, don’t blame them, nor the teachers, nor the tutors. The problem lies in the inadequacies of certain areas of the brain associated with learning.”

**DR. PILLAI DEVELOPED PHONEMIC INTELLIGENCE TECHNOLOGY (PI) BASED ON THREE DECADES OF RESEARCH TO PROVIDE A SUSTAINABLE SOLUTION TO POVERTY BY IMPROVING THE COGNITIVE, EMOTIONAL AND BEHAVIORAL MAKE-UP OF THE STUDENT’S BRAIN.**

Phonemic Intelligence is a brain-based student training program that uses phonemic sounds, hand placements and concentration exercises. Within seconds, phonemic intelligence increases the blood flow of brain areas associated with intelligence, behaviour and overall achievement.

In 2000, Tripura Foundation began a partnership with the Rotary Club of Madras in Chennai, India for the first release of PI education programs in a local Boystown. After four years, the boys’ transformational success provided them with higher education opportunities previously thought of as out of reach. In 2004, Tripura’s Girls town was set up to accommodate 50 girls from the most disadvantaged rural villages. The children were helped step-by-step to learn how to groom themselves, enjoy nutritious food to build their strength and use phonemic intelligence to expand their possibilities for a bright future.

In 2005, Tripura brought PI to the poor children of Mexico. The program was officially launched at the International Conference of New Paradigms of the Science of Education at the University of Baja California in Mexicali.

2011 began the launch of after-school HoPE Learning Centers in the most remote rural villages of South India to serve children of severely disadvantaged families. Each center empowered 40 children through a holistic educational balance

of physical activity, nutritious foods and Phonemic Intelligence. These centers continue to grow with 101 currently active.

In 2013, Tripura began partnering with schools and educational institutions serving high needs students at risk of educational failure or otherwise in need of special assistance or support. Tripura helps each school establish daily PI practice inside the classroom to help improve academic performance, behaviour and compassion, while reducing stress and anxiety.

TO DATE, TRIPURA HAS SERVED OVER 124 SCHOOLS, 101 HOPE LEARNING CENTERS AND 55,000 STUDENTS IN THE US, INDIA, MEXICO, CANADA AND THE UK WITH TRANSFORMATIONAL PHONEMIC INTELLIGENCE EDUCATION PROGRAMS.

Teachers reported positive results in the improvement of student behaviour, concentration and productivity when students practice the PI exercises routinely. Teacher surveys demonstrate 80% improved teacher satisfaction. With regard to student behaviour, one school in Detroit was able to decrease disciplinary actions by 33% during the semester PI was practiced with fidelity.

In a small quasi-experimental trial conducted at Detroit Public Schools in 2014–15, Phonemic Intelligence exercises demonstrated statistically significant improvement in math scores ( $p < 0.05$ ) on the Star Math platform used by the school in three, primary school classrooms compared to matched same-grade, controlled classrooms.

Phonemic Intelligence responds to the basic need of primary education for all; brings a better quality of life while minimizing the use of natural resources so as to not jeopardize the needs of future generations. The Phonemic Intelligence exercise takes 5-7 minutes to practice, and is quickly implemented schoolwide with minimal time burden on school staff. Students have shown dramatic results in academic performance and improved behaviour even within a two-week period. It can be practiced anywhere at any time, and requires no prerequisite training.

## **PHONEMIC INTELLIGENCE, RESEARCH AND STUDIES**

Phonemic Intelligence (PI) draws on the literature of Mindfulness Training (MT), a common secular practice exemplified by Jon Kabat Zinn's Mindfulness Based Stress Reduction developed at the University of Massachusetts in the 1970's. It promotes mindfulness and in addition postulates that Phonemic Intelligence practice increases connectivity in the brain and by the mechanism of neuroplasticity, creates new neural pathways increasing intelligence.

Brain Science International of San Francisco (2012) was commissioned by Dr. Baskaran Pillai to perform an advanced electroencephalogram (EEG), a test that detects electrical activity in the brain. The study was performed with four test subjects while they verbalized the Phonemic Intelligence exercise phonemes "Ah, Ee, and Ai". Using independent component analysis, neuroscientists found activation of the Anterior Cingulate Cortex (ACC) during EEG tracings when the subjects were listening to, or pronouncing the "Ah" phoneme. Findings from the study confirmed that Phonemic Intelligence creates a significant signature in the ACC. The study showed that in seconds, the part of the brain associated with higher intelligence, comprehension, and compassion showed unique patterning.

The Anterior Cingulate Cortex (ACC) is a part of the brain associated with self-regulation and emotional, as well as cognitive control. The ACC is the brain's

limbic system and appears active in many neuroimaging studies (Bush et al., 2000). In general, the ACC is involved in “cognitive and emotional processing as well as mediating a sense of compassion and inhibition of undesirable behaviours” (Bush et al., 2000). The sensitivity of the ACC to both reward and pain, and evidence for ACC coupling to cognitive and emotional areas during both the resting state and task performance, support the role of ACC in emotional and cognitive self-regulation or self-control (Tang, 2013). The ACC is also involved in the brain’s ability to detect error and correct itself as evidenced by the Stroop effect (Stroop, J. R. 1935).

#### **A WAY FORWARD**

Phonemic Intelligence is a promising new strategy in the realm of Brain Science technology for activating the Anterior Cingulate Cortex (ACC). The evidence is mounting that Phonemic Intelligence exercises when practiced with fidelity can strengthen core cognitive systems of attention and working memory, and bolster emotional resilience and executive functions. This presents an uncommonly simple and sustainable opportunity for students living in poverty to ultimately increase their chances of completing their education, and ending the cycle of poverty for themselves and their progeny.

#### **CLOSING**

We call on the United Nations through the Commission for Social Development to urge the Member States to:

- 1) encourage their local primary and secondary schools where the majority of students are living in poverty or are at risk of not completing their education to implement brain-based educational technology such as Phonemic Intelligence, capable of not only enhancing the intelligence potential of the student, but also creating and nurturing compassion;
- 2) endorse the aims of Tripura Foundation’s Phonemic Intelligence project; and
- 3) provide feedback and guidance as to how Tripura Foundation can implement Phonemic Intelligence globally in primary and secondary schools where the majority of attendees are living in poverty or are at risk of not completing their education.

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