Make use of what we've learnt: Sheikha Mozah

Staff Reporter

TEACHERS should concentrate on promoting innovative methods of education to instill self-confidence in students, HH Sheikha Mozah Nasser al-Misnad, wife of HH the Emir Sheikh Hamad bin Khalifa al-Thani and chairperson of the Qatar Foundation for Education, Science and Community Development (QF), has said.

She was delivering the closing remarks at 'The Art and Science Partnership' symposium, hosted by the QF in association with the International Child Art Foundation (ICAF), yesterday.

The two-day event, the first in the "Innovations in Education" series of QF symposiums, was attended by a number of globally renowned academics and researchers.

Speaking on the occasion, HH Sheikha Mozah expressed hope that the discussions at the symposium would benefit all the participants.

"The symposium focused on avenues to enhance the partnership between the arts and science education and how instruction in the arts could boost scientific education," she recalled.

HH Sheikha Mozah urged the participants to make use of the outcome of the exercise to face the challenges of teaching science and mathematics.

She expressed gratitude to all the resource persons and delegates who attended the symposium.

Eman al-Ansari, a member of the QF academic team who was the master of ceremonies at the sessions, lauded HH Sheikha Mozah's role in organising the landmark event.

The resource persons who presented papers at the symposium were led by renowned academics Harriet Mayor Fulbright and Dr Ashfaq Ishaq, the chairman of the board of directors and the executive director, respectively, of the ICAF.

The symposium, held at the Virginia Commonwealth University School of the Arts in Qatar campus in the Education City, focused on six research topics.

They were higher order thinking skills and arts-enriched schooling, mathematical visualisation and artistic activity, practical applications for teachers in converging math and art, spatial-temporal reasoning: music and mathematics proficiency, music and neuroscience, and integrating art and life sciences.

Tests show music 'enhances learning, reasoning'

Staff Reporter

The resource persons of 'The Art and Science Partnership' symposium at the panel discussion yesterday.

TEACHING mathematics through music, the influence of music on the human brain, and an integrated art and biology curriculum were the key points presented on the final day of 'The Art and Science Partnership' symposium, which concluded yesterday.

The two-day event was organised by the Qatar Foundation for Education, Science and Community Development (QF) in association with the International Child Art Foundation (ICAF).

"Music lessons enhance the brain's ability to do spatial-temporal reasoning (thinking in pictures, as in chess) and learning difficult math concepts," said Dr Gordon Shaw, chairman of the board of the MIND (Medical Investigation of Neuro-developmental Disorders) Institute, California.

The Music Spatial-Temporal Math Programme of the MIND Institute, which has been in operation as part of the University of California's Davis Health System since 1998, currently covers over 8,000 second to fourth graders in 43 schools.

"You will be astonished to learn that mice and rats were able to go through a maze faster after listening to Mozart's *Sonata* for two months," Shaw told the audience during the closing panel discussion.

The animals were able to perform better even when they were tested after last listening to music six hours ago. The inference is that the mice and rats had improved spatial reasoning.

"The three-part programme of the MIND Institute complements and supplements the usual language based (equations, symbols and word problems) math school programmes," said Dr Shaw in his paper on "Music matters: Educating the next generation in math".

A teacher from Doha said she was able to achieve wonderful results by teaching maths through music.

"Music provides a fascinating tool to understand how the human brain operates," said Dr Petr Janata, a cognitive neuroscientist working as a research assistant professor at the Dartmouth College.

In his paper on "Music and Neuroscience", Janata described a recent study that used functional magnetic resonance imaging to map out those regions of the brain that are sensitive to tonal structure in western music.

The "Five E approach" to curriculum was advocated by Dr B Stephen Carpenter, associate professor of art education at the Virginia Commonwealth University (VCU), Richmond, Virginia, in the US.

"Engagement, exploration, explanation, elaboration and evaluation are vital components for curriculum design," he said in his presentation on "Art and Life Sciences Project".

Carpenter's paper described the origin of an integrated art and biology curriculum and explored theory and design in K-12 visual art and biology education based on the work of contemporary artists and scientists whose work exemplifies the overlapping of concepts shared by both disciplines.

Dr Charles F Bleick, chair of the department of art education at VCU, spoke on a model programme for integrating the arts into the teaching of science.

When asked by a participant why the presenters at the symposium were only from the US, ICAF executive director Dr Ashfaq Ishaq said the selection was made on the basis of an Internet search of researchers who have published works in English.

"However, we invited several experts from other countries to participate as delegates," he clarified.

Eman al-Ansari, a member of the QF academic team, co-ordinated the panel discussion.