That Steelpan Talent

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A recent lecture by Dr. Brian Copeland on steelpan technology provided new insights in terms of the potential of the pan for innovation in many spheres of social life and also in terms of the genius of the inventors. Dr. Copeland explained some of the scientific principles underpinning the manufacture (including tuning) and use (including amplification) of the instrument, and indicated that there is now a much wider body of research on the instrument—some of the scientific theories about the behaviour of steel have been challenged and hitherto unknown properties of steel have been unearthed.

We note the initiation of The Pan in Schools project, which utilizes the pan as the primary instrument for teaching music. However, throughout Dr. Copeland's presentation it was evident that in addition to being used to teach music, the steelpan could be used to teach mathematics, physics, history, economics, and social studies among other "subjects." In other words, the steelpan can itself be used as the basis for developing an innovative curriculum within the formal school environment.

Most of us might easily be able to relate to music as a language, and it is highly likely that teachers of English language could find ways to use music to teach the elements of composition required for essay writing, and for narrative structure in general. The lecture also explored the intimate relationship between music and mathematics.

It is public knowledge that student performance in mathematics and English language at the Caribbean Examinations Council (CXC) examinations is unsatisfactory. In 2004, a mere 36% achieved a passing grade (Grades I to III) in the CXC General Proficiency examinations. Only 49% of the candidates achieved Grades I to III on the General Proficiency examination in English. Juxtaposed against this is the clear evidence of an abundance of musical talent in Trinidad and Tobago and the Caribbean in general. The results of the CSEC 2004 examinations in music provide formal evidence of this musical talent—83% of the students were successful as against 71% in 2003. Admittedly, music is not a compulsory subject like mathematics and English, so comparisons are not readily made. But, can we use musical intelligence to develop the mathematical and linguistic intelligences?

Gardner's theory of multiple intelligences (MI) provides a theoretical framework for classroom activity, which aims at doing just that. Gardner believes that any intelligence can be used as a means for communicating the content of instruction, and that the child's strength in any of the intelligences could be used to assist in the development of the concepts within any selected domain of study. Therefore, it seems reasonable to conclude that teachers could use students' musical intelligence to develop some aspects of the mathematical and linguistic intelligences. Music by its nature could be used to illustrate patterns, number, story (beginning, development, end), and mood which are characteristic of linguistic intelligence and mathematical intelligence.

However, mathematics has not been traditionally presented in a manner that allows students to discern the relationship between music and mathematics at an epistemic level. Therefore, an approach/undertaking of this nature would require research and development. The steelpan has spawned a research and development agenda involving academics such as Derek Gay, Clem Imbert, Anthony Achong, and Brian Copeland in Trinidad and Tobago, and others in foreign countries. Perhaps it is now time for the steelpan, in those schools that have embraced the pan as the instrument of choice in teaching music, to act as the central point for collaboration among the teachers of music, mathematics, and language arts. Let's celebrate that steelpan talent.

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