



# NURUL MODULE

## REDEFINING WAYS IN TEACHING AND LEARNING – WCC 108 KO-K Jazz Band



### ABSTRACT

During the COVID-19 lockdown, WCC108 co-curriculum Jazz Band faces numerous difficulties in determining the "right" method of teaching and learning. Initially, applications such as Zoom, Google Teams, and Webex were unable to support music lessons due to sound issues, lagging, and the absence of high musical pitch. In addition, the learning outcome of WCC108 includes music education and community impact. In Malaysia, most musical intervention has been a clinical and evidence-based approach in therapies, however it is rarely addressed to children with special needs. Therefore, the Nurul Module was founded, which is a simplified, musical learning module specifically designed for the disabled. This is a simplified musical notation system to replace contemporary learning system, which is complex and requires a long extensive time to master the instrument. It is a guided fingering board marking, which each string 1 colour, each line 1 colour, and each note with 1 number. It is also colour-blind friendly educative module with precise engineered cut markings, which has different thickness. The educative module caters for the disabled and disadvantaged populations, who is interested to learn to play a musical instrument. Our studies showed significant improvement ( $p=0.001$ ) on motor skills, cognitive skills and quality of life after four weeks of learning.

**Learning a musical instrument:**

- Takes time
- Costly (in formal sessions)



### OBJECTIVES

1. To learn to play a jazz band musical instrument with basic performance technique.
2. To use the the music knowledge to educate for community service by **empowering musical literacy** in children with special needs.

Received Human Research Ethics Committee, USM Research (USM/JEPeM/17 120712),

Trained musicians introduced the study procedure to PLPP Bangi

Intervention was conducted daily for 4 weeks

Participants motor skills, musical skills, simple cognitive skills and quality of life were assessed pre- and post- intervention



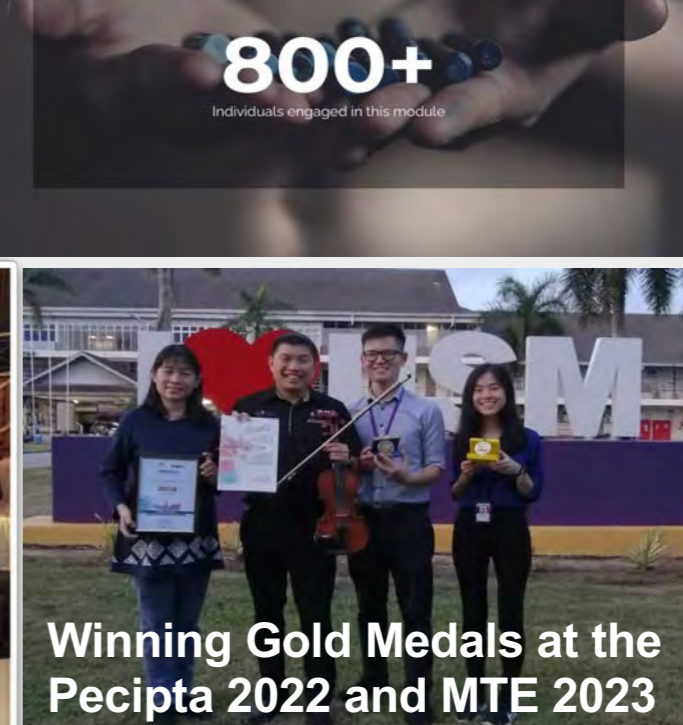
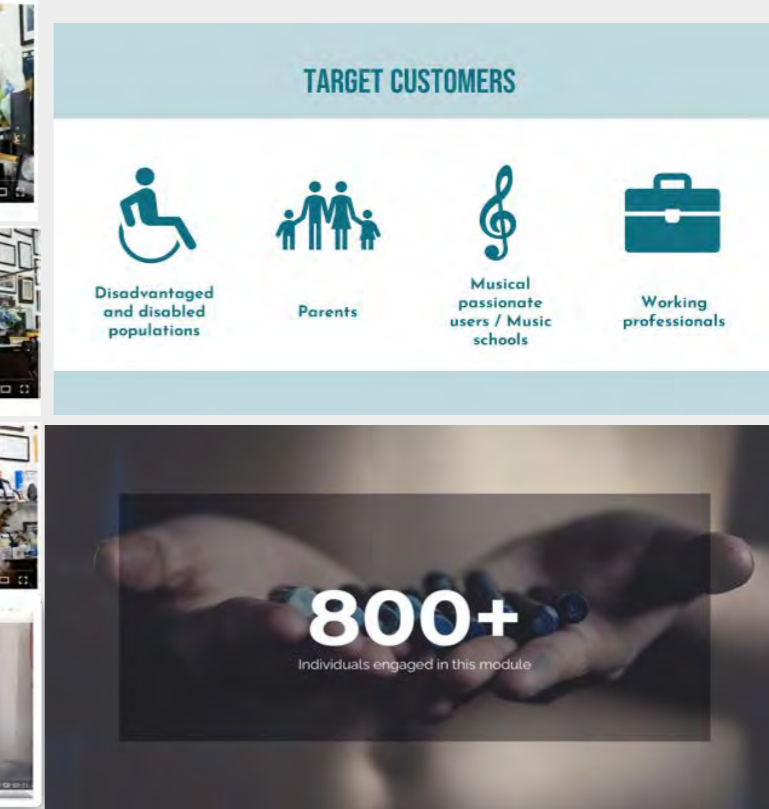
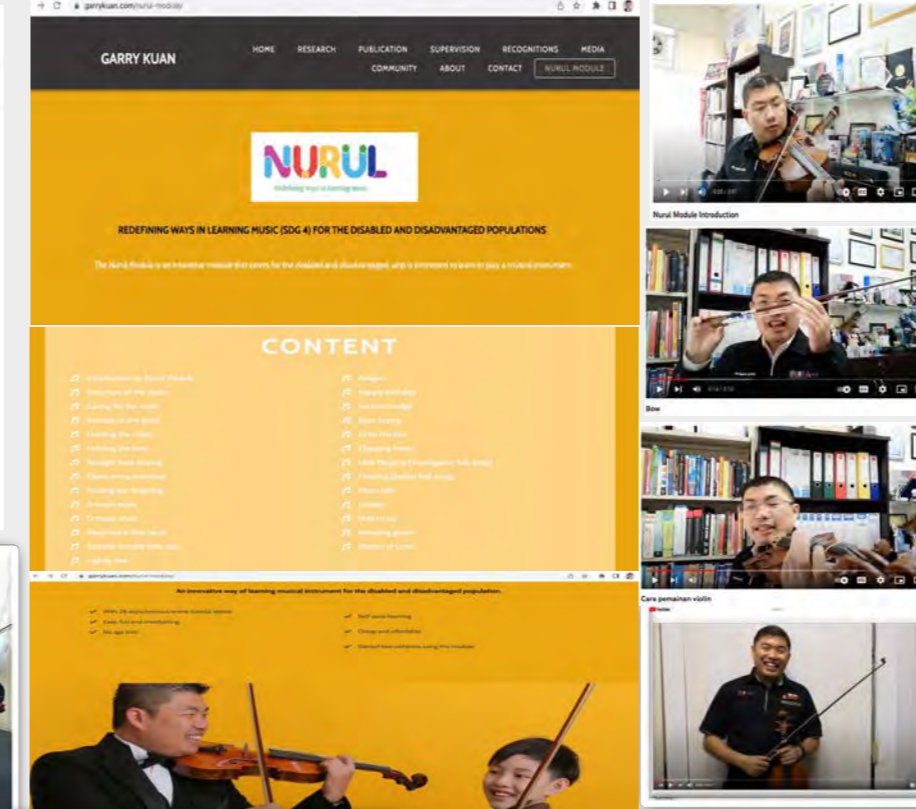
We would like to introduce an approach that helps one to learn an instrument fast and benefits overall wellbeing.

### NURUL MODULE

The NURUL\* module is an **integrative learning module** developed by A.P. Dr. Garry Kuan for teaching WCC108 Jazz Band, upon the establishment of two orchestra: *USMKK Symphony Orchestra*, and *PLPP Orchestra*

**NUTURING  
UPBEATING  
RESOUNDING  
UPLIFTING  
LOVELY**

The module allows us to teach WCC108 Jazz Band students and to teach children to play violin using the **Nashville Numbering System** while focusing on their proprioception, crude and fine touch.



Winning Gold Medals at the Pecipta 2022 and MTE 2023

### General characteristics

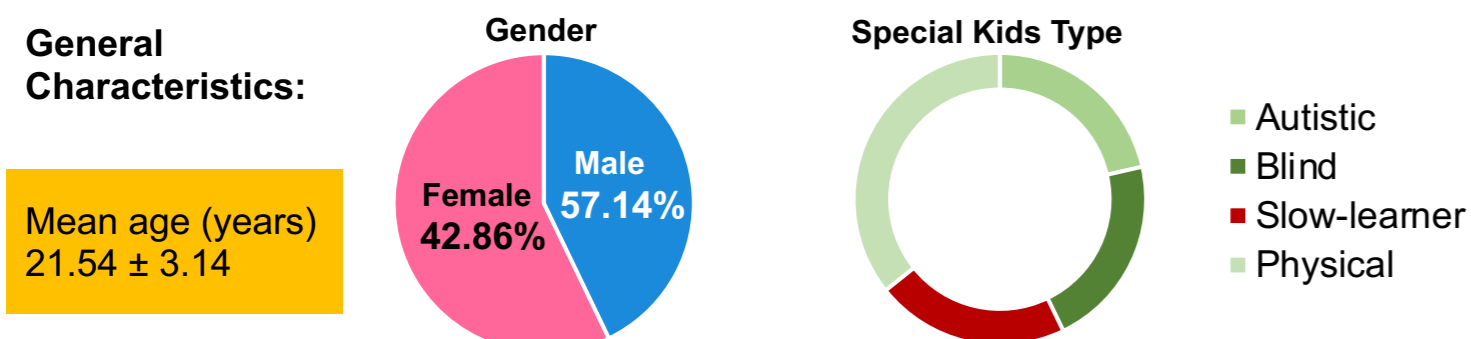


Table 1: Pre-post intervention (intensive exercise training program;  $n = 40$ )

Variables	Mean difference (95%, CI)	t-stats (df = 27)	p-value
Weight	1.21 (3.58, 8.53)	5.016	0.001
Fitness	17.1 (14.28, 19.97)	12.19 (39)	<0.001

Table 2: Pre-post intervention upon receiving the Brain-breaks NURUL Intervention ( $N = 28$ )

Variables	Mean difference (95%, CI)	t-stats (df = 27)	p-value
Motor Skills			
Steadiness Test	0.17 (0.67, 1.37)	6.029	0.001
Finger Tapping (average in 1 min)	1.21 (3.58, 8.53)	5.016	0.001
Simple Reaction Time (s)	0.16 (0.85, 1.52)	7.281	0.001
Musical Skills			
Rhythm	0.23 (1.98, 1.02)	6.441	0.001
Aural	0.20 (1.26, 0.45)	4.344	0.001
Musical Hearing	0.25 (2.83, 1.80)	9.203	0.001
Simple Cognitive Skills			
Digit Span (short-term memory)			
Forward	0.59 (5.50, 3.07)	7.256	0.001
Backward	0.73 (5.57, 2.57)	5.570	0.001
Sustained attention (min)	0.33 (1.51, 2.89)	6.584	0.001
Quality of Life Scale			
Overall quality of Life	0.17 (0.71, 0.03)	2.073	0.048
Physical health	0.41 (4.87, 3.19)	9.848	0.001
Psychological	0.41 (3.92, 2.22)	7.411	0.001
Social relationship	0.21 (1.72, 0.85)	6.088	0.001
Environmental	0.37 (2.88, 1.34)	5.609	0.001

### REFERENCES

Bittman, B. B., Berk, L. S., Felten, D. L., & Westengard, J. (2001). Composite effects of group drumming music therapy on modulation of neuroendocrine-immune parameters in normal subjects. *Alternative therapies in health and medicine*, 7(1), 38.

Clair, A. A., Lyons, K., & Hamburg, J. (2012). A feasibility study of the effects of music and movement on physical function, quality of life, depression, and anxiety in patients with Parkinson disease. *Music and Medicine*, 4 (1), 49-55.

### ADDED VALUES

It is the first module to teach disabled and abled students using the numbering system, and asynchronous learning.

### USEFULNESS

It is fun, effective and only required ONE (1) month to master the instrument.

### RECOGNITION

-Endorsed by Global Community Health (GCH) and Jesselton Philharmonic Orchestra (JPO).  
- Won Pecipta 2022 and MTE 2023.

### COMMERCIAL POTENTIAL

-JKM pledged 600 books, which will be circulated to 574 PDKs in Malaysia.  
-2000 books by USM press.  
-Collaborate with local leaders, NGOs, healthcare practitioners, social media influencers.

The present study shows that there are **significant changes** in motor skills, memory and quality of life in the sample group.

### MOTOR SKILLS

The effects of musical intervention pertaining in physical rehabilitation has been proven by many researchers. For example, the technique of playing a violin allows **enhancement of fine and gross motor coordination, control, muscle strength and range of motion.**

### MEMORY

A child being exposed to music will need to face challenges and multi-sensory experiences which **encourage cognitive development and enhance learning abilities** such as planning, working memory, inhibition, and flexibility.

### QUALITY OF LIFE

Quality of life patients with disability contribute to negative emotions and thoughts as it reflects the problems they experience in their interaction with society and physical movements.  
Music remains as a **conventional way to express emotional feelings** freely, allowing patients to diminish negative thoughts.



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INTRODUCTION

METHODS OF IMPLEMENTATION

RESULTS & IMPACT