Notice of the Final Oral Examination
for the Degree of Master of Science

of

KALAN ANGLOS

BA (Vancouver Island University, 2015)

“Establishing a Standardized Fitness Test Battery for Karate Athletes”

School of Exercise Science, Physical and Health Education

Wednesday, April 26, 2017
10:00 a.m.
McKinnon Building
Room 0025

Supervisory Committee:
Dr. Lynneth Stuart-Hill, School of Exercise Science, Physical and Health Education, University of Victoria (Supervisor)
Dr. Kathy Gaul, School of Exercise Science, Physical and Health Education, UVic (Member)

External Examiner:
Dr. Jason Brandenburg, Faculty of Health Sciences, University of the Fraser Valley

Chair of Oral Examination:
Dr. Margo Matwychuk, Department of Anthropology, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies
Abstract

The purpose of this study was twofold: to determine the physical demands of the sport of karate and to establish a standardized field-based physical fitness test battery to assess karate athletes. The Physical Demands Analysis (PDA) consisted of a heart rate analysis, a movement analysis of karate techniques by an expert panel, and a review of the current literature. Five experienced karate athletes were monitored using acticals and heart rate monitors during simulated competition to help determine the physiological demands of karate. The results of all parts of the PDA were combined to inform the development of the physical fitness test battery for karate athletes, as well as rationalize the use of the individual tests included in the battery. The PDA identified the physical requirements for karate athletes to be: kicking and punching performance, balance, agility, speed and stamina. Therefore, a fitness test battery was developed using field-based tests that measures lower and upper body power, hip flexibility, single leg balance, anaerobic capacity, agility, as well as aerobic performance. While this study provides some evidence on the physiological profiling and fitness testing standards for karate athletes, the proposed physical fitness test battery provides a preliminary tool for the appropriate steps to analyze karate training and performance, establish normative data for athletes at all stages of development and experience and to determine karate fitness standards.