



UNIVERSITI PUTRA MALAYSIA

VALIDATING AND DEVELOPING A NEW AGILITY TEST FOR KARATE

MOHAMMAD EBRAHIM MARJANI

FPP 2013 28



VALIDATING AND DEVELOPING A NEW AGILITY TEST FOR KARATE

By

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**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in
Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

July 2013

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DEDICATIONS

Dedicated to my late father's immortal soul and to my beloved mother

and to my best companion in life, Ashraf

and my wonderful sons to whom I owe much



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirements for the degree of Doctor of Philosophy

VALIDATING AND DEVELOPING A NEW AGILITY TEST FOR KARATE

By

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July 2013

Chairman: Soh Kim Geok, PhD

Faculty: Educational Studies

Karate is one of the most popular martial art styles in the world as well as a popular sport in Iran. Successful performance in karate requires high level of agility that enables the karateka (karate player) to avoid the opponent's attacks, and to assume optimal position for efficient performance of karate techniques. In order to measure agility, karate coaches make use of general and available agility tests. However, there are many agility tests and coaches need to know which one is the best test for karate. Hence, the purpose of this study is to find the best and most appropriate validated agility test and to develop a new agility test for karate using Analytic Network Process (ANP). Data was collected from twenty one karate experts' opinion with mean of age and standard deviation 40.3 ± 7.0 and years of coaching 13.05 ± 5.80 . Results for the ANP analyses in reported that speed is the highest priority in agility and the best valid agility test for karate is *SEMO* test. Based on karate-specific

movement patterns and components of ranked agility tests, a new test- Marjani
Agility Test for karate is developed.

Keywords: Agility Test, Karate, Analytic Network Process.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**VALIDASI DAN PEMBANGUNAN UJIAN
KETANGKASAN BAHARU KARATE**

Oleh

MOHAMMAD EBRAHIM MARJANI

July 2013

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Karate adalah salah satu gaya seni mempertahankan diri paling popular di dunia serta sukan yang popular di Iran. Prestasi cemerlang dalam karate memerlukan tahap ketangkasan yang tinggi untuk membolehkan karate (pemain karate) mengelak serangan lawan, dan mengambil posisi yang terbaik untuk melaksanakan teknik-teknik karate dengan cekap. Dalam usaha untuk mengukur ketangkasan, jurulatih karate menggunakan ujian ketangkasan umum yang sedia ada. Walau bagaimanapun, terdapat banyak ujian ketangkasan dan jurulatih perlu mengetahui ujian yang terbaik untuk karate. Justeru, tujuan kajian ini adalah untuk membentuk ujian ketangkasan yang terbaik dan paling sesuai dengan menggunakan *Analytic Network Process* (ANP). Data telah dikumpulkan dari dua puluh satu pendapat pakar karate dengan min umur dan sisihan piawai 40.3 ± 7.0 dan tahun kejurulatihan 13.05 ± 5.80 .

Keputusan kajian berdasarkan analisis ANP melaporkan bahawa kelajuan merupakan keutamaan tertinggi dalam ujian ketangkasan, dan ujian ketangkasan SEMO dilaporkan sebagai ujian ketangkasan sah yang terbaik. Berdasarkan keputusan kajian, satu ujian ketangkasan spesifik untuk karate iaitu Marjani Agility Test telah dibentuk.

Kata kunci: Ujian ketangkasan (Agility test), Karate, Analytic Network Process.



ACKNOWLEDGEMENTS

Mostly to God, the Compassionate the Merciful, through Him, all is possible.

The fulfillment of this program is indeed a challenging task which cannot be accomplished without the personal and practical support of numerous people. Thus, I would like to deeply thank the various people who provided me with useful and helpful assistance during my doctoral work. Without their invaluable and wise advice, this dissertation would not have reached to this stage.

I would especially like to thank my supervisor, Assoc. Prof. Dr. Soh Kim Geok, for her warm encouragements and support. Throughout my doctoral research, her constant insight has helped my dissertation to mature. She has also helped me to develop independent thinking and to become a self-driven researcher. I am grateful to her for giving me her time and special attention.

I am also extremely grateful for receiving an exceptional assistance and coaching from my supervisory committee member Dr. Nur Surayyah M. Abdullah. In fact, I feel a lot indebted to her for her teachings. I am also very thankful to Assoc. Prof. Dr. Mohd. Rizan Abu Bakar for his continuous support.

I extend many thanks to my colleagues and friends, especially Dr. Majid Mojahed for his invaluable time given to validate my research instruments and data analysis. I would like to thank Ahad Tanzade for his academic and technical advice as my best friend during my developing my thesis. I also would like to extend my regards and appreciation to all my teachers up to this date. I am still greatly indebted to my karate

coach master Vahid Khajeh Hosseini for his vision to his students has shaped my career.

I extend many thanks to my colleagues and friends, especially Dr. Mehrdad Moloudi , Dr. Hamid Rajabi and Dr. Bahrami nejad for their invaluable time given to validate my research instruments, Dr. Nikookheslat for his assistance throughout data collection procedure.

I am very thankful to all Iranian national karate coaches; without their feedback this study could not be accomplished. I specially appreciate Iran Karate Federation and Iran National Olympic Committee.

Finally, I'd like to thank my family. I indeed owe a lot to my wife Ashraf for her incredible support and sacrifice that she along with my sons, Soheil and Ali, have made throughout my candidature. Without their generous sacrifice this accomplishment was impossible. I am especially indebted to my lovely dad and my mom. Their encouragement, praying, and teachings have always been with me.

I certify that an Examination Committee has met on 03/July/2013 to conduct the final examination of Mohammad Ebrahim Marjani on his thesis entitled "**Validating and Developing a New Agility Test for Karate**" in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia [Higher Degree) regulations 1981. The Committee recommends that the student be awarded the Doctor of Philosophy

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

MOHAMMAD EBRAHIM MARJANI

Date: 3 July 2013

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