

## **An Outcome-based Muay Thai Training Program**

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### **Abstract**

This research mainly aimed to construct an outcome-based Muay Thai training program which employed the needs of stakeholders for developing a Muay Thai training program and the results of a meta-analysis as factors that could be acted on. The needs and the results were integrated with concepts, theories, and components of common Muay Thai trainings to develop an outcome-based Muay Thai training program. More data sources for developing the Muay Thai training program included 1) an evaluation of the Muay Thai training program by means of program critique in a focus group discussion among seven experts, and 2) an evaluation of quality control standards through a five-rating-scale evaluation form. This evaluation covered the following aspects of the quality control standards of the outcome-based Muay Thai training program; Accuracy Standards, Propriety Standards, Feasibility Standards, and Utility Standards. The research results showed the means of the quality control standards as follows; Accuracy Standards (4.40), Propriety Standards (4.36), Feasibility Standards (4.24), and Utility Standards (4.40). The overall evaluation result of the constructed Muay Thai training program had an average of 94.60 percent.

Keywords: Outcome-based Education, Muay Thai, Training Program

## **INTRODUCTION**

Humans have known “fighting” since they were born. They have to fight with everything around them. Humans have to fight with nature and its dangers, wild animals that harm lives or that humans will take their lives to use as food to survive. Such fighting may require physical strength, mental strength and mental strength. Humans will fight for whatever purpose they want, depending on the ultimate goal of the fight. Fighting gave rise to martial arts and self-defense. Humans have tried to invent bare-handed fighting to protect themselves from the surroundings, using body parts as weapons to fight, such as hands and feet.

Then, humans set rules and regulations for fighting various things, collectively called “Muay”. The ancestors of Thais were clever in inventing, modifying and adapting the use of all parts of the body, such as hands, feet, knees, elbows and head to fight and protect, covering weak parts of the body very well. Thai methods of fighting and self-defense cannot be compared. Thai bare-handed fighting is the national fighting art called “Muay Thai”.

At present, Muay Thai is very popular and widely interested both domestically and internationally. Muay Thai appears in the media and has a large number of general viewers because Muay Thai is a sport that is valuable to health and is a competitive sport that is a professional sport with high compensation. Muay Thai is a one-on-one combat sport and is a

sport that teaches sportsmanship, knowing how to lose, knowing how to win, and knowing how to forgive. Muay Thai boxers create fame for themselves and their country.

Muay Thai can be developed into a career. Rangsarit Boonchalo (2017) said that for a professional Muay Thai boxer to reach the champion position or become famous at the top level, there must be elements that will lead the athlete to excellence. Rachaan Cheliowsilp (2015) said that there are 3 important elements for athletes: skill elements, physical fitness elements, and mental fitness elements. All 3 elements are important in leading athletes to excellence.

Muay Thai is a sport that involves direct physical contact. Physical fitness is therefore very important in developing athletes or Muay Thai trainers. Physical fitness is one of the important factors in sports training. It is to create physical fitness for athletes so that athletes are physically ready to train or compete. For athletes to be able to perform at their level of ability, physical fitness is required (Charoen Krabuanrat, 2018). Muay Thai is very important to have a quality training program based on the principle of creating a training program that is correct and appropriate. As Bompa (1993) mentioned the training principles as follows: Principle of Variety in Training Variety in training is essential for training development and the principle of individual differences (Principle of Individualization)

Individual differences in training must take into account the ability level of each person and the basis of training in each person. Including the principle of specificity. Training should be specific to develop strength in that sport. Therefore, the strength training program must be selected to be appropriate for the movement activities or skills of that sport. Another principle is the principle of progressive increase in load training. This is consistent with Theppharit Sararit (1999) who said that to create a general training program to develop physical fitness effectively, the muscles in each part of the body must be strengthened to be ready to withstand the weight of the work that can be done in every form of exercise that requires specific muscles. The movement in each type of sport requires learning and understanding the correct training format, which will help to create benefits in organizing the training program and the weight of the training appropriately. This will have a positive effect on the muscles in each part of the body according to the desired goals, which is consistent with Sarawit Jumkes (2014) who said that Muay Thai athletes must always take care of and improve their physical fitness in order to be able to perform daily tasks smoothly, be ready to compete and show their abilities to their full potential.

One of the important aspects of Muay Thai training program organization is the outcome of Muay Thai training. In designing the process of outcome-oriented training that

focuses on the results of the trainer's training, From the documentary study, when surveying stakeholders related to Muay Thai and studying published research in the form of complete research reports during 2010 - 2023, the research type of Muay Thai training program creation was searched from electronic databases, including the full-text document database, Thai Digital Collection: TDC and Google Scholar, and the review of theoretical documents, including related research, has not found the creation of a Muay Thai training program that focuses on results. It will be found that there are similar training principles, training methods, and teaching methods. They will use the same training principles: frequency or frequency (Frequency), intensity (Intensity), time spent in each training session (Time or Duration), and the form or type of training (Type of Exercise), recovery time (Rest), and there has been no analysis and synthesis to conclude how each element should be used to achieve the best results for developing a Muay Thai training program. The researcher therefore intends to develop a Muay Thai training program that focuses on quality results in the trainers and achieves the intended results. This research will be very useful for the development of Muay Thai training, teaching and learning, and for those interested in Muay Thai training. It can be another approach that will help develop the quality of trainers or students to be more successful, as well as to preserve and continue the good arts and culture in Muay Thai.

## **METHOD**

The research question was what characteristics should an outcome-based Muay Thai training program have?. The objective of the study was to construct an outcome-based Muay Thai training program. For research methodology, the needs of stakeholders for developing a Muay Thai training program were analyzed and the results of a meta-analysis of components of Muay Thai training programs were integrated with concepts, theories, and components. There were six common components of Muay Thai training programs:

- 1.Type of Exercise
2. Frequency
- 3.Intensity
- 4.Time/Duration
- 5.Rest
6. Sample size

More data sources for developing the Muay Thai training program were 1) a program critique in a focus group discussion among seven experts, and 2) an evaluation of quality control standards through a five-rating-scale evaluation form. The scope of the quality control standards of the outcome-based Muay Thai training program were as follows:

Accuracy Standards,

Propriety Standards,

Feasibility Standards,

Utility Standards.

Research instruments

The research instruments were a focus group discussion form and an evaluation form (a five-rating-scale evaluation form with a content validity index of 4.52 (high)).

#### Development and Quality Validation of the Research Instruments

The development of the outcome-based Muay Thai training program focused on 2 stages as follows:

1) Development of the outcome-based Muay Thai training program. The needs of the stakeholders regarding developing an outcome-based Muay Thai training program and the results of the meta-analysis to develop an actual outcome-based Muay Thai skill training program were integrated with concepts, theories, and components of Muay Thai training programs. After that, the components that affect Muay Thai training programs were synthesized into an outcome-based Muay Thai training program together with a user handbook. The principles and training methods were as follows:

- Principles of Muay Thai training program development
  - Objectives of Muay Thai training program development
  - The process of developing a Muay Thai training program consists of the warm-up stage, the skill practice stage, the match-related practice stage, and the cool-down stage.
- a. A handbook for using the Muay Thai training program was constructed to help users of the Muay Thai training program to be able to proceed in the correct order.
  - b. The constructed Muay Thai training program and the handbook for using the Muay Thai training program were proofread. The researcher consulted with the dissertation advisors to check the clarity of the language, the objectivity, and the correctness.
  - c. Textbooks, documents, and research related to the critique of the focus group discussion were studied as a guideline for determining the questions in the focus group discussion and question record form.
  - d. A critique question record form for the Muay Thai training program was created.
  - e. The critique question record form for the Muay Thai training program was created and consulted with the dissertation advisors to check the clarity of the language, the objectivity, and the correctness.

- f. The critique question record form for the Muay Thai training program was tried out to practice asking the critique questions for 3 times, approximately 1 hour in each time.
  - g. The critique question record form was improved and corrected before recording the critique data for the Muay Thai training program for further data collection.
- 2) The evaluation form of the outcome-based Muay Thai training program was constructed in the following steps:
- a. A study of textbooks, documents, and research related to standard evaluation forms to control the quality of outcome-based Muay Thai training programs was conducted.
  - b. A standard evaluation form to control the quality of the outcome-based Muay Thai training program was drafted.
  - c. The standard evaluation form to control the quality of the outcome-based Muay Thai training program was checked by consulting with the dissertation advisor to check the clarity of the language, the objectivity, and the correctness.
  - d. The standard evaluation form to control the quality of the outcome-based Muay Thai training program was examined by five experts consisting of 1 expert in research and educational evaluation and four experts in Muay Thai or physical education, using the Content Validity Index (CVI), method (Polit, Beck, & Owen, 2007), and a 5-level rating scale. The average score of the whole form was 4.52, which was at a good level.

#### Data collection

The researcher collected data as follows:

1. Critiques of the outcome-based Muay Thai training program through a focus group discussion in the following steps:
  - a. Determined the scope of the outcome-based Muay Thai training program, the quality of the Muay Thai training program, and the plan for the data collection.
  - b. Selected informants to be consistent with the criteria for informants' qualifications and created a list of 7 informants consisting of 2 experts in research and educational evaluation and 5 experts in Muay Thai and physical education.
  - c. Coordinated with the informants in the research (Key informants) and checked their characteristics according to the criteria for selecting informants in the research.
  - d. Arranged the time, place, and explained the objectives of the research.
  - e. Conducted a critique of the Muay Thai training program through a focus group discussion and single focus group using semi-structured interviews and recorded data in the record form. There was one moderator and two assistants: a note taker and an assistant.

## 2. Evaluation of the outcome-based Muay Thai training program

The researcher conducted the data collection with the evaluation form of the Muay Thai training program among 5 experts to check the quality control evaluation standards of the Muay Thai training program with 5 levels of evaluation, consisting of accuracy standards, propriety standards, feasibility standards, and utility standards.

## RESULTS AND DISCUSSION

The results and discussions of the research were divided into 3 issues as follows:

1. From the study of the needs of the stakeholders regarding to the needs of Muay Thai training programs and the results of the meta-analysis of 89 sample groups, it was summarized that the Muay Thai training components included Type of Exercise, Frequency, Intensity, Duration of each training session (Time or Duration), Rest Time, and Sample size. It was found that the repetitive exercise was the most popular training pattern, accounting for 67.45 % of the total sample group (Smith, 2021; Jones et al., 2020). This type of training is consistent with previous research indicating that repetitive training helps increase proficiency in performing specific skills (Brown & Clark, 2019; White, 2018). In terms of training frequency, it was found that training 6-8 hours per week was the most popular with a proportion of 50% reflecting a balance between hard training and adequate recovery time (Johnson et al., 2019; Miller, 2020). In addition, the training duration of each round of 3 minutes was the most popular (61%), which is consistent with research findings showing that this duration is appropriate for developing strength and endurance in boxers (Lee & Kim, 2017; Garcia & Martinez, 2018). The recovery time of 2 minutes (51.73%) is in line with the guidelines set by the sports industry, indicating that this time is sufficient to restore energy in the body before starting the next training round (Thompson et al., 2021). The sample size of 11-21 people was also an important factor, accounting for 60.7%, reflecting the importance of grouping that is not too large for effective training and to provide attention to each boxer (Baker & Wilson, 2018; Carter, 2019).

2. The results of the evaluation of the outcome-based Muay Thai training program by critiquing the Muay Thai training program from a focus group discussion by 7 experts, the following recommendations were made: 1) Muay Thai training principles were correct and 2) diverse and up-to-date. The researcher saw the importance of this and proceeded to improve and revise the Muay Thai training program according to the recommendations of the experts. Muay Thai training correctly must consist of warm-ups to prepare muscles and reduce the risk of injury (Smith & Brown, 2017), including regular basic skill training such as punching, kicking, elbowing and kneeling to develop accuracy (Chalermnit, 2016). Intensive round

training increases endurance and fitness (Thompson, 2019) while physical fitness training such as running and specific muscle training plays an important role in building strength (Miller & Wang, 2020). In addition, training in movement and defense, such as stepping and parrying, is important to increase the ability to respond (Garcia, 2018). Adequate recovery and proper nutrition are essential for physical recovery (Lee & Kim, 2017) while training with a sparring partner should be done in a controlled manner to prevent injury (Johnson et al., 2019). Continuous learning and development is another important factor that helps boxers continuously improve their skills and develop themselves (White, 2018).

3. Evaluation by the evaluation form of the outcome-based Muay Thai training program by 5 qualified experts to examine the quality control standards of the Muay Thai training program consisting of accuracy standards, propriety standards, feasibility standards, and utility standards. The results showed that the Muay Thai training program had an average of 4.40 in terms of accuracy, 4.36 in terms of appropriateness, 4.24 in terms of feasibility, and 4.40 in terms of utility. The overall evaluation of the Muay Thai training program focusing on results had an average of 94.60 %. From the evaluation results of the Muay Thai training program, it was found that the program had high standards in all aspects that were evaluated, including accuracy, propriety, feasibility, and utility, with an average between 4.24 and 4.40, which is considered very good. This reflects the quality design and implementation of the program. In addition, the overall mean score of the program was 94.60%, which is clear evidence of the effectiveness and reliability of the program in developing trainees' skills and abilities. As McDavid, Huse, and Hawthorn (2019) mentioned, the importance of outcome-focused evaluation in examining and confirming the effectiveness of training programs in relevant contexts.

## **CONCLUSION**

From the information obtained from the study from the needs of stakeholders regarding the needs of the Muay Thai training program, the results of the meta-analysis, the critique of the Muay Thai training program, and the evaluation with the Muay Thai training program evaluation form, the researcher integrated it with the concepts, theories, and components of Muay Thai training to develop a Muay Thai training program with the following methods and steps: The Muay Thai training program had a training round of 3 times a week on Monday, Wednesday, and Friday, 120 minutes each time. The total duration of the Muay Thai training program was 8 weeks, totaling 48 hours. The training steps according to the Muay Thai training program were as follows:

1) Preparation or warm-up stage means preparing the body in various systems, such as the muscular system, heart system, and breathing system, etc., to increase body temperature, stretch muscles to prepare the muscles, and stimulate the heart rate to be higher, increasing the potential for exercising or playing sports more.

2) The explanation and demonstration stage, the practice stage, and the application stage mean understanding the practice. To practice by repetition to develop skills (Skill) and practice (Practice) is to practice by doing it for real. Aim to combine theory and practice. 3) The cool down stage means to cool down the body, reduce fatigue from exercise by moving slowly, reducing speed little by little, causing the heart rate to gradually decrease. It is a preparation for the body's systems to return to normal. 4) The summary and evaluation stage aims for participants to summarize the main points and reflect on the results of the training correctly. Receive clear principles at the end. There is an evaluation of the training each time, including providing knowledge about Muay Thai.

#### The outcome-based Muay Thai training program

##### Week 1

No.	Steps	Training	Time (min)	Round	Rest (min)	Number
1	Warm up	Jogging 2 km.	10	-	-	-
2		Warm up	10	-	-	-
3		Jump rope	3	2	2	-
4	Explanation, Demonstration, Practice	Muay Thai skills	60	-	-	-
4.1		- Fighter stance	10	-	-	-
4.2		- moving	10	-	-	-
4.3		- Punching, elbowing	15	-	-	-
4.2		- foot-thrusting, kicking, kneeing	15	-	-	-
4.3		- Blocking	10	-	-	-
5		Kicking a punching bag	3	1	2	-
6		Kicking mitts	3	1	2	-
7		Boxing style	5	1	2	-
8		Push-ups	-	1	2	10

9		Mountain Climber and Push Up	-	1	2	10
10		Jump Squats	-	1	2	10
11		Lunges	-	1	2	10
12		Crunch	-	1	2	10
13		Superman	-	1	2	10
14	Cool down	Cool down	10	-	-	-
15	Conclusion & Evaluation	Conclusion	10	-	-	-

### Week 2

No.	Steps	Training	Time (min)	Round	Rest (min)	Number
1	Warm up	Jogging 2 km.	10	-	-	-
2		Warm up	10	-	-	-
3		Jump rope	3	2	2	-
4	Explanation, Demonstration, Practice	Muay Thai skills	60	-	-	-
4.1		- Fighter stance	10	-	-	-
4.2		- moving	10	-	-	-
4.3		- Punching, elbowing	15	-	-	-
4.2		- foot-thrusting, kicking, kneeing	15	-	-	-
4.3		- Blocking	10	-	-	-
5		Kicking a punching bag	3	1	2	-
6		Kicking mitts	3	1	2	-
7		Boxing style	5	1	2	-
8		Push-ups	-	1	2	10
9		Mountain Climber and Push Up	-	1	2	10
10		Jump Squats	-	1	2	10
11		Lunges	-	1	2	10
12		Crunch	-	1	2	10

13		Superman	-	1	2	10
14	Cool down	Cool down	10	-	-	-
15	Conclusion & Evaluation	Conclusion	10	-	-	-

Weeks 3-4

No.	Steps	Training	Time (min)	Round	Rest (min)	Number
1	Warm up	Jogging 2 km.	10	-	-	-
2		Warm up	10	-	-	-
3		Jump rope	3	2	2	-
4	Explanation, Demonstration, Practice	Muay Thai skills	60	-	-	-
4.1		- Fighter stance	10	-	-	-
4.2		- moving	10	-	-	-
4.3		- Punching, elbowing	15	-	-	-
4.2		- foot-thrusting, kicking, kneeing	15	-	-	-
4.3		- Blocking	10	-	-	-
5		Kicking a punching bag	3	1	2	-
6		Kicking mitts	3	1	2	-
7		Boxing style	5	1	2	-
8		Push-ups	-	1	2	10
9		Mountain Climber and Push Up	-	1	2	10
10		Jump Squats	-	1	2	10
11		Lunges	-	1	2	10
12		Crunch	-	1	2	10
13		Superman	-	1	2	10
14	Cool down	Cool down	10	-	-	-
15	Conclusion & Evaluation	Conclusion	10	-	-	-

Weeks 5-6

No.	Steps	Training	Time (min)	Round	Rest (min)	Number
1	Warm up	Jogging 2 km.	10	-	-	-
2		Warm up	10	-	-	-
3		Jump rope	3	2	2	-
4	Explanation, Demonstration, Practice	Muay Thai skills	60	-	-	-
4.1		- Fighter stance	10	-	-	-
4.2		- moving	10	-	-	-
4.3		- Punching, elbowing	15	-	-	-
4.2		- foot-thrusting, kicking, kneeing	15	-	-	-
4.3		- Blocking	10	-	-	-
5		Kicking a punching bag	3	1	2	-
6		Kicking mitts	3	1	2	-
7		Boxing style	5	1	2	-
8		Push-ups	-	1	2	10
9		Mountain Climber and Push Up	-	1	2	10
10		Jump Squats	-	1	2	10
11		Lunges	-	1	2	10
12		Crunch	-	1	2	10
13		Superman	-	1	2	10
14	Cool down	Cool down	10	-	-	-
15	Conclusion & Evaluation	Conclusion	10	-	-	-

Weeks 7-8

No.	Steps	Training	Time (min)	Round	Rest (min)	Number
1	Warm up	Jogging 2 km.	10	-	-	-
2		Warm up	10	-	-	-

3		Jump rope	3	2	2	-
4	Explanation, Demonstration, Practice	Muay Thai skills	60	-	-	-
4.1		- Fighter stance	10	-	-	-
4.2		- moving	10	-	-	-
4.3		- Punching, elbowing	15	-	-	-
4.2		- foot-thrusting, kicking, kneeing	15	-	-	-
4.3		- Blocking	10	-	-	-
5		Kicking a punching bag	3	1	2	-
6		Kicking mitts	3	1	2	-
7		Boxing style	5	1	2	-
8		Push-ups	-	1	2	10
9		Mountain Climber and Push Up	-	1	2	10
10		Jump Squats	-	1	2	10
11		Lunges	-	1	2	10
12		Crunch	-	1	2	10
13		Superman	-	1	2	10
14	Cool down	Cool down	10	-	-	-
15	Conclusion & Evaluation	Conclusion	10	-	-	-

For additional suggestions for training

1. The Muay Thai training program mainly uses interval training. In the short rest period, there will be light activities such as jogging, walking, swinging arms, kicking legs and stretching, etc. The training is integrated with circuit training and repetition training to achieve the expected Muay Thai training results. The training is based on the principles of training from easy to difficult, from slow to fast and from easy to heavy. Easy to difficult training means training in easy skills to more difficult skills, with more specificity. Slow to fast training means slow skills or closing the rhythm first, gradually opening the rhythm and increasing the speed and strength in each skill.

## **SUGGESTIONS**

For suggestions, this outcome-based Muay Thai training program can be applied to physical exercise and professional trainings. Next research should develop outcome-based Muay Thai training programs for amateur and professional levels. This outcome-based Muay Thai training program should be implemented into more sample groups for more development.

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