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Value-Based Education Model to Enhance Emotional Intelligence, Positive Character, and Fighting Techniques of Junior Tarung Derajat Athletes

Nissa Aldani ¹⁾✉, Yanuar Kiram ²⁾, Alnedral Alnedral ³⁾, Tjung Hauw Sin ⁴⁾

^{✉1)} Universitas Negeri Padang, Padang, Indonesia
E-mail: nissaaldani@fik.unp.ac.id

²⁾ Universitas Negeri Padang, Padang, Indonesia
E-mail: yanuarkiram@fik.unp.ac.id

³⁾ Universitas Negeri Padang, Padang, Indonesia
E-mail: alnedral@fik.unp.ac.id

⁴⁾ Universitas Negeri Padang, Padang, Indonesia
E-mail: thj_sin@yahoo.com

✉ Correspondence Author

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Abstract

This study addresses the low improvement in training outcomes, particularly in mastering character-intelligence and fighting skills among junior athletes in Tarung Derajat martial arts. The research aims to determine the effectiveness of the BMB3 learning strategy in enhancing these aspects for early-age athletes at Kurata levels III (ages 10–12) and IV (ages 13–14). The study employed an experimental method using a one-group pretest-posttest design. The sample consisted of 30 athletes from the UNP Padang training center, selected through stratified-cluster random sampling. Data collection instruments included a Character-Intelligence Questionnaire and a Tarung Derajat fighting ability test. Descriptive statistics were used to reveal training conditions, while hypothesis testing employed the t-test. The results show: (1) a significant improvement in character-intelligence for 12-year-old athletes (Kurata III) with $t = 6.22$, $p = 0.00$; (2) a significant improvement for 14-year-old athletes (Kurata IV) with $t = 11.81$, $p = 0.00$; (3) a significant increase in fighting ability for 12-year-olds with $t = 6.52$, $p = 0.00$; and (4) a significant improvement in fighting ability for 14-year-olds with $t = 7.05$, $p = 0.00$. These findings demonstrate that the BMB3 learning strategy effectively enhances both character-intelligence and fighting skills in junior Tarung Derajat athletes.

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INTRODUCTION

Tarung Derajat Martial Arts is a self-defense sport that utilizes a combination of *Dynamic Movement Force (Daya Gerak Hidup / DGH)* derived from muscles, the brain, and conscience in a realistic and rational manner. There are five elements of *Moral Movement Force (Daya Gerak*

Moral / DGH) involved in the learning process of full or partial body movements: strength, speed, accuracy, courage, and perseverance. These moral elements are dynamically and aggressively embedded in a system of defense and attack movements, patterned into techniques, tactics, and strategies that are practical and effective for self-defense.

To improve fighting ability, training must be supported by strategies that synergize with physical performance. The better an athlete's physical condition, the higher their potential for achievement. Conversely, poor physical fitness makes it harder to execute techniques effectively. Therefore, proper training methods and strategies are essential. A newly developed training model by the founder of Tarung Derajat, called the *Sport Derajat* model, includes 12 training sequences (Alnedral, 2013, 2016; Sari, 2014). Research continues to develop Tarung Derajat and improve athlete performance (Alnedral et al., 2023; Cahyono et al., 2022), including studies using robotic technology in training (Sari et al., 2020).

These play-based training sequences are grounded in a variety of Tarung Derajat martial techniques developed since 2011, including: 1) fast punches, 2) inner circular punches, 3) outer circular punches, 4) hand drops, 5) inner round kicks, 6) side kicks, 7) back round kicks, 8) front hook kicks, 9) back kicks, 10) back hook kicks, and 11) foot drops.

These basic techniques are then integrated into instructional materials delivered through a play-based method called *Sport Derajat*. Play in sports training fosters athlete responsibility for the game. When conflicts arise, responsibility during gameplay supports moral development, helping shape character. The spirit of treating opponents as friends—where all participants are valued equally and deserving of recognition—promotes fairness and shared accountability. This aligns with the UNESCO International Council of Sport and Physical Education's "Declaration of Sport", which emphasizes that all physical activities involving struggle—against others, oneself, or nature—should embody the spirit of *Fair Play* to remain pure. According to experts (Ateng, 2003:47), sport conducted in the spirit of fair play is a powerful educational tool.

Tarung Derajat martial arts require mastery of fundamental techniques such as kicking, punching, defending, and attacking. These must be properly and systematically trained for athletic achievement (6th Serantau Proceedings, 2013:2753–2767). All of these must be supported by optimal physical fitness. According to Harsono (1988:100), essential components of physical fitness include cardiovascular endurance, muscular endurance, strength, flexibility, speed, stamina, agility, and power.

The mastery of *intelligent character* and fighting skills requires an effective and educational training strategy. One such strategy is the *BMB3 learning strategy*, which stands for *Thinking, Feeling, Behaving, Acting, and Being Responsible*. This approach serves as a standard in the training process to enhance training dynamics, comprehension, and practical mastery (Prayitno, 2010:90). The BMB3 components reflect an improvement in performance linked to the virtuous behavior promoted by Thomas Lickona (1992, 2004), involving goodness toward others (God, people, and nature) and oneself within an educational setting. Thus, the BMB3 learning strategy aims to strengthen the moral and mental development of athletes and should be considered, developed, and applied by coaches to enhance achievement and shape intelligent character in Tarung Derajat martial arts. Research has proven that character development in adolescent Tarung Derajat athletes is highly effective through the BMB3 learning strategy.

METHODS

The research employed an applied experimental method to test the effectiveness of the BMB3 learning strategy on junior Tarung Derajat athletes at the UNP Training Center in Padang, West Sumatra. A total of 30 athletes, selected through stratified-cluster random sampling, were divided into groups based on Kurata level: Kurata III (ages 10–12, 12 athletes) and Kurata IV (ages 13–14, 18 athletes). The research began with official permission, followed by coordination with coaches and a coaching clinic to introduce the BMB3 strategy. Pre-tests were conducted to assess character-intelligence and fighting ability before the training intervention. The BMB3 strategy was then implemented through structured learning stages—pre-impact, impact (main training), and post-impact—focusing on motivation, assignment-based activities, feedback, and reflection. Data were collected through pre- and post-tests and analyzed using descriptive and inferential statistics. Hypothesis testing was conducted using the one-tailed T-Dunnett method, preceded by normality testing with the Lilliefors test and homogeneity testing with the Bartlett test.

RESULT AND DISCUSSION

Description of the Tarung Derajat Martial Arts Training

Based on in-depth discussions with several academic experts and coaches of the fighting degree martial arts at the UNP training center in Padang city, there are several main ideas about the conditions of training that have been implemented: Athletes are measured using a questionnaire related to the research variables of character-smart mastery and the fighting ability tests of fighting degree athletes. Coaches are also interviewed regarding the training reflections experienced by athletes, and the difficulties faced during the study in implementing the BMB3 strategy through a series of play methods. The description of the Pre-Test and Post-Test data from each research variable can be explained as follows.

Table 1. Descriptive Statistics of Smart Character Data and Fighting Ability of Martial Arts Athletes in the Tarung Derajat Pre-Test and Post-Test Training at UNP Kota Padang

Measurement	Sample	Smart Character			Fighting Skills		
		Mean	Variance	Presentase Capaian	Mean	Variance	Percentage Capaian
<i>Pre-Test</i>							
KU 10-14 K III	15	303,40	248,00	77,79%	64,17	64,22	64,17%
KU 10-14 K IV	15	300,80	312,00	77,13%	62,19	61,67	62,19%
KU-12 K III	12	295.83	295.83	75,85 %	62.09	14.64	62,09%
KU-14 K IV	18	306.28	1231.97	77.46 %	63,90	13.07	63,17%
<i>Post-Test</i>							
KU 10-14 K III	15	333,27	323,00	85,45%	69,21	70,11	69,21%
KU 10-14 K IV	15	326,47	334,00	83,59%	63,39	68,72	63,39%
KU-12 K III	12	323.33	1231.97	82,90 %	68.33	4.42	68,33%
KU-14 IV	18	334.28	377.48	85.71%	69.46	5.51	69,46%

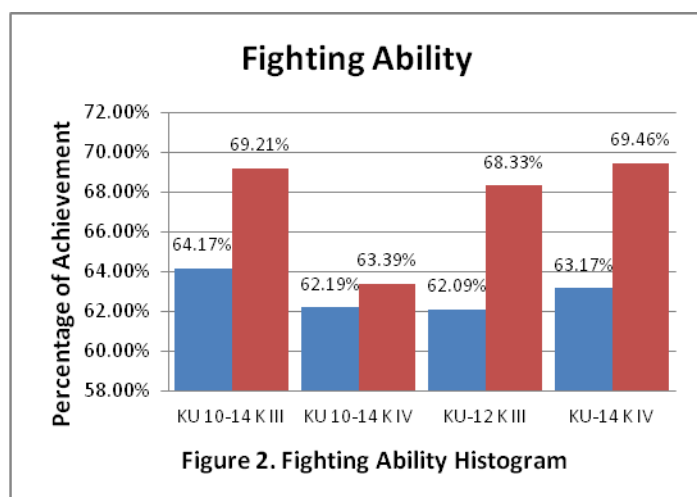
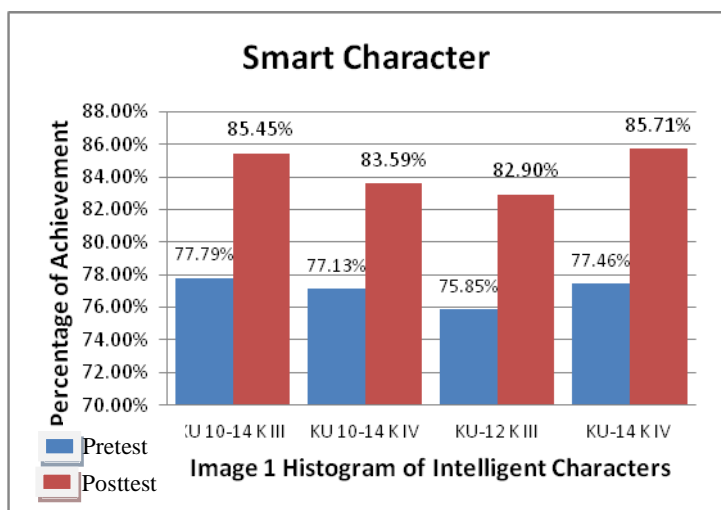
Based on the data description in Table 1, we obtain an overview of athletes' mastery of intelligence characteristics and fighting abilities as follows:

For Pretest intelligence characteristics in KU 10-14 K III from 15 athletes, we obtained a Mean of 303.40, Variance of 248.00, with an achievement percentage of 77.79%. KU 10-14 K IV from 15 athletes, Mean of 303.80, Variance of 312.00, achievement percentage 77.13%. KU-12 K III from 12 athletes, Mean of 295.83, Variance of 295.83, achievement percentage 75.85%. KU-14 K IV from 18 athletes, Mean of 306.28, Variance of 1231.97, achievement percentage 77.46%.

For Posttest intelligence characteristics in KU 10-14 K III from 15 athletes, Mean of 333.27, Variance of 323.00, achievement percentage 85.45%. KU 10-14 K IV from 15 athletes, Mean of 326.47, Variance of 334.00, achievement percentage 83.59%. KU-12 K III from 12 athletes, Mean of 323.33, Variance of 1231.97, achievement percentage 82.90%. KU-14 K IV from 18 athletes, Mean of 334.28, Variance of 377.48, achievement percentage 85.71%.

Next, for Pretest fighting ability in KU 10-14 K III from 15 athletes, Mean of 64.17, Variance of 64.22, achievement percentage 64.17%. KU 10-14 K IV from 15 athletes, Mean of 62.19, Variance of 61.67, achievement percentage 62.19%. KU-12 K III from 12 athletes, Mean of 62.09, Variance of 14.64, achievement percentage 62.09%. KU-14 K IV from 18 athletes, Mean of 63.90, Variance of 13.07, achievement percentage 63.17%.

For Posttest fighting ability in KU 10-14 K III from 15 athletes, Mean of 69.21, Variance of 70.11, achievement percentage 69.21%. KU 10-14 K IV from 15 athletes, Mean of 63.39, Variance of 68.72, achievement percentage 63.39%. KU-12 K III from 12 athletes, Mean of 68.33, Variance of 4.42, achievement percentage 68.33%. KU-14 K IV from 18 athletes, Mean of 69.46, Variance of 5.51, achievement percentage 69.46%. For further clarity, the achievement percentages of Pretest and Posttest data for intelligence characteristics and athletes' fighting ability can be seen in the following figure.



This study conducted only 16 training sessions, including tests and a coaching clinic, yet it was able to demonstrate improvements between the Pretest and Posttest results. This outcome is likely due to the implementation of the BMB3 learning strategy, which proved to be more effective in shaping athletes' intelligent character while simultaneously enhancing their fighting abilities. It can be said that the stronger the chemistry with the BMB3 learning strategy, the more developed the intelligent character becomes. The higher the intelligent character, the greater the skills acquired (Alnedral, 2012).

Based on the improvement in the average achievement scores, coaches are categorized as being capable of applying the BMB3 strategy in Tarung Derajat martial arts training at a "Good" level. This is primarily attributed to the quality of leadership and authority shown by the coach during training, which was found to be quite effective. However, coaches must pay closer attention to the supporting components of each BMB3 dimension thinking, feeling, behaving, acting, and taking responsibility. These dimensions are all outcomes of learning. According to Burton in Lufri (2007:10), learning outcomes consist of patterns of behavior, values, understandings, attitudes, appreciation, abilities, and skills. This reality indicates that learning outcomes are indicators of a student's or athlete's success in participating in learning or training activities. Learning outcomes are the changes that occur as a result of learning activities. These changes include knowledge, understanding, skills, and attitudes, which cover mastery of the cognitive, affective, and psychomotor domains (Nana, 2002:22).

In the application of learning strategies to master fighting skills, the dimension of thinking emphasizes the cognitive domain, feeling and behaving emphasize the affective domain, while acting and taking responsibility emphasize the psychomotor domain (skills). In accordance with the martial arts sport being developed Tarung Derajat the learning outcomes are based on five fundamental elements of moral movement power: strength, speed, accuracy, courage, and perseverance. If the mastery of these movement powers truly aligns with the pillars of learning in Tarung Derajat martial arts training, then the mastery of intelligent character and fighting ability will surely lead to an increase in the average achievement score to the "Excellent" category.

This reality shows that the level of improvement in athletes' fighting abilities can actually be optimized by paying attention to various factors during training and gameplay. According to Mutohir and Gusril (2004:68), aspects that should be considered in play activities include: (a) extra energy, (b) sufficient time to play, (c) play equipment, (d) play space, (e) knowledge of how to play, and (f) playmates.

The learning strategy approach using the play model contains philosophical values in each movement:

- (a) Play activities are a reflection of community culture, actualized through sports training activities. These activities can positively affect an athlete's health over a long period.
- (b) Play is important in the human growth phase, especially in physical and motor development, because through play, students/athletes accumulate a wide range of movement experiences, which in turn help them more easily understand effective and efficient motor skills.
- (c) There is a belief that through play, athletes learn and practice creating, following, and implementing rules.
- (d) Learning should be filled with programs that are enjoyable for athletes and offer many choices for activities they enjoy. Through play activities, all students regardless of motor skill levels can participate in sports learning.
- (e) Valuing playmates is one of the goals of play activities, where athletes' social values can be developed through play. However, this goal is not achieved automatically but depends on how well the coach plans and teaches play activities.

The achievement levels gained through the implementation of the BMB3 learning strategy using a series of sports play models will impact the mastery of intelligent character. It has also been anticipated, based on theoretical studies, that the variable of improved fighting ability would show

positive results. This means, *"The implementation of the BMB3 learning strategy is very suitable for Tarung Derajat martial arts athletes in improving the mastery of intelligent character and fighting skills, particularly for young athletes in the Satlat UNP, Padang City."*

Improvement in the Mastery of Intelligent Character among Tarung Derajat Athletes Given the BMB3 Learning Strategy

The mastery of intelligent character in this study was measured based on five variable dimensions:

- (1) Faith and Devotion,
- (2) Intelligence,
- (3) Honesty,
- (4) Resilience, and
- (5) Empathy.

These dimensions were further elaborated into 45 variable indicators with 78 statements used to reveal the athletes' mastery of intelligent character. The research findings indicate that the hypothesis of this study namely, that there is an improvement in the mastery of intelligent character among athletes who were given the BMB3 learning strategy at Satlat UNP Padang City was proven. This improvement was evidenced by the results of the Pretest and Posttest assessment calculations. A summary of the hypothesis test analysis is presented in Table 2.

Table 2. Summary of Hypothesis Test Results through T-Test

No	Measured variable	T _{count}	df	Significant (1-tailed)
1	Mastery of Intelligent Character KU10-14 K III	8.386	14	.000
2	Fighting Skills KU10-14 K III	6.283	14	.000
3	Mastering Smart Characters KU10-14 K IV	9.606	14	.000
4	Fighting Skills KU10-14 K IV	7.287	14	.000
5	Mastering Smart Characters KU-12 K III	6.22	11	.000
6	Fighting Skills KU-12 K III	6.52	11	.000
7	Mastering Smart Characters KU-14 K IV	11.81	17	.000
8	Fighting Skills KU-14 K IV	7.05	17	.000

The test results indicate that there is a significant difference.

This outcome affirms that the further the BMB3 learning strategy is developed in training, the higher the average learning achievements will be in mastering intelligent character, reflected through the increased number of moral values of intelligent character. Thus, the moral values taught in Tarung Derajat martial arts will further cultivate the identity of a fighter known as the *"knight warrior and warrior knight"* (Sang Guru Achmad Dradjat, 2003). This finding implies that the BMB3 learning strategy implemented at Satlat UNP Padang City is more effective in enhancing athletes' intelligent character values.

The implementation of the BMB3 Learning Strategy at the training center (Satlat) is more capable of directly involving athletes with various real-world environmental exposures. Throughout the learning process, athletes are encouraged to be more active, innovative, creative, effective, and engaged. Furthermore, the learning process integrates the dimensions of thinking, feeling, behaving, acting, and taking responsibility in relation to the subject matter covered in all training activities. The values of intelligent character are embedded in Tarung Derajat martial arts lessons, combined with moral and mental values in a realistic and rational manner as part of mastering and applying

the five moral movement powers: strength, speed, precision, courage, and perseverance (Sang Guru Tarung Derajat, 2011).

This aligns with Lutan's (2001) statement that the concept of physical education and sports is focused on the process of socialization or cultural transmission through physical activity, games, and/or sports. This socialization process means the transfer of cultural values from older to younger generations.

In line with the efforts to improve the relevance and quality of character education, the Indonesian Ministry of National Education (2011) developed a grand design for character education across all pathways, levels, and types of education units. According to Prayitno and Khaidir (2011:66), the development of this grand design for character (intelligent character) education must be aligned with Article 1, Paragraph 1 of Law No. 20/2003 on the National Education System.

Furthermore, Prayitno (2011) explains that the BMB3 learning strategy is designed to energize learning materials by encouraging intellectual, emotional, volitional, and creative engagement, along with responsible attitudes and actions (BMB3).

According to theoretical reviews and research findings, the implementation of the BMB3 learning strategy in Tarung Derajat martial arts training is believed to effectively energize all fundamental elements of education: training materials, instructional media, assessment, and training outcomes. Therefore, the application of Tarung Derajat martial arts training can benefit from increased training results, particularly in improving the intelligent character mastery of martial arts athletes, and in sports in general. Hence, it can be concluded that: **"The application of the BMB3 learning strategy is more effective in improving the intelligent character mastery outcomes of Tarung Derajat martial arts athletes at Satlat UNP Padang City."**

Improvement of Fighting Ability of Tarung Derajat Athletes Given the Implementation of the BMB3 Learning Strategy at Satlat UNP Padang City The fighting ability of Tarung Derajat athletes was measured based on ten indicators across six types of skills: three punching techniques and three kicking techniques. The average score accumulation from these judged punching and kicking skills constitutes the athlete's fighting ability score.

The research findings show that there was an improvement in the athletes' fighting ability. Data from the implementation of the BMB3 learning strategy between the initial test (Pretest) and the final test (Posttest) was used. As shown in Table 3.2, the third hypothesis can be confirmed, as the average values of both groups' Pretest and Posttest scores show a sufficient difference, allowing the null hypothesis to be rejected.

This confirms that the improvement in athletes' fighting ability can be optimized by considering various aspects of training and play, especially in point-scoring scenarios during competitive sports simulations. Moreover, the presence of training centers (Satlat) in West Sumatra is inseparable from the moral and mental development required to produce reliable athletes ready to compete at city and district levels, especially in regional sports events (PORPROV). The next level involves national championships (Kejurnas), and potentially, representing Indonesia in international events such as the SEA Games.

Therefore, Tarung Derajat martial arts athletes can be considered professional athletes. Referring to Maslow's hierarchy of needs, professional athletes are positioned at the fifth level—self-actualization which is the highest stage in Maslow's theory. Sang Guru Dradjat refers to this as

"make yourself through yourself" or as an athlete who has reached the level of a self-reliant individual. Athletes at lower need levels can fulfill their movement needs rapidly through sports-based games using the BMB3 learning strategy.

Based on the discussion above, it can be concluded that the application of the BMB3 learning strategy is proven to produce a significant difference in improving athletes' fighting ability in Tarung Derajat martial arts training. However, supporting and inhibiting factors may not be fully accommodated in the process. Therefore, coaches—as process managers—should pay attention to these supporting and inhibiting factors in applying the BMB3 strategy to enhance performance. Hence, it is affirmed that: "The BMB3 learning strategy is more effective in improving the fighting ability outcomes of Tarung Derajat martial arts athletes at Satlat UNP Padang City."

CONCLUSIONS

The key factors and stimulating elements that emerged in the process of shaping intelligent character and enhancing the fighting ability of athletes to achieve peak performance (Golden Age) at Satlat UNP Kota Padang include skill transfer, BMB3 transformation, the presence of many potential athletes being developed, the role of management, parental involvement, training media, and the application of learning/training technologies. The "Sport Derajat" play series was developed using junior-standard chairs as media. The research findings show that: (1) there was an improvement in the intelligent character mastery of 12-year-old Tarung Derajat athletes in Kurata III trained through the BMB3 learning strategy, (2) there was an improvement in the intelligent character mastery of 14-year-old athletes in Kurata IV trained through the BMB3 strategy, (3) there was an improvement in the fighting ability of 12-year-old athletes trained with the BMB3 strategy, and (4) there was an improvement in the fighting ability of 14-year-old athletes trained using the BMB3 learning strategy.

CONFLICTS OF INTEREST STATEMENT

Regarding this study, the author declares that there is no conflict of interest.

AUTHOR CONTRIBUTIONS

Study concept and design: Nissa Aldani. Acquisition of data: Yanuar Kiram. Analysis and interpretation of data: Alnedral Alnedral. Drafting the manuscript: Nissa Aldani. Critical revision of the manuscript for important intellectual content: Tjung Hauw Sin. Statistical analysis: Nissa Aldani.

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