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Evaluation of the pencak silat coaching program in East Java: A study using the CIPP model

Heri Wahyudi[1*], Roy Januardi Irawan[1], Achmad Widodo[1], Mokhamad Nur Bawono[1], Himawan Wismanadi[1], Shidqi Hamdi Pratama Putera[2], Anindya Mar'atus Sholikhah[3], Dhananjaya Sutanto[4]

[1] Department of Health Education and Recreation, Faculty of Sports and Health Sciences, Universitas Negeri Surabaya, Indonesia.

[2] Department of Sport Coaching Education, Faculty of Sports and Health Sciences, Universitas Negeri Surabaya, Indonesia.

[3] Department of Nutrition, Faculty of Sports and Health Sciences, Universitas Negeri Surabaya, Indonesia.

[4] National Strength and Conditioning Association, PADI Foundation, the Chinese University of Hong Kong, Hong Kong.

* Correspondence: Heri Wahyudi; heriwahyudi@unesa.ac.id

ABSTRACT

This study evaluated the development of pencak silat coaching in East Java using Stufflebeam's Context, Input, Process, Product (CIPP) evaluation model. The participants were 55 members of the East Java Indonesian Pencak Silat Association (IPSI), consisting of 11 coaches, 7 staff members, and 37 athletes. A mixed-method evaluative approach was employed, with data collected through questionnaires, observations, interviews, and document analysis. The results indicated that, overall, the implementation of the coaching program falls into the "good" category, with the following scores: (1) Context obtained an average score of 3.34, showing strong alignment between the program and government goals and policies; (2) Input received an average score of 2.84, categorized as "sufficient," highlighting areas for improvement such as funding and infrastructure; (3) Process scored 3.16, rated as "good," reflecting that the program was generally well-planned and executed as designed; and (4) Product achieved an average score of 3.18, also rated as "good," indicating improvements in athletes' physical and non-physical skills, despite a decline in medal counts during the 21st National Sports Week. In summary, the CIPP model was able to pinpoint the areas requiring improvement to foster greater success in pencak silat coaching development.

KEYWORDS

CIPP Model; Coaching; Evaluation; Pencak Silat; Sport Development

1. INTRODUCTION

Pencak silat is a martial art that originates from the Malay ethnic groups found in mainland Sumatera and several regions of Southeast Asia (Kartomi, 2011). The term “pencak silat” itself is a relatively modern label that encompasses both traditional and contemporary martial arts styles that could be practiced either individually (solo) or in pairs as duel, with or without weapons or musical accompaniments (Wilson, 2002). In Indonesia, pencak silat was first adopted as a unifying term for indigenous martial arts during the inaugural congress of the Indonesian Pencak Silat Association in 1948 (Haqiyah et al., 2017). This congress marked a significant step in recognizing and formalizing the diverse forms of self-defense techniques practiced across the nation, leading to "pencak silat" becoming one of the two most commonly used Indonesian terms for such techniques (Wilson, 2002).

In Indonesia, pencak silat is deeply embedded in the culture and is regarded as an important aspects of the nation’s heritage (Aguss et al., 2020; Sarbaitinil et al., 2023). Rich in cultural significant, pencak silat has evolved into a symbol of national identity and a tool for uniting the nation, embodying values such as friendship, mutual respect, and social cohesion (Kusumo & Lemy, 2021). The cultural richness of pencak silat is reflected in its diverse styles and techniques, which vary across different regions of Indonesia, each incorporating unique movements and accompanying music (Kartomi, 2011). Apart from having strong cultural elements, pencak silat is also a type of sport that is practiced by many people (Purwantoga et al., 2022). This martial art has a long history that predates the country’s independence, and its popularity has grown significantly with numerous championship events being held at both national and international levels (Alang et al., 2023; Nugroho et al., 2022).

The achievement trends of pencak silat athletes in Indonesia reflect a dynamic landscape of growth and development, characterized by both historical successes and recent challenges (Qutrotunaini et al., 2022). Indonesia has been a dominant force in pencak silat, successfully securing a high percentage of medals in international competitions, including in 2019 and 2023 SEA Games, as well as 2018 Asian Games (Irianti et al., 2024). However, recent evaluations indicate a decline in performance, with the Indonesian team experiencing a drop from winning in some championships (Qutrotunaini et al., 2022). East Java is one of the provinces in Indonesia with abundant skilled athletes and an outstanding history of medal achievement (Marsudi et al., 2024). It is also a province which actively participating in pencak silat competition, with its potential athlete coming from various regions. However, latest performances indicated a decrease in medal winning of East Java

athletes. This shift has prompted a critical assessment of coaching strategies and training methodologies within the sport.

A successful sport development programs require continuous monitoring and evaluation which involves athletes, coaches, clubs, organizations, infrastructures, fundings, and parents (Sudirman et al., 2024). Evaluating the development of pencak silat coaching is crucial for several reasons. Firstly, a systematic evaluation can identify the strengths and weaknesses within current coaching practices, allowing for targeted improvements that can enhance the athletes' performance. Many coaching programs lack a structured talent identification system, which often results in the exclusion of potentially talented athletes who have not yet achieved titles but possess the necessary skills and attributes for success (Syahputra et al., 2022). Furthermore, an evaluation can address issues such as inadequate training methodologies and insufficient infrastructure, which have been shown to hinder the effective development of athletes (Lestari & Sutapa, 2019). By assessing these factors, stakeholders can implement evidence-based strategies that align with modern training techniques and sports science principles, ultimately fostering a more competitive environment for pencak silat athletes. This ongoing assessment is essential, not only for improving individual athlete outcomes but also for elevating the overall standard of pencak silat as a sport in Indonesia.

Studies on the evaluation of sports coaching development programs in Indonesia are still lacking. Therefore, we conduct this study to fill in the gap of current literatures. Specifically, we opted to use the CIPP model developed by Stufflebeam and Coryn (2014) as it provides a comprehensive framework for evaluating an entire system of activities, encompassing context, input, process, and product, which includes formative and summative assessments focusing on identifying areas for development as well as demonstrating that a program is effective (Burke & Hennessy, 2021; 2019). Thus, this research aims to obtain valuable insights in the form of relevant information related to pencak silat development program. The scientific purpose of this study is to align regional development policies with the advancement of sports especially in pencak silat.

2. METHODS

2.1. Study Design

It was a descriptive study using mixed-method approach to evaluate the development program of pencak silat in East Java. This approach allows for a comprehensive analysis by combining qualitative and quantitative method, providing a deeper understanding of the effectiveness of the current program and areas for improvement. The Contextual, Input, Process, Product or CIPP

evaluation model developed by Stufflebeam and Coryn (2014) was used to assess the whole process, because CIPP is more comprehensive than the other assessment models in terms of decision-making, including preparation, goal setting, execution, and program impact on an organization.

2.2. Participants

Participants of this study were selected using purposive sampling with the criteria as follows: (1) between the age of 18 and 55 years; (2) serving as active member of East Java's Pencak Silat Association (Ikatan Pencak Silat Indonesia, or IPSI); (3) having minimum of five years of experience as a coach or assistant coach; (4) athletes have participated in any championship at provincial level. This targeted selection process was carried out to collect insights from individuals who have practical experience and a deep understanding of pencak silat training, so as to ensure that the findings would be grounded on the reality of actual coaching and practice.

The initial participant was 55 people consisted of 11 coaches, 7 staff members, and 37 athletes. After coordinating with all participants in order to confirm their willingness to participate in the study, they were invited to engage in discussions that familiarized them with the study objectives through interviewers. They were given ample time to consider the risks and benefits associated with their involvement in the study before giving their written consents. In the end, the final participants were reduced to 48 IPSI members consisted of 9 coaches, 6 staff members, and 33 athletes.

2.3. Data Collection

Data were collected through observations, in-depth interviews, questionnaires, and document analysis. Observation was done to examine certain action or situation which occurred in natural setting to obtain more accurate data. During the observation process, we focused on closely monitoring the activities of the participants, striving to capture valid data on real conditions that occurred in the field.

Meanwhile, in-depth interviews were carried out to provide additional data information that aligned with the data gathered from the questionnaire, and revealed the topics that required further investigation. During the interviews, we directly interacted (face-to-face) with participants through question-and-answer session, and the whole process were recorded. This method of data collection aimed to dig up further information about the participants' point of view, opinion, and experiences related to the measured variables. The interview questions comprised of two parts: 1) the first part was general questions about training or coaching program satisfaction, strength and weakness, and

future development; 2) second part consisted of certain questions based on the result of CIPP. The context part related with objective and institutional policy. The input part focused on program planning, human resource, funding and support, infrastructure, and other variables that could affect the implementation of training program. The process part assessed the implementation of pencak silat coaching, strategies, challenges faced by participants, and feedback mechanism. The last was product part that measured the outcomes of the program, athletes' performance and and non-skill improvement, program effectiveness, and long-term impact.

This study also used questionnaires as a structured method to gather information from the participants. This questionnaire composed of several lists of closed and open-ended questions specifically designed to measure four key areas of CIPP on pencak silat training program. Closed-ended questions provided predefined response options, facilitating quantitative analysis. A four-point Likert scale was used for all categories (4-strongly agree, 3-agree, 2-disagree, 1-strongly disagree). The questionnaire had 90 questions in total, consisted of 17 questions on context, 37 questions on input, 24 questions on process, and 12 questions on product. On the other hand, open-ended questions encouraged participants to share their thoughts, thus providing deeper qualitative insights. Participants were instructed to respond based on their personal perspectives and experiences, ensuring that the data gathered was relevant, honest, and represented their own perspectives. Mean score was then calculated for each area of CIPP, and the criteria in evaluating pencak silat training program was decided as follows:

Table 1. Criteria of evaluation result

Score	Criteria
3.51 – 4.00	Excellent
3.01 – 3.50	Good
2.51 – 3.00	Sufficient
2.01 – 2.50	Unsatisfactory
< 2.01	Poor

In addition to questionnaires, present study used document analysis as a supplementary data collection method. This involved reviewing various written or recorded documents that were required for the study.

2.4. Data Analysis

Data were analyzed descriptively by presenting the maximum score and percentage of each indicator. In addition, a statistical analysis was performed using SPSS 30 for Mac (IBM Corp, Armonk, NY, USA) to measure validity and reliability of the questionnaire results. The survey results were computed and the reliability of the responses assessed using Cronbach's alpha. Kruskall-Wallis test was carried out to compare the result of program evaluation between coaches, staff members, and athletes. Significant difference was decided on p-value ≤ 0.05.

The qualitative data analysis was conducted using a content analysis approach. The audio recordings of the interviews were converted into written transcript, and each individual transcript was systematically coded. Two researchers with expertise in qualitative research reviewed the transcribed data multiple times to grasp the overall meaning. They identified key words and phrases that represented significant thoughts or concepts related to the context, input, process, and product within the content. Sentences with similar meanings and topics were then grouped together. Subsequently, these groups were organized into more abstract and meaningful categories based on their interconnections. Throughout the analysis process, efforts were made to enhance the reliability and validity of the findings. This was achieved by reconciling any discrepancies in categories or concepts through ongoing discussions and consultations between the two researchers.

3. RESULTS

The findings of the evaluation on pencak silat coaching development program in East Java are presented as follows. Table 2 shows the results of program evaluation using the CIPP Model.

Table 2. The results of program evaluation using the CIPP Model

Component	All	Coach	Staff	Athlete	p-value
Context	3.34 ± 0.80	3.35 ± 0.77	3.34 ± 0.72	3.33 ± 0.78	0.340
Input	2.84 ± 0.79	2.84 ± 0.76	2.85 ± 0.75	2.83 ± 0.79	0.677
Process	3.16 ± 0.82	3.16 ± 0.78	3.16 ± 0.80	3.17 ± 0.79	0.310
Product	3.18 ± 0.75	3.17 ± 0.77	3.15 ± 0.76	3.18 ± 0.75	0.220

The result of program evaluation shows that context had the highest score among the four areas of CIPP model, which was 3.34 ± 0.80. Coach, staff, and athlete were satisfied and agreed with the current program on pencak silat coaching development that has been implemented in East Java, with score for each group were 3.35 ± 0.77, 3.34 ± 0.72, and 3.33 ± 0.78, respectively (p = 0.340).

The context evaluation in present study encompassed analysis of several indicators such as coaching background, objectives (vision and mission of organization), need analysis, alignment with government policy, and stakeholder engagement which involved how coaches, athletes, and local authorities contributed in shaping the training program (Table 3).

Table 3. The descriptive result of context evaluation

Area	Indicator	Score	Criteria
Context	Background of coaching program	3.42	Good
	Objective (vision and mission)	3.33	Good
	Need assessment before the implementation of program	3.20	Good
	Implementation aligns with government's policy	3.31	Good
	Stakeholder engagement	3.45	Good
Average		**3.34**	**Good**

The context evaluation was done to evaluate the current conditions related to coaching programs that have been implemented or planned including the weaknesses and strengths of a coaching program objective. The result of context evaluation on pencak silat training program was considered good, with the average score of 3.34.

The input evaluation of pencak silat training program assessed resources, infrastructures and facilities, and other indicators that support the program implementation in achieving its predetermined goal. In the context of sports coaching, these indicators are interrelated as they collectively contribute to the overall success of the coaching process. Each component or indicator plays a vital role in facilitating athlete development and improving their performance. The finding from input evaluation, as presented in Table 4 were sufficient, yielding an average score of 2.84.

Table 4. The descriptive result of input evaluation

Area	**Indicator**	**Score**	**Criteria**
Input	Human resources	2.96	Sufficient
	Program planning	3.04	Good
	Coaching curriculum	3.00	Good
	Fundings and budget allocation	2.45	Sufficient
	Infrastructures and equipment	2.50	Sufficient
	Parents' support	3.10	Good
Average		**2.84**	**Sufficient**

The lowest score was found in funding and budget allocation. Based on these results, it showed that overall input score was in the sufficient category because there were several input indicators that have not been fulfilled properly, such as human resources, funding, and infrastructures.

Process evaluation involves assessing data related to the implementation of predetermined activities within the coaching program, using the inputs that have been provided. This evaluation is basically conducted to determine the extent to which activities have been implemented during the program implementation phase. In addition, this evaluation aims to identify which components need improvement or modification to better align with the needs of participants and the overall program objectives (Table 5).

Table 5. The descriptive result of process evaluation

Area	Indicator	Score	Criteria
Process	Implementation of training program	3.04	Good
	Curriculum delivery	3.35	Good
	Variability of training activities	3.22	Good
	Coaches competency	3.28	Good
	Adherence to schedule / plan	2.97	Sufficient
	Team cohesion	3.02	Good
	Performance monitoring and evaluation	3.18	Good
	Support services	3.26	Good
Average		**3.16**	**Good**

By analyzing these aspects systematically, the process evaluation ensures that the program remains smooth and effective during its implementation. The average score of process evaluation was 3.16 which fell into good category.

Table 6. The descriptive result of product evaluation

Area	Indicator	Score	Criteria
Product	Athletes' performance at regional, province, and national level	3.02	Good
	Non-physical outcomes	3.30	Good
	Program effectiveness	3.24	Good
	Long-term achievement	3.18	Good
Average		**3.18**	**Good**

The last evaluation focused on product aspect, which assessed the athletes' performance, non-physical outcome (positive attitudes, increased confidence, mental resilience, discipline), program effectiveness, and long-term achievement (including medal achievement and progression to higher

level of competition). Overall, the average score of product evaluation was 3.18, yielding excellent results (Table 6).

4. DISCUSSION

The coaching development of high-performing sports are managed by sports organizations at both the national and regional levels. This process involves empowering sports associations and enhancing national and regional coaching centers, as well as organizing competitions in a structured and sustainable manner as stated in the Republic of Indonesia Law Number 3 of 2005 concerning the National Sports System (Bella, 2022). Organizational structure is a line of components that manages all members or staff to have their respective positions and functions in an organization. A good organizational structure can be seen from the responsibility of each staff to their duties and roles, working together to achieve the goal or objective (Sondej, 2016). The vision and mission of sports have the goal of increasing sport achievements. Sport achievements are the benchmark for the success of sports coaching that is developed or fostered (Suratmin et al., 2023).

All of those above-mentioned variables are interrelated in influencing the successful of sport coaching development program. It reaffirms that every organization needs evaluation, both internally and externally to achieve better changes and improvements (van Vliet et al., 2021). Therefore, this study used a CIPP evaluation to assess pencak silat coaching development in IPSI East Java. The CIPP model is a comprehensive framework that evaluates the setting goal, input, process implementation, and outcomes of the program (Zhang et al., 2011). A thorough evaluation conducted using this model would yield objective findings that can provide valuable insights for East Java Indonesian Pencak Silat Association in the future.

The result of evaluation on pencak silat training program reported by coaches, staff members, and athletes revealed positive findings from the context, input, process, and product. The average scores for each group in all four areas were closely aligned, with no significant difference was found between groups. The similarity in the scores indicated a mutual agreement on point of view or perspective among all participants towards the pencak silat training program in East Java. The uniformity in perceptions and thoughts were also encouraging as it indicated that all parties involved feel positively about their experiences within the program.

4.1. Context Evaluation

In term of context evaluation, we found that majority of participants thoughts was in good category, where the implementation of sport coaching and training was in line with its objective as well as government policy. The main goal of sports coaching is to maximise the development and improvement of athletic abilities and accomplishments (Johnson et al., 2011). Establishing clear goals enables all participants involves in the coaching program to concentrate their efforts on strategies and actions required to achieve those goals (van der Hoek et al., 2018). It was in line with previous study which reported that sport coaching evaluation on context aspect should be relevant to the needs of sport training and coaching (Sudirman et al., 2024). It explained why the implementation of sport coaching is formulated according to both government and sport organization policy which involved the needs of athletes in the field. In-depth interview analysis revealed that training need assessment or TNA was carried out at the beginning of each training session. In addition, a culture of feedback was also actively carried out among coaches, athletes, and stakeholders, facilitating ongoing discussion about coaching requirements and enhancements.

4.2. Input Evaluation

Human resources such as coaches and athletes are one of the factors influencing the success of coaching process (Liu et al., 2024). Professional coaches must have a strong understanding of coaching knowledge such as training methodology and pencak silat curriculum, beside possessing solid grasp of non-technique skills (Assalam et al., 2015). This knowledge must be effectively delivered to the athletes in order to train and shape them as skilled athletes (Johnson et al., 2011). Without the support of skilled athletes, even the most professional coaches may struggle to achieve peak performance. Conversely, talented athletes who do not receive proper support and training may fail to meet their performance goals (Mottaghi et al., 2013). Therefore, fostering a collaborative relationship between coaches and athletes is essential in every sport activity including pencak silat (Sut Txi et al., 2023). In addition, parental support is also a significant factor affecting the athletes' performance as it helps them in boosting self-confidence and motivation to practice. Thus, creating a quality coaching process requires good cooperation between coaches, parents, and athletes to achieve optimum performance (Yang et al., 2024).

The findings revealed that several assessment indicators showed sufficient results, such as the funding, infrastructure, and equipment to support the coaching process. Adequate funding is essential for enhancing and maintaining the resources required for effective training (Kulvisaechana et al.,

2020). This element is important factors in the success of achievement-oriented coaching programs, as limited financial resources may restrict access to high-quality training facilities or necessary equipment. When organizations lack sufficient funding, it can also severely impede the implementation of training programs designed by the coaches (Dmitriev et al., 2020). Meanwhile, infrastructure also plays vital role in any sports activity which requires specific attention. The sufficient and accessible infrastructures would increase the motivation of athletes to practice, as it provides the environment where athletes can train and improve their skills (Marsudi et al., 2024). Conversely, inadequate and poor infrastructure can lead to unsafe training conditions or insufficient space for athletes to practice.

4.3. Process Evaluation

The process evaluation of pencak silat coaching program in East Java observed several key insights into its implementation. The interpersonal dynamics between the coaches and athletes were found to be essential in athlete development, as highlighted by previous study done by Curran et al (2015). The results of the evaluation analysis of the pencak silat coaching in East Java showed that the program has been well designed, but its implementation has not yet referred to the coaching program designed by the team. Specifically, it became evident that the training sessions sometimes deviated from the structured plan due to several factors such as communication between coaches and athletes, as well as adherence to training schedule. Researchers have previously expressed an interest in the interpersonal interactions that exist between coaches and their athletes. This is especially true in pencak silat, where this interaction is important to the success of the athletes' development (Bella, 2022). However, in term of coaches' competency, in-depth interview results reported that most coaches in East Java IPSI had a comprehensive understanding of various training aspects, athletes' psychology, technical skills, and material delivery. Professional coaches are needed to implement training program that tailored to the needs of each athlete. It included recognizing individual strengths and weaknesses, which is required for talent identification and athlete development (Assalam et al., 2015).

4.4. Product Evaluation

Product evaluation tries to assess the achievement of previously defined objectives using particular standards and criteria. The product's outcomes are linked to human resource performance and impact subsequent decision-making, ensuring that the program's objectives are met. Pencak silat coaching program focuses in developing the all-round abilities and skills while fostering athletes'

capacity to become good team member who are passionate about pencak silat (Rikberg & Raudsepp, 2011). Although clear files were not documented due to lack of data at the regional level, sports office staff reported that the coaching program contributed less than expected. This could be seen from the declining achievements of several East Java athletes when competing at the provincial, national, and even international levels. The latest event was reported during National Sports Week (PON XXI) held in Aceh and North Sumatera, where East Java failed to become the overall champion in pencak silat after losing from West Java (Kominfo Jatim, 2024). In addition, a strong monitoring and evaluation mechanism should be established to enhance the quality of program implementation, which in turn would lead to improve the athlete performance (Teshome et al., 2022). It is also important to consider that high-quality coaching program is not only anticipating medal achievement but also improving non-physical outcomes such as positive behaviours, life skills, teamwork, etc. Coaches and other related parties should instill in athletes a drive to compete, hoping they would develop team skills and commitment to the success of the team (Teshome et al., 2022).

5. CONCLUSIONS

The findings indicated that both the context, process, and product evaluations fell into the "good" category, reflecting a strong alignment between the training program's objectives and the needs of the participants, as well as significant improvements in athletes' performance and development. This suggests that the program is not only well-conceived in terms of its foundational goals and implementation but also successful in achieving meaningful outcomes for its athletes. Conversely, the input evaluation was categorized as "sufficient," indicating that while there are solid resources in place, there may still be areas for improvement. In summary, the CIPP model was able to pinpoint the areas requiring improvement to foster greater success in pencak silat coaching development.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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