

# An Evaluation of Swimming Coaching Programs

Indra Gunawan  
Faculty of Sports Science  
Universitas Negeri Yogyakarta  
Yogyakarta, Indonesia  
indragunawan375@gmail.com

Sugeng Purwanto  
Faculty of Sports Science  
Universitas Negeri Yogyakarta  
Yogyakarta, Indonesia  
sugengpurwanto.fik@gmail.com

**Abstract**—the aim of this study was to evaluate the context, input, process and product for the implementation of swimming sports training program in Bengkulu City. The research was conducted at Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club. All the components contained in the training program which included 2 coaches, 20 athletes, 20 athlete's parents were used as subjects of the study. Data collection techniques employed include observations, questionnaires, tests and measurements, and documentations. Quantitative and qualitative descriptive analysis were employed as data analysis techniques. The results of the evaluation carried out on the performance improvement program in Bengkulu City showed that (1) with regards to the 'context', the goal of the training was good and parental support to the athlete was substantial but there were some parents who were less supportive to the athletes; (2) When it comes to the input, the level of competence of the trainer was good, but the physical ability level and athlete attractiveness were found not to be good enough. Other supporting factors such as facilities and infrastructures and training qualifications was found to attain an ideal achievement, although some training equipments were still not available. (3) For the process, generally, the training process was running well. In the selection of a training program and carrying out analysis on an existing program with respect to the field condition, the coach had run the program well and the athletes were quite active in running the training program that had been given. Finally, (4) with respect to the product, generally, swimming clubs in Bengkulu city showed good results in regional competitions but have not been in impressive in national and international level.

**Keywords**—evaluation, coaching program, swimming

## I. INTRODUCTION

Competitive swimming can be a central part of life for some athletes [1]. Achievement in sports is gotten from input of the player as well as the coaching support. [2]. Most sport training components are provided with methods, instruments and standard techniques that can be used in measuring and appreciating their didactic activities but technical training cannot be quantified [4]. Evaluation helps swimmers in achieving their desired exercise goals through the monitoring of their swimming performance and technique and providing them with necessary feedback [3].

Program evaluation approaches are used in discovering their strengths and weaknesses, decide which ones merit substantial use, determine when and how they can apply it, and obtain direction to improve these approaches and devise better alternatives [5]. The reasons for the evaluation of trainings include justification of the existence and budget of the training department by showing how it contributes to the organizational objectives and goals; deciding whether to

continue or discontinue training programs; and gathering information on how to improve future training programs [6].

One of the model evaluations is the CIPP evaluation model, which is a more comprehensive model compared to other models. This model was developed by Daniel Stufflebeam at Ohio State University. It is effective in responding to ESEA (Basic and Intermediate Education Act). CIPP is an abbreviation for Context evaluation which is the evaluation of context; Input evaluation which is the evaluation of input; Process evaluation which is the evaluation of process; and Product evaluation which is the evaluation of results. In swimming sport coaching, there is need for the evaluation of (1) training goals and parent's support as context; (2) trainer's competence, athletes physical abilities, facilities and infrastructures as input; (3) the process of implementing the training program as process; and (4) athlete achievements after implementing training program.

## II. METHOD

Program evaluation is a process of systematic inquiry used in making provision for sound information about the characteristics, activities, or outcomes of a program or policy for a valued purpose [7]. There are many factors that influence athlete achievements and they include motivation, support, trainer's competence, athlete abilities, facilities and infrastructures, and coaching program. The most important thing in athlete development is their own development. However, athletes also identify how other athletes and coaches influenced their development. It is important to note that when athletes discuss the roles of their coaches, they classify its effect to have either direct or indirect influences on their development. For instance, coaches influence athletes through the direct teaching of life skills (e.g. teaching goal setting) [11].

Before the consideration of whether there can be identification of talent, it is first important to consider the evidence regarding whether talent actually exists. This might seem counterintuitive, but several researchers have concluded that the notion of talent, that is, an identifiable potential for later success in a domain is not yet founded [13].

But in sport, understanding that no effective and comprehensive sport selection method is possible without a thorough understanding of each individual task involved in such sport, and an equally thorough understanding of how the various human systems (the brain, the heart, the muscles, and so on) go about performing those tasks is necessary [12].

The purpose of this study was to evaluate the swimming coaching programs through the use of CIPP evaluation model. Tirta Cempaka Swimming Club and Tirta Rafflesia

Swimming Club were used as case studies. The subjects of this study were all components contained in the training program which include 2 coaches, 20 athletes, and 20 athlete's parents. The context section of the Context, Input, Process, and Product evaluation model employed helped in the identification of the service providers, learning needs and the community needs. The input evaluation component helped in the prescription of a responsive project that can best address the identified needs. Next, the process evaluation component dealt with the monitoring of the project process and potential procedural barriers and also identified needs for project adjustments. Finally, the product evaluation component measured, interpreted, and judged the outcome of the project and interpreted their merit, worth, significance, and probity [8].

#### A. Context Evaluation

Context evaluation is most times called the needs assessment. It asks "What needs to be done?" and helps in the assessment of problems, assets, and opportunities within a defined community and environmental context [9]. This study engaged in the evaluation of training goals and parental supports as a context.

#### B. Input Evaluation

Input evaluation helps in the prescription of a project needed in addressing the identified needs. It asks "How should it be done?" and identifies procedural designs and educational strategies that will most likely achieve the desired results [9]. This study engaged in the evaluation of the trainer's competence, athlete physical abilities and facilities and infrastructures as input.

#### C. Process Evaluation

The process evaluation in the CIPP model has to do with the evaluation of the progress of the program implemented [10]. This study engaged in the evaluation of the process of implementing the training program as process.

#### D. Product Evaluation

Product evaluation or outcome evaluation apply the effects or outcomes of programs, rather than their inputs or processes [5]. It has to do with the assessment of the benefits and impacts of a learning service project, which are then used in adjusting and improving projects for future implementation. It offers insight into the sustainability and ease of transporting the project, i.e., whether the project can be sustainable on the long run, and the transferability of this method to other situations [8]. This study engaged in the evaluation of athlete achievements after the implementation of the training program.

The subjects and data collections technique of this study are summarized in table 1. Data analysis techniques used were quantitative and qualitative descriptive analysis.

TABLE I. THE SUBJECT, DATA COLLECTIONS TECHNIQUE, AND DATA ANALYSIS

No	Aspect	Variable	Respondent and subject	Data collections technique
1	Context	Training goals and parent supports	Training goals and athlete parents and	Observation & questionnaire,
2	Input	Trainer's competences, athlete physical abilities and facilities and infrastructures	Trainer's athletes, and facilities and infrastructures	Test and measurement, questionnaire, observation, documentation
3	Process	Process of implementing of the training program	Trainers and athletes	Questionnaire & observation
4	Product	Achievement of athlete	Athletess	Documentation

The data collection techniques used in this study are Stroke Distance, Cooper Twelve-Minute Run, Measurement of Body Proportions, Fish-Scale Stroke Power, Vertical Jump, Shoulder Range of Motion, and Ankle Range of Motion [12].

This study made use of questionnaires, tests and measurements as instruments to obtain quantitative data. The questionnaires were given to the parents of athletes and their trainers. Tests and measurements were carried out on athlete's physical abilities in swimming sport selection.

Meanwhile, qualitative data was also obtained from questionnaires, observations and documentations. Qualitative questionnaires were used in the evaluation of the process of implementing the training program. Observations were used for the evaluation of training goals, facilities and infrastructures, and process of implementing the training program.

### III. RESULTS AND DISCUSSION

#### A. Context

The most important aspect of the training program is to set the goals of the program. These training goals help individuals and team to engage in a more efficient and effective behaviors [15]. Development of sport has to do with the collaboration of some important components of sports towards achieving a high-level performance in such sport. Parental support is one of the important components of sport that could be classified under the Long Term Athlete Development, which is capable of benefiting or harming athletes if not adequately administered [14].

The training goal of both Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club was to perform well in Bengkulu Regional Competition and National Sport Competition. The results of parental support are summarized in table 2. Parental support was divided into four parts: (1) Material support is financial support or provides all the equipment needed for athletes; (2) Nutritional support is how parents provide good nutrition for athletes; (3) Non- material support or motivation; and (4) Communication with the coach.

Generally, the results of parental support at the Tirta Cempaka Swimming Club stated that 65% of parents support

their athletes, but the remaining 35% do not provide support to athletes. Meanwhile, the results on parental support at the Tirta Rafflesia Swimming Club stated that 85% of parents are supporting their athletes and only 15% of parents lacks support for the athletes.

TABLE II. TIRTA CEMPAKA SWIMMING CLUB AND TIRTA RAFFLESIA SWIMMING CLUB PARENTAL SUPPORT

Respondents	Components in question	Answers
Parental support in Tirta Cempaka	Material Support	40% answered agree 27,5% answered less agree 25% answered very agree 7,5 answered disagree
	Providing Nutrition	52% answered agree. 24% answered less agree 20% answered very agree 4% answered disagree
	Non-Material Support Or motivation	57,5% answered agree 22,5% answered less agree 17,5% answered very agree 2,5% answered disagree
	Communication with trainers	50% answered very agree 50% answered agree
Parental support in Tirta Rafflesia	Material Support	60 answered very agree 25% answered agree 7,5% answered less agree 7,5 answered disagree
	Providing Nutrition	60% answered very agree 34% answered agree. 6% answered less agree
	Non-Material Support Or motivation	62,5% answered very agree 27,5% answered agree 10% answered less agree
	Communication with trainers	35% answered very agree 50% answered agree 15% answered less agree

### B. Input

The importance of relational issues at helping relationships are highlighted within several areas related to growth and learning, for instance in education, leadership, guidance, counselling, and sport. A successful helping relationship between a coach and an athlete in sport should bring about the stimulation of growth and development of the athletes' talents [16]. This shows that a good relationship between coach and athlete can support the achievement [17]. On the other hand, supporting facilities, both physical and non- physical can also support achievement [18].

A research on the competency level of coaches was conducted at Club Tirta Cempaka and Club Tirta Rafflesia, it can be concluded that the level of competence of coaches in both clubs is good. This can be founded on the results of the questionnaire given to the two trainers which showed that the coaches compiled and developed a good training program strategy. There was also an evaluation of each training program that has been implemented.

The results of athlete physical abilities are summarized in table 3. Generally, the results show that the athletes' physical abilities are not good enough, especially on the main physical

components in swimming such as Vo2max, stroke distance, body proportions and leg power.

TABLE III. THE RESULTS OF ATHLETE'S PHYSICAL ABILITIES

Type of test	Results	
	Tirta Cempaka Swimming Club	Tirta Rafflesia Swimming Club
Stroke Distance	Not good	Not good
Cooper Twelve-Minute Run	Not good	Not good
Body Proportions	Not good	Not good
Fish-Scale Stroke Power	Good	Not good
Vertical Jump	Not good	Not good
Shoulder Range of Motion	Good	good
Ankle Range of Motion	Good	good

The results of facilities and infrastructures are summarized in Table 4. and Table 5.

TABLE IV. THE STATE OF THE POOL

No	Indicator being assessed	Results		Explanation
		Tirta Cempaka Swimming Club	Tirta Rafflesia Swimming	
1	Length	25 meters	25 meters	Standard
2	Wide	13 meters	15 meters	Standard
3	Dept	1,2 - 2,1 meters	1,5 - 2,3 meters	Standard
4	Start block	5 start block	5 start block	Standard
5	Water condition	Good	Good	Standard

The research of the state of facilities and infrastructure was done through the examination of the state of the swimming pool as well as that of the training equipment. From the result of the research carried out on the facilities and infrastructure of Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club, it was discovered that the pools are in good condition, but the training equipment at Club Tirta Cempaka are not good enough because of the unavailability of some important athlete training equipment.

TABLE V. THE STATE OF TRAINING EQUIPMENT AVAILABILITY

No	Training equipment	Results (availability)	
		Tirta Cempaka Swimming Club	Tirta Rafflesia Swimming
1	Swimsuit	Available for all athletes	Available for all athletes
2	Goggles	Available for all athletes	Available for all athletes
3	Kickboard	Available for some athletes	Available for all athletes
4	Snorkel	Not available	Available for all athletes
5	Pull buoy	Available for all athletes	Available for all athletes
6	Paddles	Available for all athletes	Available for all athletes
7	Fins	Not available	Available for all athletes

### C. Process

Swimming performance of older students appears to be strongly related to the opportunities to learn to swim as a child and availability of swimming pools as a child. As a child and beginner, the more time an individual devotes to practicing a particular activity, the greater their level of achievement and the more comfortable they tend to be in the environment [19]. In an effort to achieve high achievement in a sport, the most important thing is the process of developing athletes or so-called training process [18].

The results of the state of training process at Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club reveal that the training process is satisfactory. This came as a result of the analysis of the training materials, the delivery of the training materials, the mastery of the material, and the interaction between trainer and athletes.

### D. Product

Product component on evaluation of Swimming Coaching Programs in Bengkulu City is the athlete achievement after following the training program. Generally, swimming clubs in Bengkulu city have achievements in regional competition, but they have not been able to show the same level of achievement in national and international level. Table 6. shows the Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club athlete achievement.

TABLE VI. ATHLETE ACHIEVEMENT

No		Achievements		
		Regional competition	National competition	International competition
1	Tirta Cempaka Swimming Club	9	3	-
2	Tirta Rafflesia Swimming Club	10	-	-

## IV. CONCLUSION

The results show that there are similarities and differences in the problems being faced by both swimming clubs in Bengkulu City. In the parental support as the context of evaluation component, Tirta Cempaka Swimming Club obtained 65% of parents supporting athletes and 35% not supporting them while Tirta Rafflesia Swimming Club obtained 85% of parents supporting athletes and only 15% of parents less supporting their athletes.

In the input component, the trainers' competence level is good for both Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club. The level of athletes' physical abilities and skills are not good enough for both clubs. However, the research of facilities and infrastructure in both clubs in Bengkulu City shows some difference, especially, the availability of training equipment where the availability of training equipment in Tirta Cempaka Swimming Club is not good enough.

The research of the process components in Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club is good. The results show that the training process in the field has been going on well. In the product component or the achievement at Tirta Cempaka Swimming Club and Tirta Rafflesia Swimming Club, it was discovered that they have both been

performing well at the regional level but they have not been satisfactory at national and international competitions.

## REFERENCES

- [1] Lucero, Blythe. *100 more Swimming Drills*. UK: Meter & Meyer Sport. 2013.
- [2] Cholik. *Sport Development Index*. Jakarta. 2007.
- [3] Bächlin, Marc & Tröster, Gerhard. Swimming performance and technique evaluation with wearable acceleration sensors: Pervasive and Mobile Computing 8 (2012) 68–81 doi:https://doi.org/10.1016/j.pmcj.2011.05.003
- [4] Liliana Mihăilescu, Nicoleta Simona Dubițb. Contributions for programming and implementing an evaluation instrument of the swimming technique correctness: Social and Behavioral Sciences 180 (2015) 1283 – 1288 doi: https://doi.org/10.1016/j.sbspro.2015.02.265
- [5] D. L. Stufflebeam, dkk. *Evaluation Models Viewpoints on Educational and Human Services Evaluation*. Second Edition. USA: Kluweracademic Publishers. 2002.
- [6] D. L. Kirkpatrick, & J. D. Kirkpatrick, *Evaluating Training Programs*. San Francisco: Westchester Book Group. 2008.
- [7] L. Stevahn, & J. A. King, "Facilitating interactive evaluation practice: Engaging stakeholders constructively," In R. S. Fierro, A. Schwartz, & D. H. Smart (Eds.), *Evaluation and Facilitation. New Directions for Evaluation*, 2016, 149, 67–80. Retrieved from DOI: 10.1002/ev.20180
- [8] G. Zhang, et al. "Using the Context, Input, Process, and Product Evaluation Model (CIPP) as a Comprehensive Framework to Guide the Planning, Implementation, and Assessment of Service-learning Programs," *Journal of Higher Education Outreach and Engagement* 2011, 15(4). Retrieved from https://kwschochconsulting.com/wp.../Using-CIPP-to-evaluate-service-learning
- [9] D. L. Stufflebeam, & A. J. Shinkfield, *Evaluation theory, models, & applications*. San Francisco, CA: Jossey-Bass. 2007.
- [10] Tomoliyus. *Evaluasi Olahraga Latihan*. Yogyakarta: UNY. 2013.
- [11] Rathwell, Scott dan Young, W. Bradley, "Coaches' Perspectives on Personal and Psychosocial Development in University Sport," *International Sport Coaching Journal*, 2018, 5 (1-13). Retrieved from https://doi.org/10.1123/iscj.2017-0018
- [12] Arnot, R. Burns dan C. L. Gaines. *Sports Talent*. England: Penguin Books. 1986.
- [13] J. Baker, S. Cobley, & J. Schorer, "Talent identification and development in sport: International perspectives. New York: Routledge. (Eds.). 2012.
- [14] Schiavon dan Soares. Parental support in sports development of Brazilian gymnasts participants in the Olympic Games. *Science of Gymnastics Journal*. 2016. Retrieved from http://dx.doi.org/10.1590/1807-55092016000100109
- [15] Gardner, K. Aimee et al. Setting goals, not just roles: Improving teamwork through goal-focused debriefing: The American Journal of Surgery, 2016. (1-4). https://doi.org/10.1016/j.amjsurg.2016.09.040
- [16] F. Moen dan R. A. Federici. Coaches' Coaching Competence in Relation to Athletes' Perceived Progress in Elite Sport. *Journal of Education and Learnin*, 2013, 2(1). Retrieved from http://dx.doi.org/10.5539/jel.v2n1p240
- [17] A. M. Grant, (2006). Workplace and executive coaching: A bibliography from the scholarly business literature. In A. M., Grant, & D. R. Stober (Eds.), *Evidence based coaching*. NJ: Wiley & Sons.
- [18] D. P. Irianto, *Dasar Kepeleatihan*. Yogyakarta: UNY. 2002.
- [19] A. Newell, & P. S. Rosenbloom, Mechanisms of skill acquisition and the law of practice. Cognitive skill and their acquisition (pp. 1–54). Hillsdale, NJ: Lawrence Erlbaum Associates. 1981.