

# **The Development Model of Football Coaches Specific Strength and Conditioning Knowledge: Application towards Youth Women's Football Players in the Selangor State Sports School**

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## **Abstract**

The purpose of this study is to identify the level of knowledge among coaches of youth women's football of the Selangor State Sports School (SSS) and the issues and challenges faced in the implementation of strength and physical conditioning training. Based on the objectives of the study a model of strength and physical conditioning training will be propose to women's football team. This research is using evolved grounded theory or EGT which was introduced by Strauss and Corbin (2007). 14 observations on the training session of women's football team of the Selangor State Sports School (SSS) are conducted. This followed by four interview sessions with four coaches in charge of the training of women's football team of SSS and also analysis of related documents. The findings of the study highlight four important themes in shaping the knowledge model of the implementation of strength and physical conditioning training of youth women's football which are sources of knowledge, content of knowledge, training suitability and competition demand as well as training facilities and equipment. These four themes are divided into other requirements which serve as the basic guidance for coaches. In conclusion, this model may assist the coaches of women's football to improve their knowledge on strength and physical conditioning training in order to implement them into practice.

**Keywords:** Women's Football Team, Coaches, Strength And Physical Conditioning Training, Knowledge, Challenges.

## **Introduction**

Football is not merely just a game. It requires players to have the ability to think positively and intuitively. Football also requires players to make quick decision and have immediate response Kho Kay Kim, (2017). Kho Kay Kim further states that football is beautiful game. Football also is the number one sports in the world and in Malaysia (Ministry of Youth and Sports, 2013). In Malaysia, collaboration between Football Association of Malaysia (FAM),

Ministry of Youth and Sports, National Sports Council and Ministry of Education Malaysia have produced a plan which is known as National Football Development Programme.

Women's football team however is not included in the National Football Development Programme for the development of football at the grassroots level. Nevertheless, efforts done by the Ministry of Education Malaysia through Sports Department of Ministry of Education Malaysia required every State Sports School (SSS) to set up one women's football team starting in mid-2014 (Ministry of Education, 2014). With the establishment of women's football team in every State Sports School, Sports Department of Ministry of Education Malaysia has organized Women's Football Circuit for the category of under 14 competitions starting on December 2014. The aim of the competition is to discover new talents in women's football and it continues until today.

Football is a sport that is played in teams. According to Zulakbal Abd Karim (2016), a coach plays an important role in increasing individual as well as team's performance level. Coaches of every sport try to set goals that allow their athletes to achieve maximum success (Fatemeh, Rahim, Mohamad dan Anoushiravan, 2010).

The field of coaching also has its own challenges and hurdles. It requires coaches to have knowledge in order to face every type of challenges and to make the right decision. According to Surujlan and Nguyen (2011), most of the football coaches will face some challenges, heartbreaks, conflicts and tensions and these issues should not be underestimated. Launder (2009) states that even though a coach's job is quite complex, the knowledge they have is the main factor that influenced athlete or team's preparations. According to Berger (2011) and Peacock (2008) a coach needs a stronger support if the association of football or the government is serious on the development of football. It is clear that every coach needs to make preparation in terms of education and knowledge in order to face the challenges in the field of coaching.

Anuar dan Abd Rashid, Salleh dan Awang, Mohd Ishak (2015), state that a coach's knowledge on aspects of existing facilities as well as training program is a big influence in the management of coaching training program. This is because it influences the contentment of athletes or players to practice. According to Zulakbal Abd Karim (2016), coaches who are more knowledgeable and intelligent in facing the challenges in the process of building their careers as a coach tend to do better in their responses toward every challenge they encounter. Zulakbal Abd Karim and Ali Md Nadzalan (2017), state that a coach needs to have knowledge on coaching in order to help improve their coaching skills. This shows that formal education for coaching through coaching courses or seminars help to build solid knowledge in a coach in order for them to implement more effective training.

According to Bangsbo and Mohr (2014), over the last few years most researches done were centralized on players' performance and the result of a football match. Due to this a study on knowledge and challenges to implement strength and physical conditioning training for the coach of women's football need to be done because it is an important aspect in ensuring the physical training for women's football is more effective. According to Dorgo (2009), a coach who has more advantage than other coaches in terms of talent, knowledge, passion, accuracy and perseverance in work often labelled as an expert coach.

Mohr, Krstrup and Bangsbo, (2005), state that in order to plan a suitable football training program it is crucial to understand the need of energy system in a football game. The physiology demand during a football match if it is estimated with the heart rate suits with 70% of maximum oxygen intake. This shows that aerobic energy production is needed and contributes more than 90% of the total of energy used during a match. Bangsbo, (2003) also

states that the ability to implement high intensity training for a long period of time should be specifically formed. These needs can be achieved through high intensity aerobic training conducted in an orderly manner. According to Krustup and Mohr (2006), it is important for each player to form their abilities to do repeated training to the maximum. This effort can be achieved through high intensity aerobic training and repeated speed endurance training. According to Bangsbo (2009), physiological analysis and measurement have shown that modern football requires players to have high energy and high ability to do repeated task. The researcher further states the most successful team is a team that is able to do high intensity activity during a match in ball possession. Based on the studies mentioned it is clear that strength and physical conditioning training is important in forming a women's football team. Strength and physical conditioning training should be acquired through the right sources of knowledge and also good understanding from every football coach in order to achieve the desired results.

### Methodology

Evolved Grounded Theory (EGT) (Strauss & Corbin, 1990) is used as the methodology in this research. According to Strauss and Corbin (1990), data is collected through observation, interview, and document analysis on training plan programs, daily reports or other written documents. The theory is gradually produced from raw data collection and evolved from phenomenon-naming and theme.

Table 1  
*Sampling*

Category	Total (N)
Head Coach of Football Selangor State Sports School	1
Head Coach of Women's Football Selangor State Sports School	1
Assistant Coach of Women's Football Selangor State Sports School.	1
Coach for Football's Goalkeeper Selangor State Sports School	1
Total (N)	4

In this research, the researchers have utilized purposive sampling technique by interviewing four participants (coaches) in charge of women's football team at Selangor State Sports School to identify knowledge and challenges in implementing strength and physical conditioning training for women's football.

### Data Collection

In this research the exploration of knowledge among women's football's coach and to identify the challenges faced during the implementation of strength and physical conditioning training is using various dimension concepts. This can be done through the application of triangulation, the usage of multiple instruments. Due to this three main strategies are used to collect data which are observations, interview and document analysis. The usage of these three data sources is necessary in order to increase the credibility of the findings and to reduce the possibility of misinterpretation.

### Procedure

According to the basic principles of Strauss and Corbin (1990) and Evolved Grounded Theory (EGT), the process of data analysis is done together with the actual data, the creation of temporary theory and memo being interacted progressively in which the data gathered is divided, theme is conceptualized and the tentative is discussed. Then the data is turn into code and category. The category and tentative theme is verified by comparing the category as suggested by Strauss and Corbin, (1990). The method used allows technique analysis. This enables richer and detailed frame of work in order to understand the complexity of more dynamic coaching development (Pellegrino, Chudowsky & Glaser, 2001).

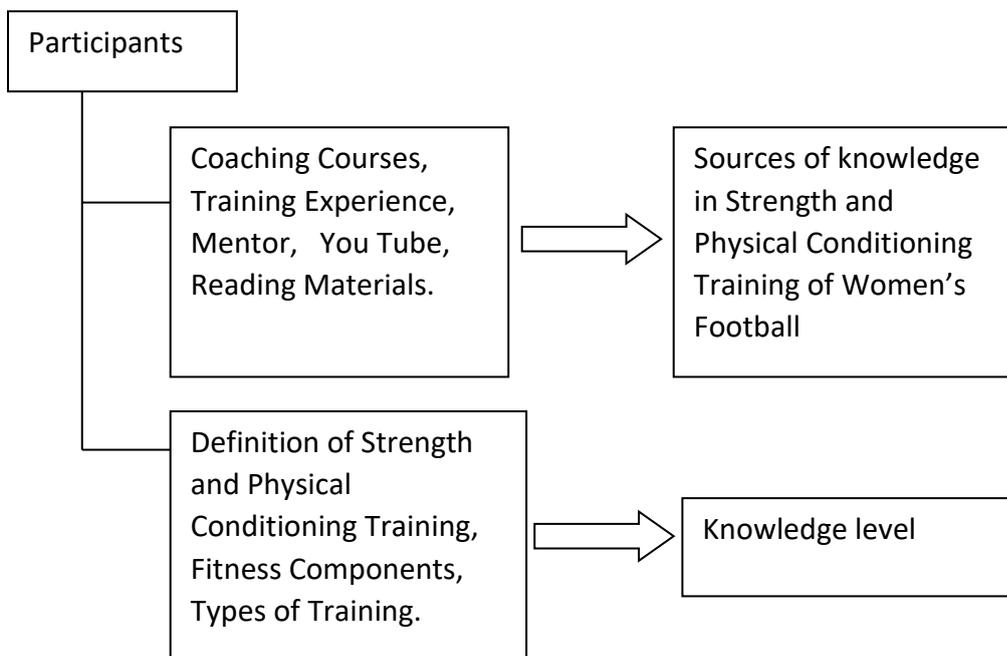
Table 2  
*Summary of Data Collection*

Sources	Formal Interview	Short Conversation	Full Observation	Observation as Participant	Documents
Participant 1 Head Coach of Football Selangor State Sports School	1 audio recording 25 minutes of interview	A lot of short conversations every week.	-	-	Certificate of coaching qualification and sport science.
Participant 2 Head Coach of Women's Football Selangor State Sports School	1 audio recording 20 minutes of interview	A lot of short conversations every day.	12 training sessions with 24 hours training activity.	Participation in one training session.	Training plan Certificate of coaching qualification and sport science.
Participant 3 Assistant Coach of Women's Football Selangor State Sports School.	1 audio recording 15-20 minutes of interview	A lot of short conversation every week.	12 training sessions with 24 hours training activity.	Participation in one training session.	Certificate of coaching qualification and sport science.
Participant 4 Coach for Football's Goalkeeper Selangor State Sports School	1 audio recording 15-20 minutes of interview	A lot of short conversation every week.	12 training sessions with 24 hours training activity.	-	Certificate of coaching qualification and sport science.
Football Player of Selangor	10-15 minutes of	Seldom short conversation.	-	-	-

State Sport group  
School interview.

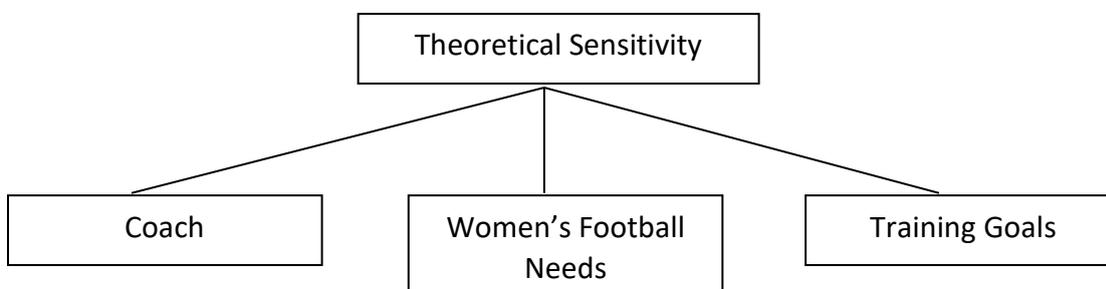
**Step One - Open Coding**

Open coding involves temporary conceptual labeling to events and other phenomenon. According to Strauss and Corbin (1990, 1998, 2015), every conceptual labeling is done through line by line analysis of the interview done with the participants (coaches), which is transcribed and from the field note of the observations done on the training of women’s football.



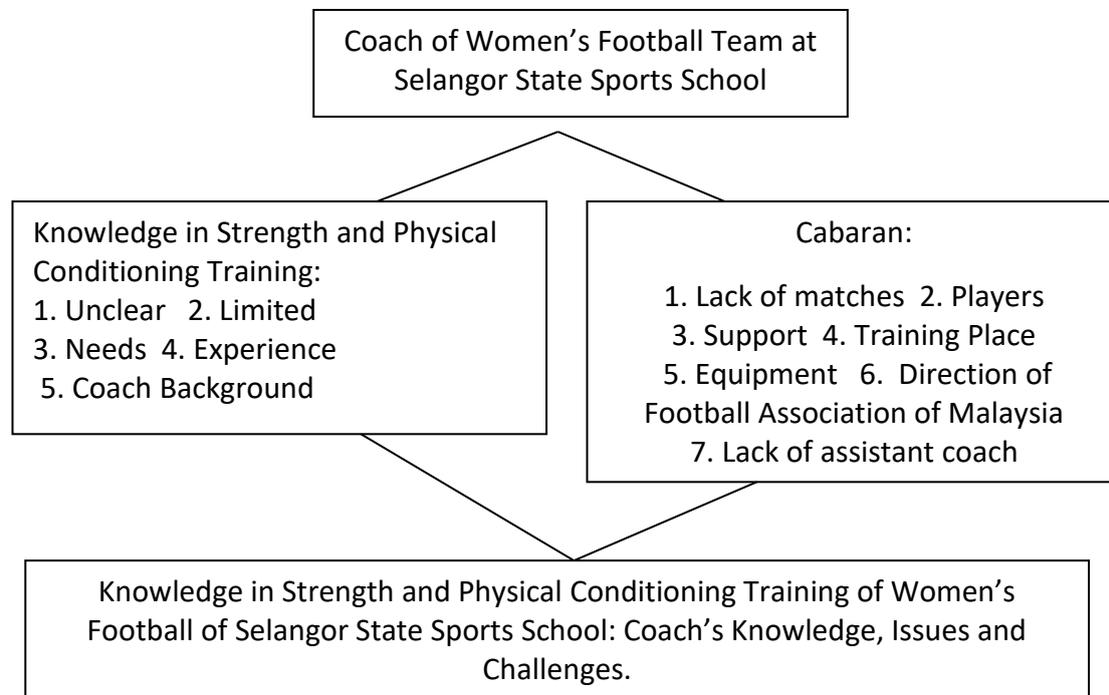
**Step Two – Theoretical Sensitivity**

According to Glaser (1978), theoretical sensitivity in theory is the best personal quality of a researcher. Due to this as researchers, we have different sensitivity level toward this study. Theoretical sensitivity also refers to the comprehension, the ability to give meaning to data, the ability to understand and separate important information (Glaser and Strauss, 1967). This process occurs during the conceptual stage and not on concrete level.

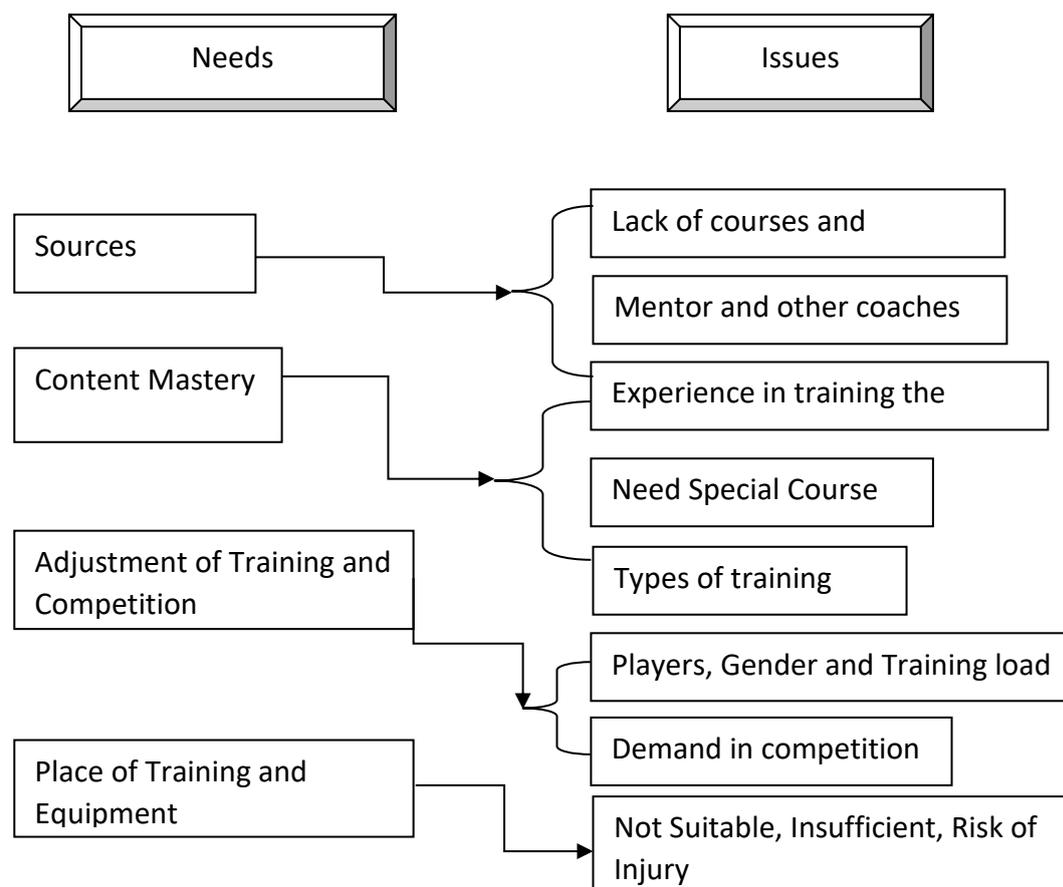


**Step Three – Axial Coding**

Based on Evolved Grounded Theory, axial coding is done to identify the relationship between categories or theme established during open coding stage. General or more inclusive concepts emerged from the data are placed in the phenomenon segment in axial coding stage

**Step Four – Selective Coding**

According to Strauss and Corbin, (1990, 1998, 2015), selective coding is used to determine core categories by integrating and perfecting the development of a theory or model. During this stage, the first step on selective coding is to decide the central category that represents the theme of this study. Every concept identified as the current phenomenon during axial coding stage is accepted as the main categories and these main categories are related to core categories.



### Findings

There are codes or themes developed based on the coaches' knowledge in the implementation of strength and physical conditioning training of women's football at a Selangor State Sports School.

### Sources of Knowledge

The coaches' sources of knowledge of strength and physical conditioning training depend on the football's coaching courses and sport science course they participated in. However, they think that it is limited. For example, P2 coach states that "the main source of knowledge I have gained is from the sport science course I had taken but there are only basic introductions and specific emphasis is rather limited so we have to adapt all these to our players". Other sources gained by the coaches is done through their own effort to increase their knowledge which include their experience as a player, readings, watching videos on YouTube, mentoring and from other coaches. For example, P2 coach states that "many sources of knowledge I have are based on the coach's mentor who is an expert, my old peers, some revision from YouTube and watching football related programs on television as well as the reading materials I received from the courses I attended".

### Content Mastery

The coaches' knowledge of strength and physical conditioning training who are in charge of the training of women's football at Selangor State Sports School is probably at the moderate level. For example, P4 coach has informed that "I think when it comes to the needs of gaining knowledge I still need some exposure of knowledge out there in order to plan training based

on strength and physical conditioning training in order to help me understand better when a training should be done and the rate of the training load itself”.

**Adjustment of training and competition**

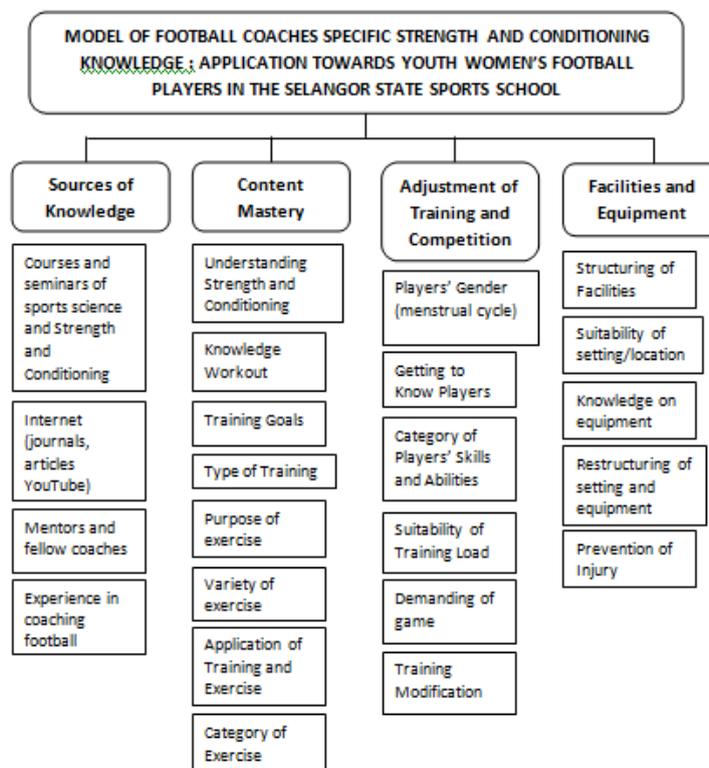
There are many discussions done by the coaches in terms of the appropriate training to apply to teenage women’s football players. In their opinion, training women’s football team is a lot more difficult than to train the men’s team. P2 coach states “that it is very difficult to get female players who are already equipped with high skills. The players have to be trained in order to form some basic skills. Skills gradually obtained along with strength that we build in the players can overcome this problem”.

**Training facilities and equipment**

There are many challenges and constraints faced by the coaches in terms of training facilities and the requirement of equipment. According to the researcher’s observation, the field area of women’s football team at Selangor State Sports School is 50 meters long and 25 meters wide. The surface of the field is not suitable for training. For example, the coach of the goalkeeper states that “the challenges I had faced when I conducted a training, first is the field itself in which the field training done did not help to improve the fitness or skills of my goalkeeper but may cause injury”.

**Model Development**

As discussed earlier in the study there is a chronological theme in the model presented to show the knowledge and challenges faced by the coaches in the implementation of strength and physical conditioning training of teenage women’s football team. This approach is aligned with what Dorgo (2009) suggested, that the knowledge in strength and physical conditioning training is highly important in the development of a coach.



## Discussion

Fundamentally, this knowledge model integrates order of knowledge, challenges and issues faced in implementing strength and physical conditioning training to women's football team. We need to take into consideration that the situation for every coach is different but essentially similar in terms of basic requirement of knowledge a coach needs to have in order to train youth women's football team. This knowledge does not come in the form of a daily routine of the coach but it is developed, modified, formatted and specific to the practice of the surrounding. Due to this some of the knowledge is practical for the coaches to use as a guidance. There are four elements every coach needs to have in implementing strength and physical conditioning training which are sources of knowledge, content mastery, adjustment of training and competition as well as place of training and equipment. The findings of this research will help future researchers to fully explore every aspect of knowledge in great details which are needed in the field of coaching of women's football.

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