The overall planning of Sabine Braun’s heptathlon training and competition

by Gertrud Schäfer

Introduction

I was national coach for women’s shot put in Germany from 1983–1990. Sabine was the first heptathlete I coached. Initially, i.e. starting in the winter of 1986, I trained Sabine only in the throwing events. As far as the running and jumping events are concerned, she was cared for by other coaches at that time.

Sabine was ranked 6th at the Olympic Games in Los Angeles. Although in 1985 she competed well in the individual events (long jump: 6.73m, 100m: 11.59sec, 200m: 23.60sec) she did not reach an adequate performance in the heptathlon. From 1986 to 1987 she could not compete because of a foot inflammation.

In the winter of 1989 I took over the task of building a team of coaches around Sabine: Joachim Busse was responsible for the jumping events, Ute Thimm for the 200m and 800m, while I myself was responsible for the hurdles, the shot put, the javelin, weight training and overall planning of her training. Beate Peters (former bronze medalist in the javelin) became her physiotherapist and Dr Werner Bastians became her physician. All these persons had competed at an international and Olympic level in athletics.

My training philosophy is based on the following basic considerations:

1) The peak must be achieved when it counts!
2) The heptathlon score is the main thing; good results solely in the individual events are simply not enough.
3) The heptathlete must get stronger in her strong events.
4) She must also improve in her weak disciplines.
5) The heptathlete must be fast, strong, and flexible.
6) There should be one head coach, assisted by the best coaches possible for each individual event.
Sabine's primary training requirements are:

1) The main focus is on the improvement of technique.
2) The improvement of physical shape, speed, power, maximum strength, aerobic and anaerobic endurance is also important.
3) It is important to develop similar techniques in different events.
4) Sabine’s training year is characterized by a double periodization.
5) Special aspects concerning Sabine’s health are taken account of.
6) Concentration is always very high and there is always an emphasis on co-ordination abilities.
7) Care is taken that Sabine’s body weight is always very low.
8) Her individual mentality is also considered.

Sabine won her first European Championships title in 1990 and her first World Championships title in 1991. In 1992 she achieved her best heptathlon score of 6985 points in Götzis. In the same year she achieved 6649 points at the Olympics which brought her the bronze medal. After the Olympic Games J. Busse and I myself took over her complete training with J. Busse concentrating on the jumps.

Sabine scored very well at the World Championships in Stuttgart in 1993, reaching 6179 points, only a few points behind Jackie Joyner-Kersee. She was first in the 1994 European Championships. However, shortly after this competition she had a tonsillectomy.

We are now preparing for the World Championships in Gothenburg. The main objective is the improvement of the running events. We hope that this will also lead to better results in the long jump and the javelin.

Sabine’s whole training plan is very individual, which means that I would train other heptathletes, who almost certainly would have different basic requirements, in a different way.

In all training areas and disciplines we proceed from the general to the very special. Winter training is started in a slow and relaxed manner. First Sabine must reach a specified level. There is an increase in intensity in all disciplines. This increase takes place the same way and often at the same time. Sabine must be able to reach peak performances in all disciplines in two days. Her training is characterized by varying load and recovery periods. She also does a lot of tests. In the case of the shot put and the javelin these tests are not always done with competition weight implements.

It is not only the intensity which is important but also the amount of training. Sabine learns new movement elements quickly. She practises the shot put, the javelin, the hurdles, the long jump and the high jump only once a week on average, while she does weight training twice a week. Speed and endurance work is done two to three times a week. As speed is very important for most disciplines, Sabine works on speed with a very high level of concentration and in a good mental state.

### 2 Weight Training

Strength endurance training is done at the beginning of winter training, followed by maximum strength training, power and combined strength and speed training. Sabine's training consists of slow and fast movements to avoid loss of speed. Because of back problems Sabine cannot do front or back squats, snatch and clean and jerk exercises.

Training includes four groups of exercises:

1) Free weights, “large”, e.g. bench press, flat or inclined; press behind the neck; upright rowing.
2) Free weights, “small”, e.g. dumbbells, seated lateral raise, triceps curl.
3) Fixed weights (i.e. strength machine or wall pulley) – triceps curl, hip abduction, hip adduction.
4) Exercises using her own body weight, e.g. dips, front chin, rear chin.

Care is taken to ensure balance in all parts of her body. Sabine has very strong muscles in her back and stomach region. Sometimes training consists only of work for the trunk, arms or legs. The following considerations are important: technical value of disciplines, performance, load, intensity, amount, and variation.

We appreciate Werchochanskij's system for effective work with regard to loading in the jumps and throwing exercises for the strength training (*Figure 1*).

Another classification of weight-lifting exercises can be the following:

- maximum strength training
  - e.g. snatch (an exercise which is not suitable for Sabine),
- power capacity
  - e.g. bench press,
- general special strength exercises
  - e.g. inclined bench press,
• special exercises
e.g. dumbbells,
• special throwing strength exercises
e.g. throwing with 800g javelin.

3 Technique Training

I am convinced that a lot of time should be devoted to technique training. Unlike other athletes, Sabine has very low strength performances but she has a very high level of coordination, which means that her ability to transfer motor skills is very good. It is very important to find similar combinations of movements for two disciplines, e.g. the javelin and the high jump because the biomechanics of these two disciplines are similar as far as steps are concerned.

Sabine trains only once per week in the shot put, the javelin, the long jump, the high jump and the hurdles, but her training has many overlapping characteristics. For example:
• five-step-rhythm in the hurdles and in the javelin
• anticipation of the left arm in the shot put and the javelin
• left side brace in the shot put and the javelin
• rebounding for the high jump, long jump, shot put and the javelin.

As there is not enough time to do specific training in all disciplines, we must find a way of overlapping.

In October and November we will change some motor actions; for example, if necessary, we change the approach to a discipline. There is also a difference between test training in a particular discipline and technique training, the latter meaning work without a stopwatch or measuring tape. Training is done under different conditions, light and heavy.

Sabine is therefore able to compete well from a technical point of view.

Sabine is able to achieve good results in the technical disciplines, which is the result of her training. Her technique training as well as her weight training and her special strength exercises contain special co-ordinated elements.

For example, for the shot put she does bench press and dumbbell exercises and puts shots of heavy and light weights, while in technique training she only uses shots of normal weight. As far as the sprints are concerned, she does thigh extension exercises, thigh biceps curls on the leg extension machine and resistance training.

4 Speed, speed endurance and extensive tempo training

I think, as far as these training areas are concerned, it is very difficult to find the right mixture in all periods. As we are dealing with seven disciplines we must find a way of combining different training areas. Sabine trains all these physical abilities – speed, speed endurance, special endurance at two levels and at an extensive tempo all year round. However, priorities are different. In all kinds of training we proceed from low to high levels. There is an increase in intensities while there is a reduction of training volume.

We do not differentiate between hurdle speed and sprint speed training. This means that, although sometimes we train the flat sprints and the hurdles separately, we also train them often together. It is important not to train too intensively at full speed over the whole distance, because in speed training the neuromuscular strain is very high. Sabine trains hurdling speed with 5 steps and longer spacings between the hurdles. She trains over distances from 20 to 60m (beginning from

![Figure 1: Werchoshanski's load system for effective training of jumping and throwing abilities](59)
standing and running position) without resistance or against a very small resistance. Sabine also does tow training.

**Speed Workouts**

1. 5 x 30m + 4 x 40m
2. 5 (30 – 40 – 50)
3. 5 x 60m hurdles + 4 x 30m – recovery/reps = 2 – 3
4. 4 (20 - 30 - 40) + 4 x 60m – recovery/reps = 7 – 10
5. 4 x 40m resistance + 4 x 30
6. 3 x (start – 1 hurdle/start – 2 hurdles)

**Speed endurance work** is done over distances between 60 and 150m, sometimes over hurdles at an intensity from 80% during the winter to 100% during the competition season. This range is very important, because if Sabine is able to run very fast over 200m she will also achieve good results in the 800m.

**Speed endurance workouts**

1. 3 (60 - 80 - 100) – recovery/reps = 3 – 5
2. 4 x 120 + 3 x 150 – recovery/reps = 8 – 12
3. 2 (2 x 100m hurdles), 2 x 120 + 2 x 150

5  **800m training**

Sabine has a great deficit over this distance. I think it is not very good for her to train like an 800m runner. It is best for her to find her own method of training, after basic endurance training, with special endurance runs ranging from 150m to 300m and 300m to 600m. These are the lactic power and lactic capacity distances. First she must be able to produce lactic acid and then she must tolerate it.

**Low intensity = programmes at a very low intensity (70%)**

- intensity 3 = programmes at 80%
- intensity 2 = programmes at 90%
- intensity 1 = programmes at 95%
- intensity -1 = programmes at above 100%

<table>
<thead>
<tr>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>95%</th>
<th>100%</th>
<th>105%</th>
<th>110%</th>
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<tbody>
<tr>
<td>23.90</td>
<td>20.90</td>
<td>18.60</td>
<td>17.60</td>
<td>16.75</td>
<td>16.00</td>
<td>15.20</td>
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</table>

Parallel to the intensity we choose the total amount of all runs:

- 1200-2000/1200-1400/1200/800-1200/1200-1400/800-1200m
- 2:14 min = 100m of 800m in 16.75 sec is the starting level

**6 Preparation for very important competitions**

Sabine has won many competitions. The last few weeks before a major competition are always planned very exactly. In this phase her training load is reduced. Sabine must be able to train with fun in a rested state, with good co-ordination, self confidence and good results. She will train between three and five times a week at a very high level of performance.

7 **General thoughts on the planning of microcycles**

The special microcycle depends on the yearly plan. Here we have a combination of overlapping targets in different training areas.

We distinguish between the following microcycles: introductory microcycle; microcycle of basic load; microcycle of performance; microcycle of active regeneration. Sabine's microcycles last between 5 and 10 days. She does between 3 and 9 sessions per week. The training results and a feedback given to the athlete are very important for the preparation of the next microcycle. Very often I plan ahead using fixed minimum performance values.

Analysis of training, adaptation to training, training type, task, load, unit, frequency, contents, intensity, stimulus, fitness, time, target, tests and training evaluation are very important parameters which serve as the basis of the next microcycle. Sabine is given a plan for one or two weeks, but we are very flexible in changing some sessions.

The gross sequence of the sessions in regard to the basic conditional abilities should be considered:

1. Tasks for improving mental aspects
2. Flexibility, skill and technique
3. Speed and velocity
4. Power capacity
5. Maximum strength
6. Speed endurance
7. Endurance.

Normally Sabine trains her abilities in the following sequences: for example, speed, power capacity and endurance or technique, maximum strength and endurance.

In the preparatory microcycle we pay attention to the right sequences for Sabine's health. In the in-season microcycles we must keep an eye on the competition sequence of the disciplines and on her health, of course. We must take care of her hamstrings and back so we often have to change the training loads acting on these parts of her body.

Examples of a microcycle in the preparatory period are given in Table 1.
Table 1: Example of a microcycle during Sabine Braun’s preparatory period

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>am</td>
<td>long jump and</td>
<td>regen-</td>
<td>high jump and</td>
<td>special</td>
<td>rest-</td>
<td>rest-</td>
</tr>
<tr>
<td></td>
<td>horizontal jumps</td>
<td>ration</td>
<td>vertical jumps</td>
<td>endurance</td>
<td>day</td>
<td>day</td>
</tr>
<tr>
<td>pm</td>
<td>power capacity</td>
<td>regen-</td>
<td>javelin co-ordination,</td>
<td>power</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(weights)</td>
<td>ration</td>
<td>medicine ball exercises</td>
<td>capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>speed endurance</td>
<td>(200m)</td>
<td>circuit training</td>
<td>(weights)</td>
<td></td>
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</tr>
</tbody>
</table>

8 Sabine Braun’s psychological preparation

Sabine is a very introverted person with great internal power but she needs communicative persons around her. So, in November I arrange her training in the running events (200m and 800m) in such a way that she trains with a partner. I think this is of great benefit to her as it will dispel her anxiety over the 800m.

Sabine trains under competition conditions so that she is well prepared for major competitions. It is very important to make her self-confident as far as her training results are concerned. Therefore Sabine has many exercise tests specifically for herself.

Heptathlon training is very time-consuming for me also. It is important that Sabine is aware that I dedicate almost all of my spare time to her. As currently Sabine is the only athlete I train, we are a very strong team.