Demands on a trainer in sport climbing

a case study among german elite level athletes and trainers

Patrick Matros

Acknowledgements to

Photos by
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Background to the study

- People’s interest in sport climbing has risen enormously over the past two decades.
- Competition climbing has gained much attention, which culminated in the IOC putting sport climbing on their short list of sports being considered for the 2020 Olympics.
- Climbing is getting more professional regarding commercialization of the sport, development in the competition sector, and knowledge of specific training in both practice and science.
Purpose of the study

- The demands on a trainer/coach in sport climbing get more complex.
- Towards general concepts concerning requirements on trainers (e.g. Nordmann, 2007) there’s a lack of sport specific knowledge.
- The unreflected transfer of this concepts is problematic as the situation in sport climbing is specific in its own way:
  - climbing on elite level is performed in both indoor (competition) and outdoor (non-competition)
  - competitions differ between official and commercial events
  - level of professionalism is still low regarding other sports like tennis, skiing etc.
  - the playful and open character of climbing movement
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Theoretical propositions: Dimensions of skills

- Acting skills (= working skills)
  - Knowledge
    - Intentional knowledge
    - Non-intentional knowledge
  - Skills
    - Professional skills
    - Social skills
    - Personal skills
    - Reflection skills

(Nordmann, 2007)
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Questions to be answered

- Which skills are needful to act as a trainer in sport climbing?
- What is the perspective of the trainers?
- What is the perspective of the athletes?
- Are differences between this subgroups?
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Scope and limitations of the study

- The study is bounded within athletes and trainers of the german national team
- It focuses on competition climbing (indoor)
- Disciplines were boulder and lead
- All athletes start within the adult level
- Trainers divide up in youth level and adult level
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Research design

- The study was designed as a comparative case study (Yin, 2003)
- Character of the study is exploratory
- Cases were compared like the following scheme

1st step

<table>
<thead>
<tr>
<th>case 1 (trainer)</th>
<th>case 1 (trainer)</th>
<th>case 1 (trainer)</th>
</tr>
</thead>
</table>

2nd step: subgroup 1: athletes

<table>
<thead>
<tr>
<th>case 1 (athlete)</th>
<th>case 2 (athlete)</th>
<th>...</th>
</tr>
</thead>
</table>

3rd step: subgroup 2: trainers

<table>
<thead>
<tr>
<th>case 1 (trainer)</th>
<th>case 1 (trainer)</th>
<th>...</th>
</tr>
</thead>
</table>
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Methodology and procedures

- Data collection was done with expert’s interviews on elite participants of the investigated field
- Participants of the study were interviewed by telephone
- Interviews were recorded and made anonymous
- Interviewer’s manual was a combination between formative and summative questions
- Manual was designed both of theoretical background and two test interviews (athlete and trainer)
- Number of asked athletes and trainers was in total 13 (7 athletes and 6 trainers)
- Due to the recent point of the competition season, the final number of finished interviews was 9 (4 athletes and 5 trainers)
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Data analysis

- In a first step the whole data was transcribed
- Second step was a qualitative analysis based on Mayring (2010)
- This method allows summary and reduction of the information
- Statements of the participants were paraphrased, generalized and finally categorized
- Validation was done by a follow-up presenting the results of the prevailing interviews to each participant
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Data analysis

Tabelle 1: Beispiel zur methodischen Vorgehensweise der Inhaltsanalyse

<table>
<thead>
<tr>
<th>Fall</th>
<th>Seite</th>
<th>Zeile</th>
<th>Originalzitat</th>
<th>Paraphrase</th>
<th>Generalisierung</th>
</tr>
</thead>
</table>
| T2   | 1     | 11,12 | „...Ich stell mir auf jeden Fall vor, dass ein Trainer der sowas macht, in der oberen Liga selber geklettert ist, natürlich auch vorzugsweise Wettkampferfahrung hat.“... | Sollte selber in der oberen Liga geklettert sein und Wettkampferfahrung haben | ▪ Hohe persönliche Kletterleistung
  ▪ Eigene Wettkampferfahrung |
Findings

During the qualitative analysis primary dimensions were formed:

- Expert knowledge
- Personality traits
- Social aspects
- Experience in climbing
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Findings: Which skills are needful to act as a trainer in sport climbing?

<table>
<thead>
<tr>
<th>Sportfachliche Komponente</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Sportwissenschaftliches Wissen</td>
</tr>
<tr>
<td>- Physiologische Unterstützung</td>
</tr>
<tr>
<td>- Sehr wichtig</td>
</tr>
<tr>
<td>- Analysefähigkeit</td>
</tr>
<tr>
<td>- Wissen anwenden können</td>
</tr>
<tr>
<td>- Kletterspezifisches Wissen</td>
</tr>
<tr>
<td>- Eigene Wettkampferfahrung wichtig</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soziale Komponente</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Psychologische Unterstützung</td>
</tr>
<tr>
<td>- Sehr wichtig</td>
</tr>
<tr>
<td>- Eigenständigkeit des Athleten fördern</td>
</tr>
<tr>
<td>- Selbstvertrauen stärken</td>
</tr>
<tr>
<td>- Unterstützung im Privatleben</td>
</tr>
<tr>
<td>- Sehr wichtig</td>
</tr>
<tr>
<td>- Athlet ganzheitlich wahrnehmen</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Persönlichkeitsmerkmale</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Empathiefähigkeit</td>
</tr>
<tr>
<td>- Wissen vermitteln können</td>
</tr>
<tr>
<td>- Motivationsfähigkeit</td>
</tr>
<tr>
<td>- Weniger wichtig</td>
</tr>
<tr>
<td>- Psychologisches Wissen</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kletterspezifisches Wissen</th>
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<tr>
<td>- Eigene Wettkampferfahrung wichtig</td>
</tr>
</tbody>
</table>

**example table athlete**

**example table trainer**
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Findings: Are there similarities between athletes and trainers?

- Trainers must have personal experience in climbing
- Trainers must have a base of expert knowledge both in training theory and sports medicine
- Trainers must have advanced skills in movement observation and analysis in order to see and improve weaknesses of the athlete
- Trainers must have personal experience in competition climbing as:
  - trainer (9 of 9)
  - athlete (7 of 9)
- Trainer must have skills to motivate the athlete (especially intrinsic)
- Trainers are not supposed to climb at a high level (6 of 9)
- Trainers must know the athlete very well to build up personal trust
Private support

- 50% of the athletes called this aspect important and very important
- For 50% of the athletes the private support is less and not important
- The same athletes appraise the psychological support in the same way

**Tabelle 2: Gegenüberstellung der Athletenmeinungen**

<table>
<thead>
<tr>
<th></th>
<th>private support</th>
<th>psychological support</th>
</tr>
</thead>
<tbody>
<tr>
<td>athlete 1</td>
<td>very important</td>
<td>very important</td>
</tr>
<tr>
<td>athlete 4</td>
<td>important</td>
<td>very important</td>
</tr>
<tr>
<td>athlete 3</td>
<td>less important</td>
<td>important</td>
</tr>
<tr>
<td>athlete 2</td>
<td>non important</td>
<td>important</td>
</tr>
</tbody>
</table>
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Findings: athletes’ statements with accordance

- Aspect with the clearest accordance was the request of a permanent support by a trainer during training and also a good reachability beside training.
- On the other hand, 2 of 2 athletes mention that the trainer should support an independent organization of training by the athlete himself.
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Findings: trainers’ statements with accordance

- Most important personal skill of the trainer should be empathy
- This is in alliance with personal experience in competition
- Trainer has to be a talent for organization
- In difference to the athletes all trainers attached the aspect of private support importance
- The boundary of this aspect should be placed by the athlete
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Findings: general differences between athletes and trainers

- There are less clues for general differences between athletes and trainers.
- Only in the evaluation of physical and psychological support there was a tendency to predominance psychological support by the trainers and physiological support by the athletes.
As motivation skills were nominated as an important aspect, participants were asked for helpful forms of motivation on the part of the trainer.

- Intrinsic motivation is predominant
- Trainer should give positive feedback
- One subgroup of athletes need a trainer, who is able to reduce pressure to perform
- Other subgroup needs a trainer, who creates pressure to perform
- Trainer should be able to retrieve middle and long term goals and point out realistic perspectives
The perfect trainer is an ideal, which can hardly realized in one person.

Core skills of a good trainer should be:
- personal traits like empathy and tolerance towards ambiguity
- educational abilities
- motivation skills
- specific knowledge and personal experience in their field of action
- skills in movement observation and analysis

Trainer should not be a project manager and needs support in organisational aspects (Nordmann, 2010)
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Conclusions

This core skills have to be aspects for both recruitment and further education.
Beyond that, the trainer needs assistance in specialist aspects like training theory, training science and sports medicine.
In this case associations have to cooperate with experts (scientists, doctors, physiotherapists, specialists like athletic and functional trainers as well as psychologists) both in permanent support for the athletes and further education for their own trainers.
Another big challenge is the go-between recent research and practical use.
Questions still to be answered

For further research:

- Are there differences between youth and adult athletes?
- What about trainers of outdoor elite climbers?
- How is the actual training of the athletes proceeding?
- How is it possible to obtain quantitative data with a higher number of participants?
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Questions still to be answered

For associations in order to modify concepts:

- Requirements specification for trainers
- Further education for trainers
- Cooperation with experts
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Thank you for your attention!

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Trainers of the German National Team
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