



Development to Elite Across the Throws Disciplines

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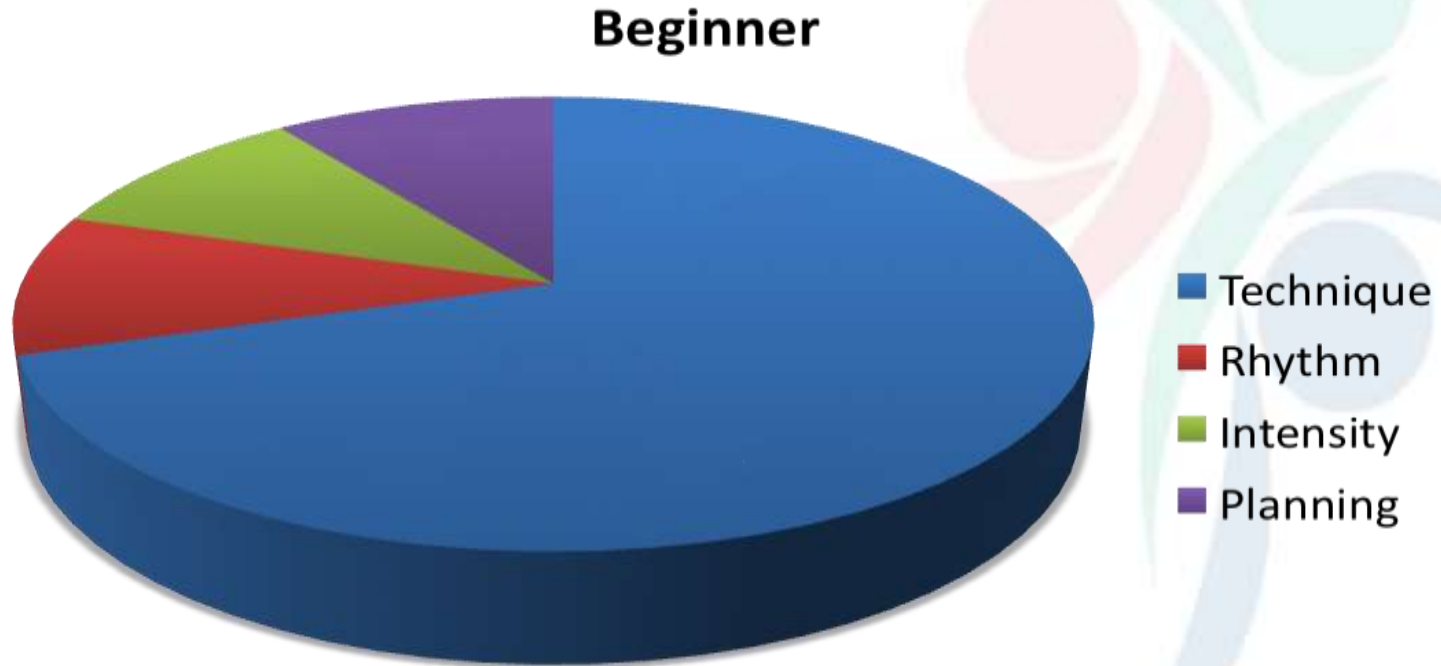
Early Development of the Thrower

- Proper motor patterns should be established first.
- Build technique and rhythm first and then introduce strength and speed development.
- Reliance on strength can provide quick gains, but can ultimately stunt long-term growth.



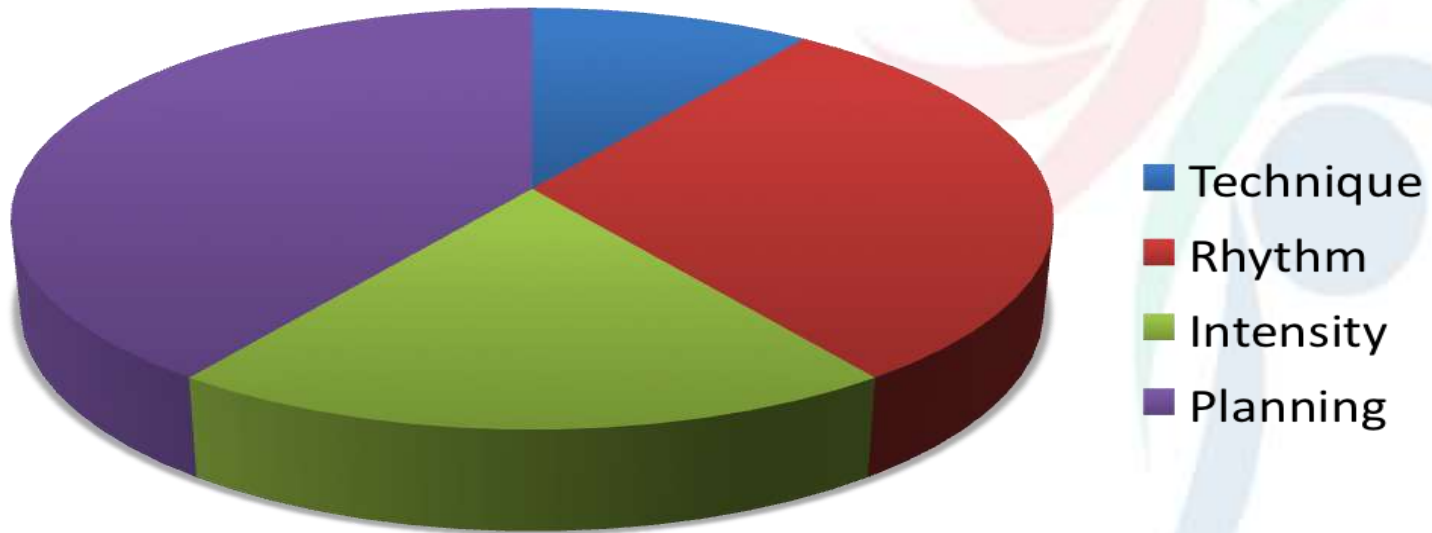
Reese Hoffa (1997)

Attention Demands for a Hammer Thrower



Attention Demands for a Hammer Thrower

Expert



Development to Elite: Shot Put



Development to Elite: Shot Put

- Establish proper grip and release mechanics
- Establish proper power position and delivery from the power position
- 85% of the final release speed is developed in the power position so it is vital to have efficient delivery mechanics



Development to Elite: Shot Put

- In the development of a young throwers technique, one should work to find the best combination of release speed and release angle to produce maximum results.
- Lesser throwers generally throw at a lower release angle than more accomplished throwers



Development to Elite: Shot Put

- As the delivery motion becomes more stable, the focus for future success turns to the start of the throw.
- Starting tempo, be it for the glide or the rotation, is usually the key determinant in a successful attempt in high-level throwers



Development to Elite: Shot Put

- Elite putters will work on figuring out what weight of shot (light or heavy) will work best to help enhance their throwing performance
- Emphasis will be put on determining appropriate strength levels and competition weight to compete at for maximum results.



Development to Elite: Discus



Development to Elite: Discus

- The biggest challenge with beginners is the ability to handle and control the orbit of the discus through the delivery phase.
- Another big challenge is teaching the appropriate entry out the back of the ring. Beginners tend to look ahead to see where they are going and use the upper body to generate rotational momentum.



Development to Elite: Discus

- As with the rotational shot, as the turning mechanics out of the back start to stabilize, more attention can be paid maximizing start speed and starting rhythm.
- Increased efficiency and balance in the middle of the ring will develop as the entry stabilizes.



Development to Elite: Discus

- Development of specific strength with special exercises and heavy implements.
- Continued development of optimal throwing speed and rhythm.
- Special consideration to increasing orbital path and radius.



Development to Elite: Discus

- Fine-tune competition weight and strength levels for optimal performance.
- Fine-tune throwing rhythm in stressful situations (weather, travel, etc...) to maximize performance in important competitions.



Development to Elite: Hammer



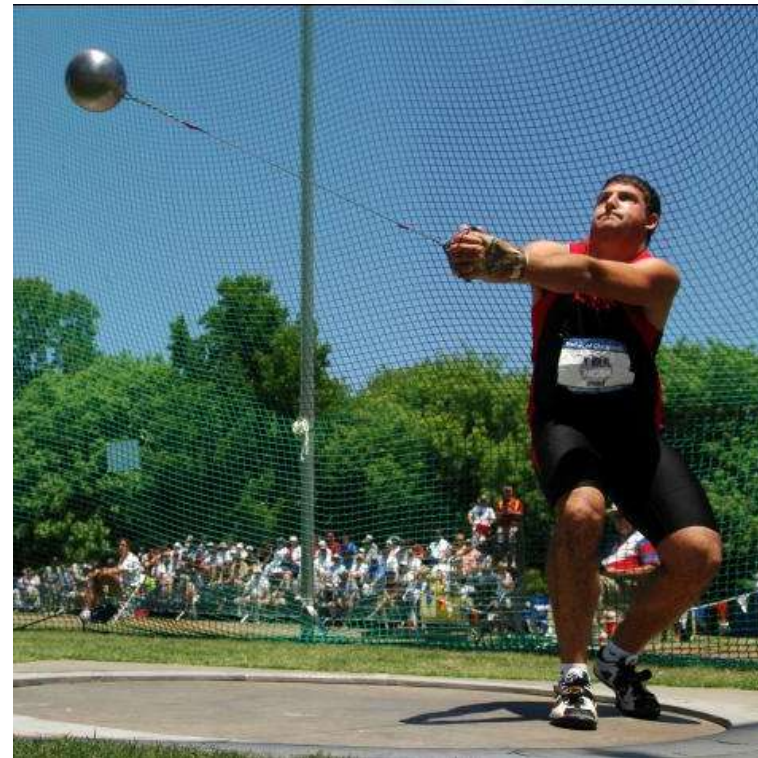
Development to Elite: Hammer

- Development of footwork
- Keeping long radius during the course of the turns
- Setting up low-point off of the preliminary swings before entry into first turn
- Maintaining turning speed through the course of the throw



Development to Elite: Hammer

- Refinement of hammer acceleration pattern through the course of the throw.
- Maintenance of the low-point through the course of the turns.
- For four-turners, further refinement of transition from turn one to turn two. (toe turn to heel turn)



Development to Elite: Hammer

- When technical pattern has stabilized, there can be more variation with hammers of different weights and lengths to enhance training effects, and develop technique.
- More intense work on hammer specific strength...which takes a long time to fully develop.



Development to Elite: Hammer

- Fine-tuning of acceleration pattern through the course of the throw.
- Adjusting the starting speed for the entry and first turn.
- Determination of what specific power levels and body weight are needed to maximize the throwing performance.



Development to Elite: Javelin



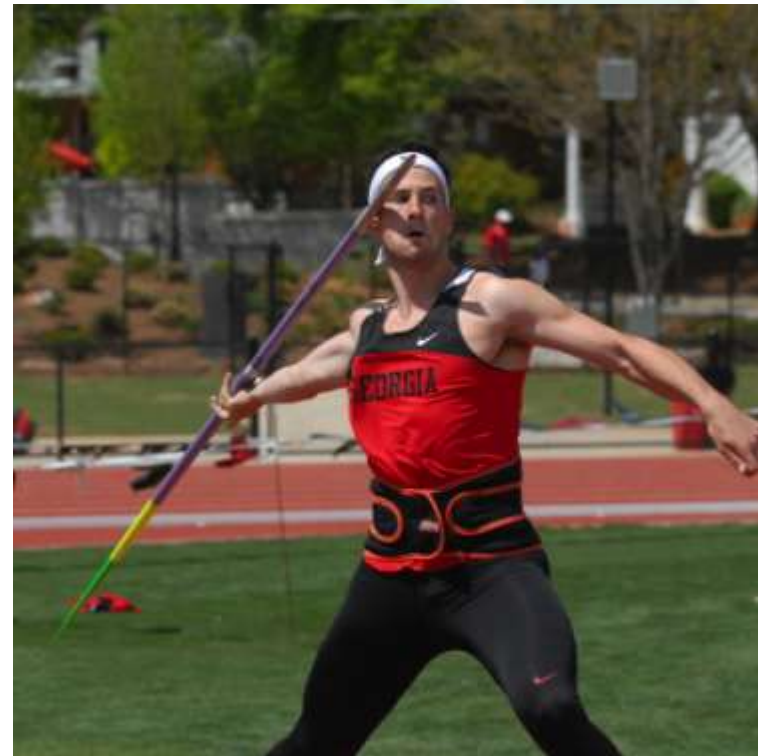
Development to Elite: Javelin

- Initial focus on trying to the the javelin straight while still being able to produce release speed.
- Establishment of footwork and proper transition through the penultimate step.
- Maintain posture and javelin position during the approach.



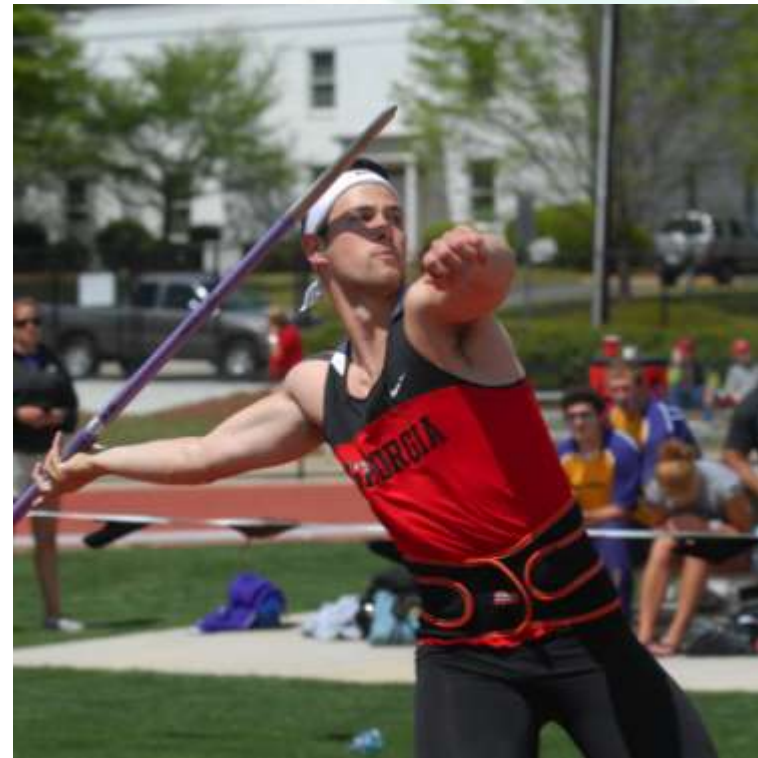
Development to Elite: Javelin

- Establish control of the javelin as runway speed is increased.
- Begin the process of developing special strength via med balls and special exercises.
- Determine best speed/length of approach for maximum results.



Development to Elite: Javelin

- Maximize right to left touch-down times into delivery.
- Fine-tune runway speed and rhythm.
- Increase special strength.
- Figure out what javelins will fly best with what conditions for each individual throwing style.



Development to Elite: Javelin

- Continue to develop special strength.
- Continue to develop manageable runway speed with the javelin.
- Training with javelins of different weights to help enhance training effects as long as technical pattern is stable.

