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The Influence of the Coaching Environment in the Cultivation of Talent

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Given the importance and high public profiles of coaches such as Vince Lombardi, Sparky Anderson, Scotty Bowman, and John Wooden, it is surprising that researchers have paid little empirical attention to the coaching domain. Instead, academics have historically directed efforts towards expert athletes rather than expert coaches (i.e., Barnes, Sime, Dienstbier, & Plaki, 1986; Krane, Greenleaf, & Snow, 1997; Tammen, 1996). The purpose of this paper is to review research in the area of talent development. In particular, three empirical studies which focused on the rise to prominence of elite performers, along with the coaches and teachers who helped these performers excel in their fields, will be examined. It will become clear that if an athlete wants to reach his/her potential, he/she will need more than innate ability, he/she will need a highly competent and experienced coach.

Bloom

Bloom's (1985) work focused on the process of talent development of world class performers in the art, science, and sport domains. Bloom postulated that talented youth in any performance domain exhibited similar developmental patterns. His one hundred and twenty one subjects included Olympic swimmers, world-class tennis players, concert pianists, sculptors, research mathematicians, and research neurologists who had reached the highest levels of accomplishment in their fields. After retrospectively interviewing the subjects, Bloom identified three phases of talent development, labelled as the early years, the middle developmental years, and the final years of perfecting the skills. Central to the development of the expert performer was the role of the coach, teacher, or mentor.

Bloom (1985) found the first phase began when individuals were introduced to activities in their realm. It involved instruction from a local coach/teacher who was caring, thoughtful, and well respected in the community. The coach/teacher provided the performer with lots of positive feedback. Rewards were garnered for effort rather than for achievement, and rarely was the coach/teacher critical of the child. In the second or middle years, individuals set performance goals and were committed to them. The athletes started improving tremendously and found they needed a new coach to help them achieve greater success in their field:

We have seen in the early years that the first coaches had been good at getting them interested in and excited about tennis. The tennis players felt that now they needed someone to teach them precision and technique as well as strategy; they also needed to tailor their tennis game to emphasize their own personal strengths and compensate for any weaknesses they might have. (Bloom, p. 236)

The teacher/coach during the middle years was more advanced and regarded as one of the best within a larger geographical area. The coaches demanded hard work, commitment, and discipline from their athletes.

Exceptional athletes auditioned for the opportunity to work with another coach, an individual widely recognized as a master teacher or expert in his/her domain. Individuals who were fortunate to reach this top stage were totally obsessed by their chosen activity. The relationship between the athlete and coach in this final stage evolved into one of mutual respect and collegiality with both parties focusing less on instructional methods and more on tactical refinement.

In sum, Bloom's (1985) innovative study revealed important information relating to the development of expertise. Through the use of retrospective interviews with performers from vastly different domains, a three-stage process of development was outlined for talented performers, as well as the individuals who influenced them.

Csikszentmihalyi, Rathunde, and Whalen

Csikszentmihalyi and colleagues (1993) conducted a longitudinal study that examined the development of talent in five areas - mathematics, science, music, athletics, and art. This work included several dimensions that are necessary for better understanding the process of expertise and those who facilitate its development. Over 200 talented high school students were studied over a period of approximately four years. The purpose of their study was to determine which factors contributed to the development of talent in some individuals and those that contributed to the eventual lack of success in others.

One of the key factors accountable to talent development was motivation. The students who had the highest levels of intrinsic motivation to learn, as well as external rewards like recognition and praise from significant others, had greater chances of succeeding. Further to this, Csikszentmihalyi and colleagues (1993) found that "flow experiences" contributed to talent development. Teenagers were unable to develop their talent unless they enjoyed it. Part of this enjoyment was the atmosphere and environment created by the teacher or coach. These young adolescents required constant stimulation and challenges to their skills to avoid boredom and losing interest in their activity.

Csikszentmihalyi et al. (1993) found three common characteristics of teachers who helped cultivate the talent of their students. For one, teachers were effective because they

enjoyed what they were doing and encouraged their students to excel beyond their current level of talent. Second, teachers created optimal learning conditions so that students were not bored or overly frustrated, enabling them to maximize their level of concentration, self-esteem, potency, and involvement. Finally, a third characteristic of distinguished teachers was their ability to understand the needs of students. They were remembered for their "reassuring kindness" as well as their genuine concern for the overall development of the student both inside and outside of the school. The authors suggested that teachers developed crucial ways of providing feedback to students by avoiding the trap that many others fell into whereby they directed the student's attention toward winning prizes.

In conclusion, this research highlighted many important points of expert teaching across all domains. The authors concluded that students will only learn if they are placed in enjoyable learning environments with individuals who know how to provide information in a manner that is both challenging and enjoyable.

Ericsson and colleagues

Ericsson and associates (Ericsson & Charness, 1994; Ericsson, Krampe, & Tesch-Römer, 1993) researched the development of expertise in various areas. Besides taking the understanding of expertise to new levels, Ericsson's research also had ramifications for expert coaches.

Ericsson's primary theory was that reaching a level of expertise involved more than innate abilities, it was a result of effortful, sustained activities designed to optimize improvement, a process that was labelled as "deliberate practice." Ericsson et al.'s (1993) fundamental view is best summarized as follows: "In contrast to play, deliberate practice

is a highly structured activity, the explicit goal of which is to improve performance. Specific tasks are invented to overcome weaknesses, and performance is carefully monitored to provide cues for ways to improve it further...the amount of time an individual is engaged in deliberate practice is monotonically [linearly] related to that individual's acquired performance" (p. 368). Resources, including time, energy, access to competent teachers and training facilities, as well as effort and motivation, were identified as constraints inhibiting the process of deliberate practice.

Ericsson and colleagues (1993, 1994) alluded to the importance of the coach or teacher in facilitating the process of deliberate practice. For example, in the absence of coaches or teachers they found that subjects played rather than practiced. Second, feedback was crucial and expert performers needed to be taught and corrected when errors occurred. It was also found that a teacher could hinder the development of a student by denying him or her the proper drills, exercises, and number of repetitions needed to reach an elite level.

Although Ericsson's research has yet to explicitly look at the sporting domain, many conclusions can be directly applied to coaches and teachers. For example, Ericsson et al. (1993, 1994) found that coaches and teachers played an important role in setting an appropriate environment for athletes to engage in the 10 years or 10,000 hours of deliberate practice that is required to reach high levels of expertise. A second issue pertains to the amount of enjoyment the athletes derive from practicing. Ericsson et al. stated that deliberate practice was not inherently enjoyable and the successful coach would have to find ways of motivating their athletes to keep them on task.

Conclusion

An important finding from Bloom (1985), Csikszentmihalyi et al. (1993), and Ericsson et al.'s (1993, 1994) research was that talent development requires great amounts of training and practice, and central to reaching the top of one's field is the assistance and guidance of a qualified and knowledgeable coach. Perhaps, Salmela (1994) best summarized the issue of talent development when he noted: "For the moment, it is clear in our minds that talent development appears to have a much greater environmentally determined stimulus, specifically in terms of how expert coaches can facilitate the development of expert performance rather than the genetically-based viewpoint of innate gifts or talent that we considered a decade ago" (p. 25).

Bibliography

- Barnes, M., Sime, W., Dienstbier, R., & Plaki, B. (1986). A test of construct validity of the CSAI-2 questionnaire on male elite swimmers. International Journal of Sport Psychology, 17, 364-374.
- Bloom, B. S. (Ed.), (1985). Developing talent in young people. New York: Ballantine.
- Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). Talented teenagers: The roots of success and failure. New York: Cambridge.
- Ericsson, K. A., & Charness, N. (1994). Expert performance. American Psychologist, 49, 725-747.
- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. Psychological Review, 100, 363-406.
- Krane, V., Greenleaf, C. A., & Snow, J. (1997). Reaching for gold and the price of glory: A motivational case study of an elite gymnast. The Sport Psychologist, 11, (1) 53-71.
- Salmela, J. H. (1994). How expert coaches develop sport talent through deliberate practice. Keynote address to the Goodwill Games Scientific Congress, St. Petersburg, Russia.
- Tammen, V. V. (1996). Elite and middle distance long distance runners associative/dissociative coping. Journal of Applied Sport Psychology, 8, (1), 1-8.