

What Are the Ingredients For Success?

Practice, Play, Match Play, Specialisation and Sporting Diversity

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A popular viewpoint in football is that children get a head start by engaging in practice at an early age. Youngsters who train and engage in practice early in their development are often identified as being more talented than those who have accumulated less practice time. These 'early starters' gain access to better coaches and facilities, increasing the opportunities for learning and improvement. This viewpoint is supported by data from elite adult players that show successful performers engaging in high quality training from an early age. There are, of course, exceptions to the rule. While most players who have reached the top start early, there are those who begin playing relatively late and still reach the same level of achievement.

Typically, players begin their involvement in sport by engaging in playful activities (eg a kick around with friends) and then progress to more formalised or 'deliberate' practice with the special intention of improving performance as they get older. Recent research from the Australian Institute of Sport indicates that playful activities might provide the fundamental building blocks for expert performance. During their formative years (ie 6 to 12 years of age), highly successful international team sport athletes spent more time in playful activities in a diverse range of sports compared to recreational performers. Even between the ages of 13 and 15 years the world-class performers were still participating in two or three sports. The implication is that play and sporting diversity aids in later specialisation in one sport, perhaps because of the transfer of general skills (eg technical, tactical, physical and psychological)

The applicability of these findings to English football is obviously of up-most importance. Although some professional bodies share the philosophy that players should not specialise in one sport too early, the reality is that many players enter into the Academy system as young as 7 years of age. As a result, these children's formative years may be characterised by early specialisation and formal 'deliberate' practice. The notion of playful beginnings, sporting diversity and later specialisation seems to be in conflict with the current system employed in football. The suggestion that diversity and late specialisation is beneficial to acquiring expertise in sport also conflicts with recent evidence which shows that adult English and Belgium elite players engaged in 'deliberate' practice from around 5 and 7 years of age respectively.

Practice or Play?

We recently conducted interviews and collected questionnaire data from 203 English Academy and recreational schoolboy players between 8 and 18 years of age. The purpose of this study was to determine what factors contribute to the development of elite performance. These players were asked questions concerning the amount of time spent in team practice, individual practice, match play and playful activities across their careers. Team and individual practice were defined as activities deliberately designed to *improve*, rather than maintain, performance (eg football specific drills, technical, tactical and strategic skills, open and set-play practices). Playful activities were fun games or unstructured football

activities undertaken primarily for enjoyment. Match play was defined as competitive matches against another team. Figure 1 highlights the amount of time spent in each activity for 8 to 18 year old Academy and recreational players respectively. Figure 2 shows the average number of hours per week spent on each activity across skill and age group.

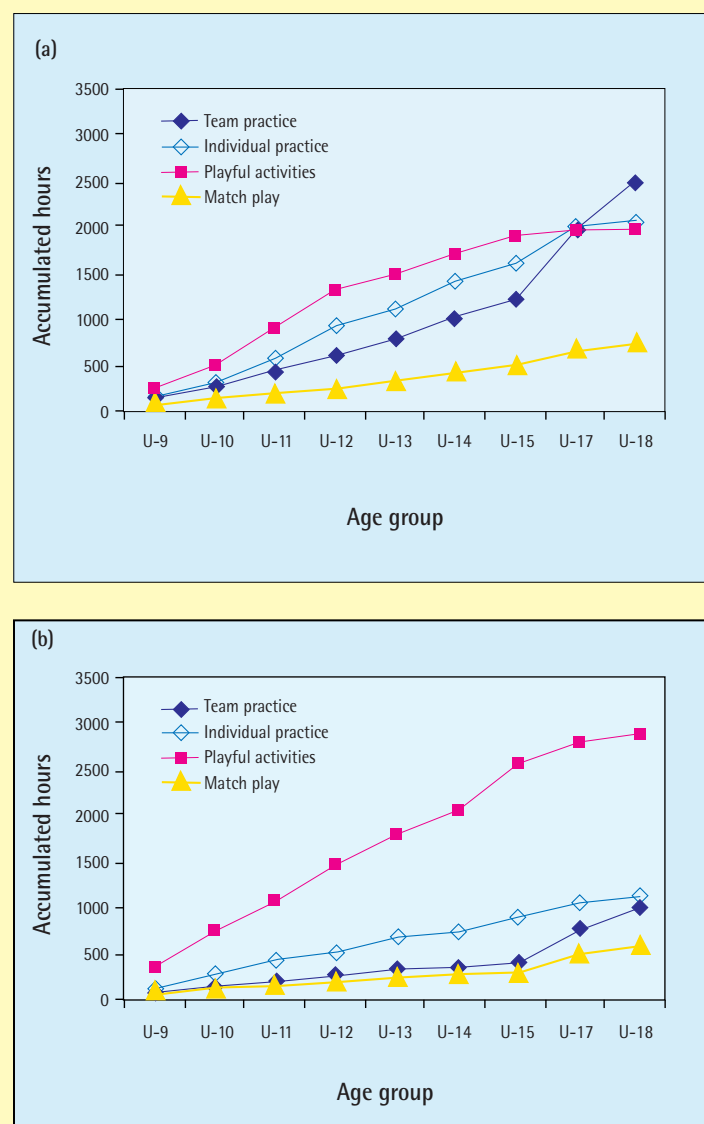


Figure 1 The amount of time accumulated in each activity by Academy (a) and recreational (b) players aged between 8 (U-9) and 18 (U-18) years across their careers.

The Academy and recreational groups started playing and practising at similar ages to those reported previously for English and Belgian Professional players (eg 5 and 7 years of age, respectively). The main difference between the skill groups was the amount of time spent in team and individual practice activities compared to the recreational players. On average, the elite players spent an extra 3 to 4 hours a week in team and individual practice (both accumulated hours across the career and hours per week).

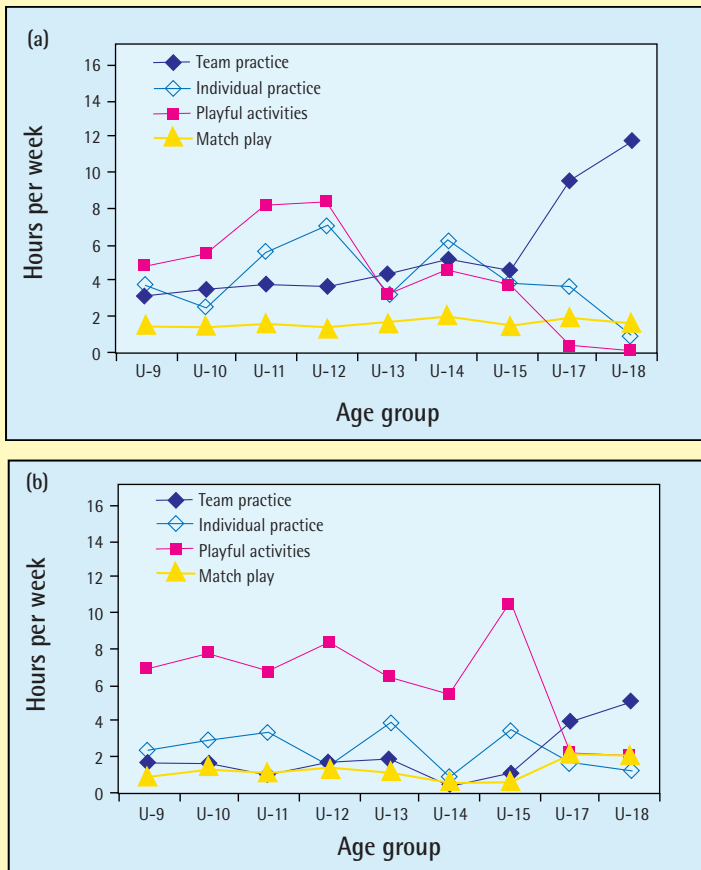


Figure 2 The amount of time spent per week in each activity by Academy (a) and recreational (b) players aged between 8 (U-9) and 18 (U-18) years.

There were no differences across skill groups in the amount of time spent in match play or in playful activities. The number of hours accumulated in playful activities by the Academy players was often equal to, if not greater than, the number of hours spent in team practice. Although there were some differences between skill groups in the amount of time spent in individual practice, the findings were relatively inconsistent. As an example the Academy players spent more time in individual practice compared to recreational players prior to 13 years of age, whereas after this age the elite players spent less time in individual practice than their recreational counterparts. An implication may be that individual practice is of equal or greater importance than team practice early in development whereas later on team practice becomes the key component in skill development. This finding supports previous research. Figure 3 highlights the activities that players engaged in during a typical practice session. Both skill groups spent most time practising technical skills. The only aspect of training to distinguish Academy from recreational players, other than quality of coaching, was the time spent on tactical and strategic decision-making.

Practice to Match Play Ratio

All age groups estimated practice and match play hours across their football careers. Hence, the U-18 age group provided practice estimates from 9 to 18 years of age, whereas the U-10 age group only had estimates for two years (ie 9 to 10 years). In Table 1 the ratio of practice to match play activities for the Academy players is highlighted. A ratio of 1 would mean that hours in match play and practice are equal, whereas a value greater than 1 represents more practice than match play. It appears that the ratio increases as players get older. The main reason for this change is that the Academies have greater access and time to spend with players as they get older. Subsequently, more time is devoted to practice relative to match play. An interesting observation is that since the implementation of the Charter for Quality in 1997 there has been a significant increase

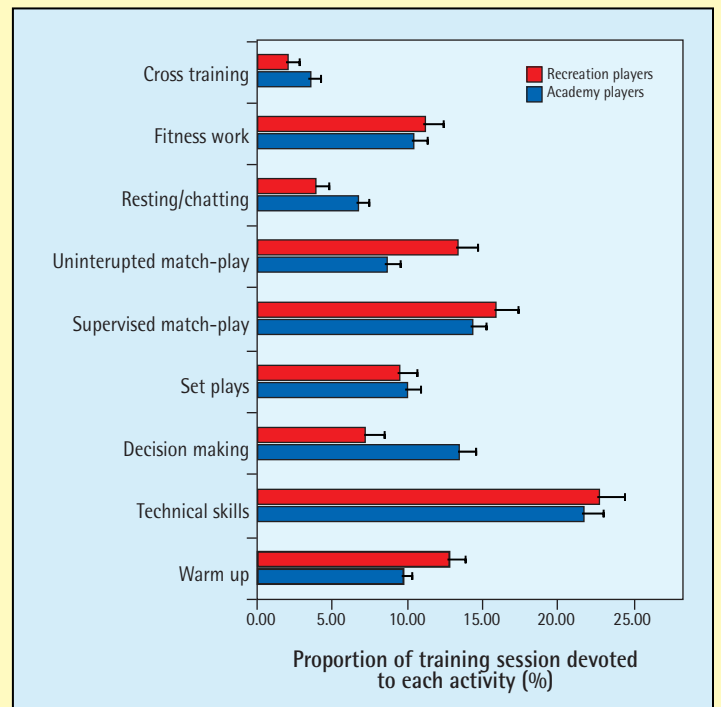


Figure 3 Structure of practice session for Academy and recreational players

in the ratio of practice to match play for the 9, 10 and 11 year olds. For example, the second column in Table 1 indicates the practice to match play ratios at the age of 9 years over the last nine years. The most recent years for the U-9 to U-12 groups (1997-2001) are highlighted in red at the top of the column. The data presented in green highlight match play to practice ratios prior to 1997 for U-13 to U-18 when they were 9 to 14 years of age, respectively. The ratio has more than doubled in recent years. It is likely that this increase in practice is due to increased access to high quality coaching and a reduction in the number of competitive matches. In contrast, the practice to match play ratios has been relatively stable in the 12-16 year old age groups, pre (green) and post (white) 1997.

Group	9 yrs	10 yrs	11 yrs	12 yrs	13 yrs	14 yrs	15 yrs	16 yrs	17 yrs	18 yrs
U-9	2.85									
U-10	2.59	3.42								
U-11	2.13	2.24	2.65							
U-12	3.67	3.50	3.28	3.17						
U-13	1.68	1.73	2.11	2.98	3.25					
U-14	1.34	1.60	1.82	2.23	2.47	3.12				
U-15	1.82	1.89	1.85	2.28	3.75	4.04	4.61	16 yrs	17 yrs	
U-17	2.40	2.62	2.77	3.60	3.64	3.68	4.79	5.19	7.24	18 yrs
U-18	1.00	1.71	1.91	2.60	2.79	3.21	4.26	6.59	11.67	10.77

Table 1 Practice to match play ratio for the Academy players: Hours of team practice for every match played.

Sporting Diversity and Specialisation

To determine whether Academy players participated in a range of sports prior to, and after, selection into the Academy, we asked players to provide details of all the sports in which they had participated. These profiles were compared to the recreational level players. Altogether, 78% of Academy players and 82% of recreational players had played another sport on a regular basis outside of physical education classes. The Academy players typically attained a higher level in other sports, playing at a club or school level, whereas the less skilled group mainly played at a recreational level. Whilst most of the players still played another sport, the older age groups (ie U-17 and U-18) reported that they had generally stopped playing other sports around the time they left school or entered the Academy full-time (eg 16 years of age). In general, the amount of time spent in other sports, whether in practice, match play

or playful activities did not differ between Academy and recreational players. The fact that the Academy players were no different from the recreational players suggests that current practice for players to enter into the Academy at an early age does not affect players' opportunities to engage in other sports.

In Figure 4 we have contrasted the amount of hours in 'deliberate' practice activities (eg team and individual practice combined) with playful soccer related activities and other sports. The amount of time spent in deliberate practice for the Academy players significantly outweighed that spent in playful soccer related activities and other sports. The Academy players had accumulated an extra 2500 hours in deliberate practice (4541 hours) compared to recreational players (2100 hours). In contrast, the recreational players had accumulated 2000 more hours in soccer related playful activities and other sports (6334 hours) than Academy players (4325 hours). The difference, over a 10-year period, in favour of the Academy players equates to around 3 or 4 hours per week spent in soccer specific deliberate practice compared to soccer related playful activities or other sports. Such investment in practice activities may preclude Academy players from benefiting from transfer of related fundamental or task specific skills acquired during playful activities or in other sports. This possibility requires further investigation. It would appear from this present study that what players are sacrificing is time in non-physical, social activities.

There is debate regarding those activities that lead to success. Some advocate that practice from an early age is the most important factor in attaining expert performance. Others suggest that unless fundamental skills are learnt through playful activities, elite performance may always be out of reach. Moreover, those that advocate the latter policy imply that players also benefit from engaging in a range of sports in the early years. Our findings show that the degree to which Academy players participate in playful activities and other sports throughout their childhood and adolescence does not differ from recreational players of the same age. Whilst these activities might play a role in the natural course of a child's skill development, only the amount of time invested in team practice distinguished between the skill groups.

Summary

- On average, the Academy players spent an extra 3 to 4 hours per week in team and individual football practice with the specific intention of improving performance compared to recreational players.
- The amount of time accumulated in team or group practice, with the deliberate intention of improving performance, is the main factor that discriminates Academy from recreational players.

- Following the implementation of the Charter For Quality in 1997, the team practice to match play ratio has increased in Academy players between 8 and 11 years of age in keeping with the expectations of the Charter.
- Academy and recreational players spend similar amounts of time participating in recreational and playful activities indicating that sporting diversity does not advantage or disadvantage the development of expertise in football.

Further Reading

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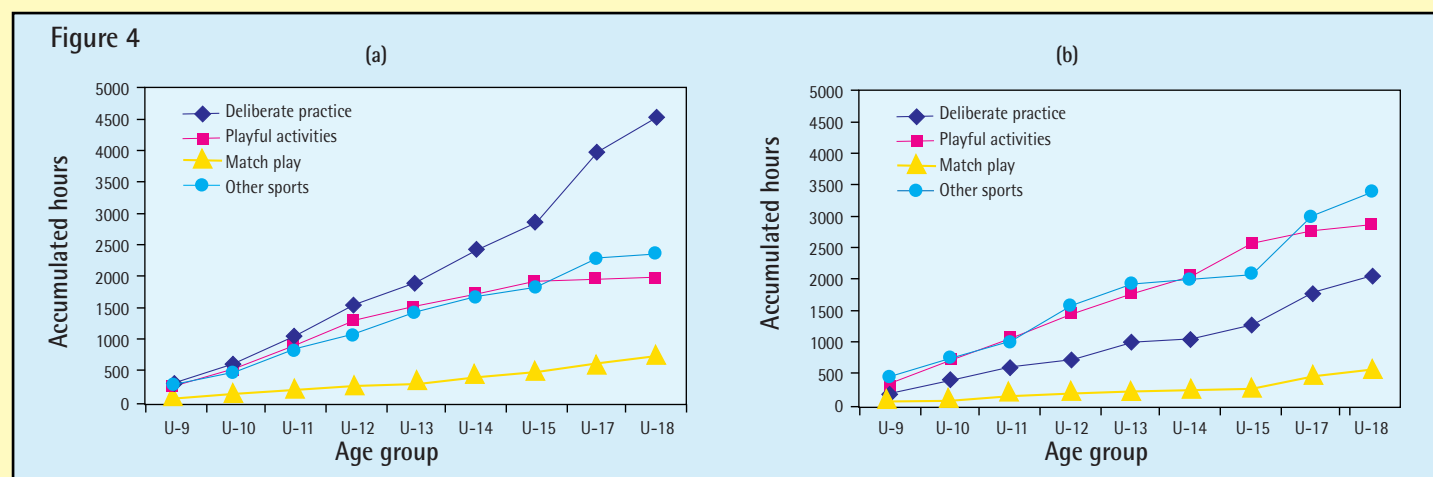


Figure 4 Accumulated hours in each activity and other sports for (a) Academy and (b) recreational players from 8 (U-9) to 18 (U-18) years of age (Deliberate practice denotes team and individual practice combined).