

Specific Training Programme and Batting Technique in Cricket: An Experimental Study

Lab Das¹, Abhijit Thander², Pintulal Mondal³

¹Ph.D. Research Scholar, Department of Physical Education, School of Education, Central University of South Bihar, Gaya, Bihar, India
Email: labdas[at]cusb.ac.in

²Assistant Professor, Cricket Research Lab., Department of Physical Education & Sport Science, Visva-Bharati University, India
Email: abhijit.thander[at]visva-bharati.ac.in

Assistant Professor, Department of Physical Education, Central University of South Bihar, Gaya, Bihar, India

³Email: pintulalmondal[at]cusb.ac.in

Abstract: Cricket is a popular sport that requires a combination of physical fitness, technical skills, and strategic thinking. To enhance technique in cricket, specific training programmes targeting different aspects of the game are often employed. This experimental study aimed to investigate the impact of a specific training programme on the overall batting ability of cricketers. Participants for this study were male students in grades 9 and 10, selected randomly from Visva Porichoy cricket Academy, Bolpur santiniketan in India. A total of 60 students were included, with an age range of 13½ to 15½ years. The control group consisted of 30 students with a mean age of 14.38 and a mean height of 154.937 cm. The experimental group also consisted of 30 students with a mean age of 14.41 and a mean height of 154.900 cm. The experimental group underwent a cricket-specific training programme for duration of ten weeks, with training sessions held four days per week (Wednesday, Thursday, Saturday, and Sunday). Each training session lasted for 90 minutes. The control group continued with their regular cricket-related training practices. To evaluate the batting technique of the participants, three judges rated their batting performance on a 10-point rating scale. The judges assessed various aspects of batting technique, skill, and decision-making. The ratings provided an overall measure of batting technique. A t-test was conducted to determine the significance of any improvement in batting technique between the experimental and control groups. The level of confidence for statistical significance was set at 0.05. The results of the study revealed a significant improvement in the batting technique of the experimental group compared to the control group, who continued with their regular cricket training practices. The findings of this study suggest that a specific training programme targeting batting skills can lead to a significant improvement in the batting technique of cricketers. By incorporating such training programmes, coaches and trainers can help cricketers enhance their overall performance in the game.

Keywords: Specific Training Programme, Batting technique, Cricket, Batting

1. Introduction

Cricket has become immensely popular in India, and the overall ability of players has improved over time. However, achieving uniformity in performance remains a challenge. One of the contributing factors to this issue is the lack of specific and well-defined batting technique factors in cricket. While there has been much discussion about the demands of cricket, scientific investigations in India to validate the significance of various parameters and essentials in the sport have been limited. Gone are the days when exceptional skills alone were sufficient to win matches. In the present era, cricket has become more systematic, and there is a growing focus on improving the selection process for potential cricket players and implementing scientific training programmes. Understanding the specific batting technique of successful cricket players is crucial in this pursuit. In batting, the principles revolve around scoring runs, avoiding getting out, defending the wicket, and strategically hitting the ball into open spaces (Bhat Z A, 2018). Defensive principles encompass restricting runs, taking wickets, and preventing the opposition from finding open spaces to score runs (Bhat Z A, 2018). In cricket, intermittent activities like batting require quick and powerful movements, which are of great importance to players involved in the game (Ahmaidi S, 2010). Running between the wickets is a critical task in batting (Chitara, M, 2008). The start-and-stop nature of sprinting between the wicket's

places stress on cricketers (Chitara, M, 2008). Effective running between the wickets is vital for increasing the scoring rate, allowing batsmen to maximize the value of their shots while batting (P. Mahesh, 2021). To improve overall performance in cricket, it is essential to recognize and develop these specific batting technique factors. By understanding the scientific aspects of cricket training and focusing on areas such as running between the wickets, players can enhance their performance and contribute more effectively to the game.

1.1 Purpose of the Study

The purpose of the present study was to investigate the effects of a ten-week cricket-specific training programme on the batting technique of junior-level cricketers.

1.2 The objectives of the study

- To assess whether the training program could lead to improvements in various aspects of batting technique.
- To provide insights into the effectiveness of structured and targeted training in enhancing the batting abilities of junior cricketers.

2. Methodology

2.1 Subjects

Sixty (60) male cricketers from Viswa Porichoy Cricket Academy, Bolpur Santiniketan, studying in class Six (6) to Ten (10), were selected as the subjects for this study. The subjects were randomly selected from the Cricket Academy based on their height. The average age of the subjects was fourteen and half years, ranging from 13½ to 15½ years.

2.2 Criteria Measures

The batting technique of the subjects, specifically in stance, Back-lift, foot placement, impact and follow-through were measured using a rating scale. Three judges, who were qualified by the National Cricket Academy (NCA), evaluated the subjects' performance using a 10-point rating scale. The average score from the three judges was recorded as the subject's score.

2.3 Design of Study

The study employed an experimental design to compare the effects of a specific cricket training programme on the batting technique of the experimental and control groups. The subjects were selected using a random sampling method. The specific cricket training programme was conducted for an average of 90 minutes per day. The testing took place between 7:30 to 9:30 am after a standard warm-up programme.

2.4 Testing Technique

To assess the effectiveness of the training program, the batting techniques of the participants in both the experimental and control groups were evaluated by three qualified judges. The assessment involved qualitative video analysis of the batting technique. The judges used a rating scale ranging from 0 to 10 points, and the batting technique was evaluated based on specific criteria:

- Stance:** This aspect focused on the position and readiness of the batsman before facing the delivery, considering factors like balance and posture. Judges allocated a maximum of 2.5 points for this category.
- Back-lift:** Back-lift refers to the movement of the bat before contacting the ball. The quality of the back-lift was assessed, considering factors like timing and positioning, and could earn a batsman up to 2.5 points.
- Foot Placement:** This criterion assessed how well the batsman positioned their feet while playing the shot, considering factors like footwork and alignment. Up to 2.5 points could be awarded for this category.
- Impact and Follow-through:** This aspect focused on the execution of the shot and the batsman's movements after contacting the ball. The quality of the impact and the follow-through were evaluated, and judges could award a maximum of

2.5 Points for this category

In total, the maximum score a batsman could achieve in the qualitative assessment of their batting technique was 10

points (2.5 points for each of the four criteria). The judges likely evaluated the players' performance before the training program (pretest) and after the training program (post-test) to analyze the impact of the specific cricket training program on their batting technique.

2.5 Statistical Analysis

The collected data from the baseline and post-training period were subjected to statistical analysis using the t-test. Paired t-tests were used to analyze the within-group changes, while unpaired t-tests were employed for intergroup comparisons to assess the training effect after the completion of the ten-week cricket-specific training programme.

By utilizing these statistical analyses, the study aimed to determine the impact of the specific training programme on the batting technique of the junior-level cricketers.

3. Results

In this section, the findings of the study on the batting technique before and after the training programme and the comparison of batting technique test after the cricket specific training programme of the experimental group and control group are discussed. The results are organized according to the specific variables analyzed during the study.

The study aimed to investigate the effect of a specific cricket training programme on the batting technique of junior cricketers. The results showed a significant improvement in batting technique among the cricketers who underwent the 10-week training programme.

Table 1: Mean and Standard Deviation of Batting Technique before and after the Training Programme of Experimental Group (N=30)

S. No.	Technique	Experimental Group (Pretest)	Experimental Group (Post Test)	t-stat
		Mean±SD	Mean±SD	
1	Batting	3.38±0.89	7.76±1.00	17.70*

*Significant at 0.05 level (t=2.16)

The findings from the table indicate that the specific cricket training programme had a significant positive impact on the batting ability of the junior cricketers in the experimental group. The significant increase in the mean batting score from 3.38 before the training programme to 7.76 after the programme demonstrates the effectiveness of the programme in improving batting technique.

The t-test statistic of 17.70 indicates a highly significant difference between the pretest and post-test scores of the experimental group. This indicates that the observed improvement in batting scores is unlikely to be due to random chance alone. The statistical significance, reinforced by the t-value being significantly higher than the critical value at the 0.05 significance level, further supports the conclusion that the specific cricket training programme had a substantial positive impact on the batting ability of the junior cricketers in the experimental group. These results provide strong evidence for the effectiveness of structured

and targeted training programmes in enhancing batting performance in cricket. The findings highlight the importance of implementing such programmes to optimize skill development and improve playing ability in junior cricketers.

Table 2: Mean and Standard Deviation of Batting Technique before and after the Training Programme of Control Group (N=30)

Sl. No.	Technique	Control Group (Pre-Test)	Control Group (Post Test)	t-stat
		Mean±SD	Mean±SD	
1	Batting	2.63±1.12	2.49±1.087	0.497

Based on the Table no. 2, the results for the control group indicate that there was no statistically significant difference in batting technique before and after the training programme. The mean batting score for the control group was 2.63 before the training programme and slightly decreased to 2.49 after the programme. The t-test statistic of 0.497 further supports the conclusion that the observed difference in batting scores for the control group is not statistically significant. This suggests that any variations in the mean batting scores could likely be attributed to random chance rather than the impact of the training programme. These results indicate that the regular cricket-related training/practice that the control group continued with did not lead to a significant improvement in their batting technique over the duration of the training programme. The lack of statistical significance emphasizes the importance of implementing a specific training programme, as seen in the experimental group, to achieve significant changes in batting ability. It is important to note that the t-value of 0.497 is below the critical value of 2.16 at the 0.05 significance level, further supporting the conclusion that there is no statistically significant difference in batting technique for the control group before and after the training programme.

Table 3: The Comparison of Batting Technique Test after the Cricket Specific Training Programme between the Experimental and Control Groups (N=60)

Sl. No.	Technique	Experimental Group	Control Group	t-stat
		Mean±SD	Mean±SD	
1	Batting	7.76±1.00	2.49±1.087	19.23*

*Significant at 0.05 level (t=2.16)

The above table shows that the mean batting score for the experimental group after the specific cricket training programme was 7.76, while the mean batting score for the control group was 2.49. The t-test statistic for the comparison between the two groups was 19.23, which indicates a statistically significant difference in batting ability between the experimental and control groups.

The significance level of 0.05 suggests that the observed difference in batting scores is unlikely to occur due to random chance alone. Therefore, the specific cricket training programme had a significant positive impact on the batting ability of the junior cricketers in the experimental group compared to the control group. These results provide evidence to support the effectiveness of the training programme in enhancing the batting performance of the experimental group. The statistically significant difference

in batting scores highlights the importance of implementing structured and targeted training programmes to improve specific skills in cricket, such as batting. It is important to note that the t-value of 19.23 is significantly higher than the critical value of 2.16 at the 0.05 significance level, further reinforcing the statistical significance of the difference observed.

These findings indicate that the specific cricket training programme had a positive impact on the batting technique of the experimental group. However, the control group, who continued their regular cricket-related training/practice, did not show any improvement in their batting technique. This highlights the importance of implementing structured and targeted training programmes to enhance the performance of cricketers.

3.1 Discussion

The results of the study indicate that the specific cricket training programme had a significant positive effect on the batting technique of the experimental group compared to the control group. This aligns with previous findings by Ravindran S.R.V. (2019) and Rawat V.S., Purashwani P (2019), who also observed improvements in cricket performance following specific training programmes.

The improvements in batting technique can be attributed to several factors. The specific drills practiced during the training programme, along with fitness training, may have induced adaptive mechanisms in the cricketers. These mechanisms could include improvements in maximal strength, hormonal balance, structural adaptations, and neuro-mechanical adaptations. It is possible that the combination of these factors, along with the cumulative post-activation performance enhancement effect induced by the specific training programme, contributed to the observed improvements in batting performance.

These findings highlight the importance of structured and targeted training programmes in cricket. By focusing on specific skills and incorporating appropriate training methods, coaches and trainers can optimize the development of cricketers' batting technique. The study emphasizes the need for a systematic approach to cricket training that goes beyond regular practice sessions, allowing players to enhance their performance in key areas of the game.

Overall, the study underscores the significance of specific training programmes in cricket and their potential to improve batting technique. It provides valuable insights for coaches, trainers, and players seeking to enhance their performance and excel in the sport.

4. Conclusion

In conclusion, the study demonstrated that a specific cricket training programme had a significant positive impact on the batting technique of junior cricketers. The experimental group, which underwent the 10-week training programme, showed a substantial improvement in their batting technique, particularly in batting. On the other hand, the control group,

who continued their regular cricket-related training/practice, did not exhibit any improvement in batting technique.

References

- [1] Bhalse S, Reddy S.N (2018) Influence of Cricket Players Fitness on Physical Variables Performance, *IJARIE*,4(1)
- [2] Bhat ZA, Sreedhar K, (2018) Effect of cricket specific fitness training program on physical variables among college level men cricket players of Jammu and Kashmir State. *International Journal of Physical Education, Sports and Health*, 5(4), 09-11
- [3] Buchheit, M., Mendez-Villanueva, A., Quod, M., Quesnel, T., & Ahmaidi, S. (2010). Improving acceleration and repeated sprint ability in well-trained adolescent handball players: speed versus sprint interval training. *International Journal of Sports Physiology & Performance*, 5(2).
- [4] Carter, J., and Greenwood, M. (2014). Complex training re-examined: review and recommendations to improve strength and power. *Strength Cond. J.* 36(2) 11–19. doi: 10.1519/SSC.0000000000000036
- [5] Chitara, M, Chaouachi, A, Levin, GT, Chaouachi, M, Chamari, K, Amri, M, Laursen, PB. (2008) Effect of concurrent endurance and circuit resistance training sequence on muscular strength and power development. *The journal of Strength & Conditioning Research*, 22(4), 1037–1045. doi:10.1519/JSC.0b013e31816a4419
- [6] Foster C. (1998) Monitoring training in athletes with reference to overtraining syndrome. *Med Sci Sports Exerc*, 30 (7)1164—1168. doi: 10.1097/00005768-199807000-00023
- [7] Murugavel K, Prasath R.G.G. (2020) Overall playing ability and skill performance parameters response to the ladder training after small side games of grassroots soccer boys. *International Journal of Physical Education, Sports and Health* 7(6), 288-292
- [8] P. Mahesh, (2021) Effect of circuit training on selected physical fitness variables and skill performance among medium pace cricket bowlers in Coimbatore district, *Bharathiar National Journal of Physical Education and Exercise Sciences* 12(1) 26-30.
- [9] S.R.V.Ravindran (2019) Effect of game-specific training programme on playing ability of kabaddi players, *Journal of Information and Computational Science*. 9(11), 1015-1018, doi:10.123.JICS.2019.V9I11.535569.11119
- [10] Robbins, D. W. (2005). Postactivation potentiation and its practical applicability: a brief review. *J. Strength Cond. Res.* 19(2), 453–458. doi: 10.1519/R-14653.1
- [11] Sale, D. G. (2002). Postactivation potentiation: role in human performance. *Exerc. Sport Sci. Rev.* 30(3), 138–143. doi: 10.1097/00003677-200207000-00008
- [12] Selvakumar, R & Vigneshwaran, Dr.G.. (2020). Impact of game-specific field training on playing ability among cricket players. *The International journal of analytical and experimental modal analysis*. 11(12) 4021-4025.
- [13] Thapa RK, Lum D, Moran J and Ramirez-Campillo R (2021) Effects of Complex Training on Sprint, Jump, and Change of Direction Ability of Soccer Players: A Systematic Review and Meta-Analysis. *Frontiers in Psychology*, 11, doi: 10.3389/fpsyg.2020.627869
- [14] Topiwala D, Patole S et al (2021) Effectiveness of sprint interval training on repeated sprint ability (RSA) and lower limb power in amateur cricket batsmen at the end of 4 weeks: An experimental study, *International Journal of Applied Research* 7(8), 192-201
- [15] V.S., Purashwani P (2019) Effect of sports vision training on selected visual skills of table tennis players, *Ignited Minds Journals Volume: 14(2)*, 217 – 219. <http://ipublisher.in/I/a/211140>
- [16] Metarbhay, R.A (2021). Effect of specific training programme on ability of kabaddi players. *JournalNX - A Multidisciplinary Peer Reviewed Journal*, 5(12), 11–14.