

## Striking a delivered ball whilst vision is occluded

The capability of cricket batsmen of different skill levels to pick-up information from the pre-release movement pattern of the bowler, from pre-bounce ball flight, and from post-bounce ball flight was examined experimentally. Six highly skilled and six low-skilled cricket batsmen batted against three different leg-spin bowlers while wearing liquid crystal spectacles. The spectacles permitted the specific information available to the batsmen on each trial to be manipulated such that vision was either: (i) occluded at a point prior to the point of ball release (thereby only allowing vision of advance information from the bowler's delivery action); (ii) occluded at a point prior to the point of ball bounce (thereby permitting the additional vision of pre-bounce ball flight); or (iii) not occluded (thereby permitting the additional vision of post-bounce ball flight information).

Measurement was made on each trial of both the accuracy of the definitive (forward&ndash;backward) foot movements made by the batsmen and their success (or otherwise) in making bat&ndash;ball contact. The analyses revealed a superior capability of the more skilled players to make use of earlier (pre-bounce) ball flight information to guide successful bat&ndash;ball interception, thus mirroring the greater use of prospective information pick-up by skilled performers observed in other aspects of batting and in other time-constrained performance domains.

### A Sample Video from the Experiment:

Viewers should note the special Glasses used. While not clear on the video, the Glasses can occlude the batsman's vision when triggered. For the shot played in this video, the batsman's vision was occluded prior to "ball bounce", providing vision of only the bowlers delivery action and early ball flight.

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### More Information:

For more details on this co-authored scientific paper that examined how high and low skilled cricket batsmen read bowlers deliveries in order to make efficient bat-ball contact, please follow this link.

The research reported in the paper formed part of Sean Muller's doctoral studies at The University of Queensland.