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Abstract details

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Title of the paper:	**THE ROLE OF VIDEO MANIPULATION IN SKILL ACQUISITION**
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Abstract text	Introduction The use of temporal and spatial occlusion are well established methods to obtain visual information and subsequent mechanisms underlying sport skills when comparing athlete levels and progression of learning. Although temporal occlusion may meet ecological validity, the use of spatial occlusion in research (Panchuk & Vickers, 2009; Williams & David, 1998) where sections of the body are no longer visible may cause concerns for poor ecological validity. Therefore, the aim of this abstract is to discuss the use of video manipulation as a tool for analysing anticipation. Methods This abstract involves data taken from a previous study by the authors where video of a striker kicking a penalty kick was digitally manipulated by changing the standing leg depending on direction. Three groups depending on skill where used, goalkeepers (n = 17), field players (n = 20) and control group (n = 20). An eye tracker was worn whilst watching 40 videos of a striker kicking at the goal in randomised placement order (left or right and high or low). All 40 videos were temporally occluded at foot-to-ball contact and the non-kicking leg of 20 videos were spatially manipulated. Results As shown in Tamara et al., (2015), the results of using a video spatial manipulation method for the football penalty kick showed similar effects as previous research (Savelsbergh et al. 2002) for predominately final fixations occurring at the stance foot (37.6%) and the ball (33.7%). There was no significant difference for goalkeepers' prediction the direction of the ball in either the manipulated or controlled condition. Discussion This is the first time that video spatial manipulation has been used and it appears that the results mimic previous research with spatial occlusion. However, it has been shown that once the stance leg is occluded performance decreases, this was not the case when the video was manipulated. Future research should look at comparing the methods to determine which would be more useful from an ecological point of view. References Panchuk, D., & Vickers, J. N. (2009). Using spatial occlusion to explore the control strategies used in rapid interceptive actions: Predictive or prospective control? J Sports Sci, 27(12), 1249-1260. Savelsbergh, G. J., Williams, A. M., Van der Kamp, J., & Ward, P. (2002). Visual search, anticipation and expertise in soccer goalkeepers. J Sports Sci, 20(3), 279-287. Woolley, T.L., Crowther, R.G., Doma, K., Connor, J.D. (In press). The use of spatial manipulation to examine goalkeeper's anticipation. J Sports Sci. Williams, A. M., & Davids, K. (1998). Visual Search Strategy, Selective Attention and Expertise in Soccer. Res Q Exerc Sport, 69(2), 111-128. Contact Robert.Crowther@usq.edu.au
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