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The functions of observational learning questionnaire (FOLQ)

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Abstract

Objectives: The main aim of the present investigation was to examine how athletes use observational learning (OL) through the development of a valid and reliable questionnaire. A second purpose was to determine how the functions of OL that emerged compared to the functions of imagery that have already been determined [Paivio, A. (1985). Cognitive and motivational functions of imagery in human performance. *Canadian Journal of Applied Sports Sciences*, 10, pp. 22S–28S] general analytical framework for imagery.

Design: Four samples of questionnaire data, presented in three studies.

Methods: Male and female athletes in a variety of sports ranging from recreational to the elite level completed the questionnaire. Study 1 consisted of 400 athletes (197 male and 203 female) with a mean age of 21.26 (SD = 2.88). For Study 2, 953 athletes (462 male, 483 female, eight unreported), with a mean age of 22.37 (SD = 5.15) completed the questionnaire. Finally, Study 3 consisted of 200 athletes (77 male, 123 female) with a mean age of 19.62 years (SD = 2.17).

Results: Study 1 consisted of computing a principal component analysis of the Functions of Observational Learning Questionnaire (FOLQ). From this, the 17-item FOLQ emerged that contained three factors (skill, strategy, and performance). In Study 2, a confirmatory factor analysis was computed that confirmed the items and the factor structure of the questionnaire. Finally, Study 3 confirmed the concurrent validity and the test–retest reliability of the questionnaire, along with examining group differences in terms of OL usage by athletes.

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Conclusions: Athletes use OL for both cognitive functions (skill and strategy) and motivational functions (optimal arousal and mental performance state). It seems that athletes use OL primarily for cognitive functions, whereas, imagery is mainly used by athletes for motivational functions. Overall, the results indicate that the FOLQ may be a useful tool for examining research questions surrounding OL.

Keywords: Observational learning; Imagery; Athletes; Questionnaire development; Functions; Motivation; Cognitions

Motivated by inconsistent conclusions and variable effect sizes found in the reviews of the imagery literature available at the time, Paivio (1985) developed a general analytical framework to explain how motor skills can be improved through mental practice. Paivio's main purpose was to determine when and why imagery techniques were not effective by analyzing the functional roles through which imagery can affect performance. According to the framework, imagery plays both a motivational and cognitive role in mediating behaviour, and each one operates at either a specific or general level. As a result, imagery can serve a cognitive specific function (i.e. learning and performance of skills), a cognitive general function (CG; i.e. learning and performance of strategies, routines, and game plans), a motivational specific function (MS; i.e. obtainment of goal-related behaviour), and a motivational general function (MG; physiological arousal and affect).

Following this 2×2 classification, Salmon, Hall, and Haslam (1994) designed a questionnaire to assess soccer players' use of the different imagery functions, and found that soccer players employed all four in training and game play, but reported using imagery more for motivational rather than cognitive purposes. Hall, Mack, Paivio, and Hausenblas (1998) sought to replicate these findings across different types of sports and competitive levels though the development of the Sport Imagery Questionnaire (SIQ), and found that the motivational general function of imagery could be further subdivided into motivational general-arousal imagery (MG-A) and motivational general-mastery imagery (MG-M). The MG-A function of imagery entails using imagery to regulate arousal levels whereas the MG-M function involves using imagery to stay focused, confident and mentally tough.

Although Paivio focused primarily on imagery, Munroe and her colleagues (Munroe, Hall, & Weinberg, 2004) have since pointed out that this framework can be applied to other types of mental skills. To date, researchers have successfully applied the framework to self talk (Gammage, Hardy, & Hall, 2001; Hardy, Gammage, & Hall, 2001) and goal setting (Munroe et al., 2004). Perhaps even more similar to imagery, however, is observational learning (OL). In fact, early definitions of mental practice tended to group both skills together. For example, Marteniuk (1976) defined mental practice as 'improvement in performance that results from an individual either thinking about a skill or watching someone else perform it'. Over the years, numerous other writers have suggested that OL and imagery might be similar, yet distinct cognitive processes, with the characteristic distinguishing between the two being the presence or absence of an external stimulus for the individual (e.g Bandura, 1986; Feltz & Landers, 1983; McCullagh & Weiss, 2001; McCullagh, Weiss, & Ross, 1989; Ryan & Simons, 1983). In a modeling situation, the observer watches a live or videotaped model of either someone else or themselves (self-modeling) executing a behavior. Comparatively, there is typically no external stimulus used in imagery, rather, the observer must instead create the image of the desired behavior based on memory and past behavior.

Despite this difference, it is likely that Paivio's general analytical framework can also be applied to OL. Indeed, the idea that OL can serve both a cognitive and motivational function is not new and has