

## Introduction

- Previous findings have shown that adapting an external attentional focus (i.e., focusing on movement outcome) enhances motor learning and performance by increasing the effectiveness, accuracy and efficiency of motor movements, when compared to adapting an internal attentional focus (i.e., focusing on produced body movements; Wulf, McNevin & Shea, 2001; Wulf, Hoess & Prinz, 1998; Kal, van der Kamp & Houdijk, 2013).
- It has been suggested that adapting an internal focus causes the subject to consciously control their movements, which thus interferes with their automatic control process and constrains their motor system (Kal, van der Kamp & Houdijk, 2013; Gray, 2004).
- There is clear evidence that instructors/coaches should guide learners via an external focus; however, previous work has failed to determine which type of attentional focus coaches predominantly rely on.
- **The purpose** of this study was to examine the attentional focus cues present in the instructions provided to motor skill learners during practice.

## Methods

- A practice session covering fundamental skill was voice recorded from a U10 boys soccer team for 30 minutes. The practice session was then transcribed.
- A coding tree was established to create coding guidelines. Inter-rater agreement was assessed using four different researchers to form a consensus in the event of disagreement.
- The instructions that were coded for internal or external cues were any instructional information describing the skills that were to be performed as well as any feedback given during the performance of the motor task.
- A high degree of inter-coder reliability was achieved, as both coders agreed on 97.5% of all cases.
- External focus cues are any verbal instructions or feedback given to motor learners which directs their attention to the movement outcome, whereas internal focus cues direct the learners attention their body movements.

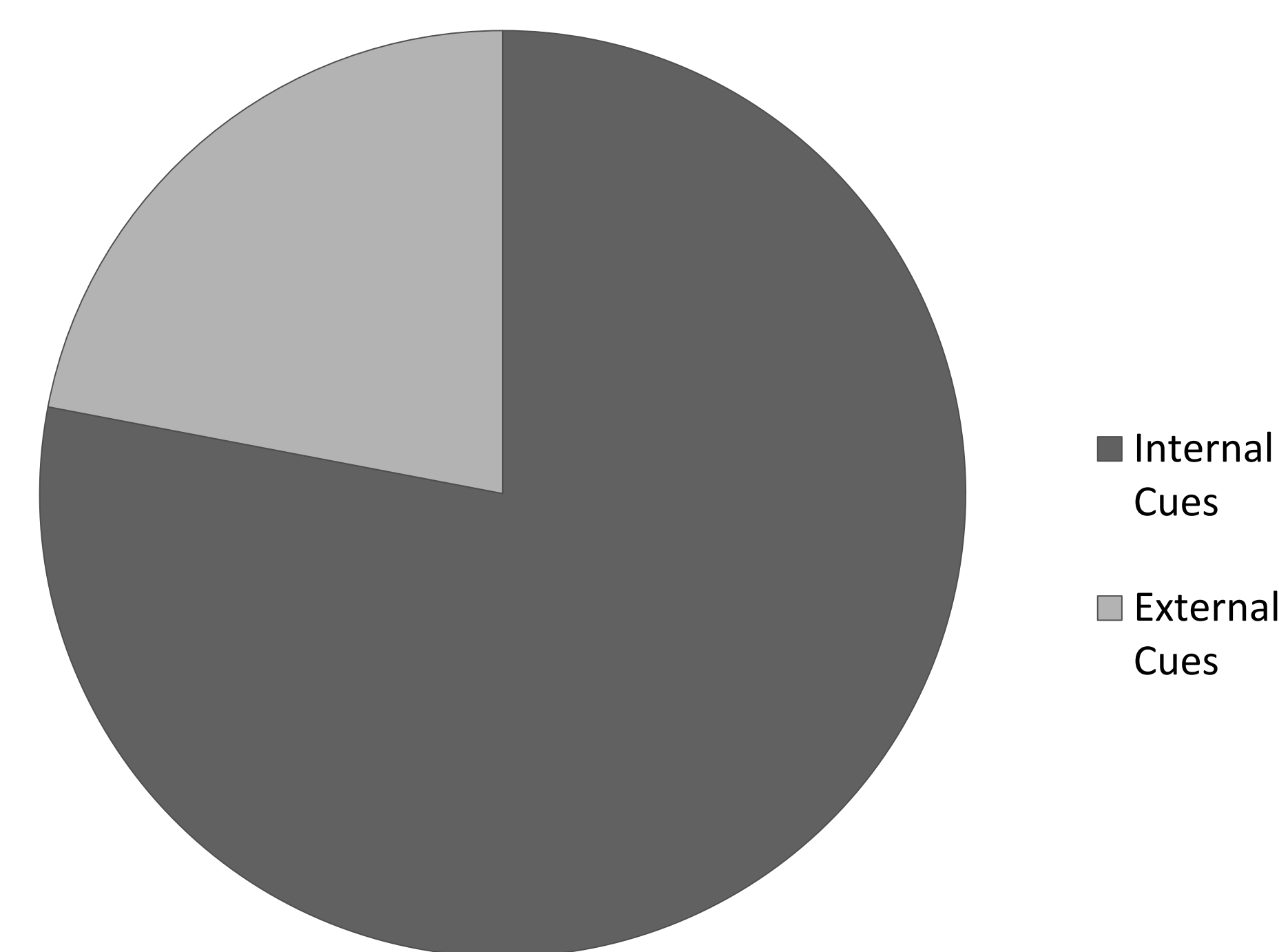
## Discussion / Conclusions

- As expected, the coach predominantly relied on internal focus cues to instruct the motor learners. Only a few external cues were used and referred to looking forward or at the surroundings and on the soccer ball. Because the athletes were younger learners who have not yet mastered the skills, it is likely that the coach wanted to ensure that the movements were executed correctly, therefore emphasizing the proper body movements and positions through internal cues (such as off your heels and up on those toes).
- These results suggest that even though there is plenty of research demonstrating the effectiveness of external cues, coaches may instruct their learners with predominately internal cues. Although it may seem like a subtle difference in the wording of the instructions or feedback, using external cues has been shown to have a large impact on optimizing performance and motor learning.
- This study highlights the need for developing coaching interventions in order to increase the effectiveness of the instructional content given to motor learners.

## Results

**Table 1.** The number and percentage of internal and external cues coded for a 30 minute practice session of a boys U10 soccer team and an example of the cues given.

|              | Internal Cues | External Cues   |
|--------------|---------------|-----------------|
| Number coded | 32            | 9               |
| Percentage   | 78%           | 22%             |
| Example      | Head up       | Looking forward |



**Figure 1.** The ratio of internal and external cues coded for a 30 minute practice session of a boys U10 soccer team.

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## Contact Information

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